



Total Request: \$394,609,000¹

ORF: \$364,486,000

PAC: \$27,905,000

Coastal Zone Management Fund: [\$3,000,000]

Environmental Improvement and Restoration Fund (EIRF): \$5,218,000

The National Ocean Service (NOS) is the primary Federal agency working for the coast through the observation, measurement, assessment, and management of the Nation's coastal and ocean areas, as well as conducting response and restoration activities to protect vital coastal resources. More than 139 million people – over 50 percent of the national total – currently reside along the narrow coastal fringes. The population in these coastal areas is expected to increase to about 165 million by the year 2015. This population growth and development places many of the Nation's coastal areas under increasing pressure. 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 four of NOAA's seven Strategic Plan Goals: Sustain Healthy Coasts, Promote Safe Navigation, Build Sustainable Fisheries, and Recover Protected Species. NOS provides improvements in the quality, quantity, geographic distribution, and timeliness of ocean and coastal observations. Mapping, charting, geodetic, and oceanographic activities produce marine and coastal data 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.

¹ The total request for NOS of \$394,609,000 does not include the general offset from the CZM Fund of \$3,000,000 in FY 2002.

NOS' role as a leader in coastal stewardship supports many of the recommendations contained in the report: "Turning to the Sea: America's Ocean Future." These recommendations help provide the framework for a comprehensive ocean agenda which will guide Federal efforts into the 21st Century. To meet the challenges posed in the report, NOS seeks increases under the Coastal Conservation Activities,

Modernization of Marine Transportation System (MTS), and People and Infrastructure Initiatives. These increases will help strengthen the understanding and protection of our valuable ocean resources and foster our Nation's economic competitiveness.

Increases are proposed as part of the Coastal Conservation Activities Initiative. Under this initiative, an increase is requested to expand Coastal Zone Management grants to enable coastal states to address such issues of national importance as the impact of coastal storms, declining water quality, shortage of public shoreline access, loss of wetlands, deteriorating waterfronts, and the challenge of balancing economic and environmental demands in the coastal zone. Increases are also requested to enhance our ability to effectively manage the National Marine Sanctuaries, intensify habitat protection through the National Estuarine Research Reserve System and strengthen and improve marine protected area (MPA) programs and their conservation goals through improved Federal, state, local, tribal, and territorial coordination and collaboration to fill shared information, technical and operational needs.

Increases are proposed to address the recommendations of the Marine Transportation System (MTS) report. The MTS initiative will modernize the Nation's suite of nautical charts, and enhance the coastal water level observation system and the geodetic positioning reference system needed to ensure safe navigation. NOAA also requests increases to maintain and improve the scientific expertise to respond to hazardous releases when they occur and restore damaged coastal resources. NOAA also proposes to begin a pilot project to better address the impacts of coastal storms on maritime users and communities. NOAA's integrated suite of surveying, charting, water level, and positioning services is capable of increasing the efficient movement of goods while significantly reducing the risk of marine accidents and resulting environmental damage. Economic benefits include reducing vessel fuel consumption and port pollution, supporting just-in-time delivery of goods, enhancing the competitiveness of U.S. exports, and restoration of important coastal resources that support tourism, fishing, and other ocean and coastal-dependent industries.

Significant Adjustments-to-Base (ATBs)

NOAA requests a net decrease of \$8.9 million for ATBs which reflects increases for inflationary costs, technical adjustments (both increases and decreases), restoration of the FY 2001 rescission and terminations.

Mandatory Pay, Inflationary Costs, and Adjustment: -\$8.9 million

NOAA requests an increase for NOS of \$7.3 million to address essential ATBs for the NOS base operations and system account. This will fund the FY 2002 federal pay raise of approximately 3.6% and annualize the FY 2001 pay raise of 3.8% as well as provide inflationary increases for certain non-labor activities, including service contracts, and rent charges from the General Services Administration (GSA). Funding for these cost increases is critical for NOS to maintain adequate services to the Nation.

Other Adjustments-to-Base include two technical ATBs: a \$19.2 million technical decrease ATB transfer of days-at-sea to NOAA Program Support now consolidated within OMAO, and a technical adjustment increase of \$3.0 million related to the Coastal Zone Management Fund.

Restoration of FY 2001 Rescission: \$0.8 million

NOAA requests an increase of \$0.8 million to restore the FY 2001 rescission. Restoration of these funds in FY 2002 is required to sustain NOS navigation, science and coastal and ocean management service to the Nation. In FY 2002, NOS will restore funding to provide critical training for staff, grants to states, and support for research and navigation services.

Terminations: -\$47.7 million

NOAA requests a decrease of \$47.7 million to reflect the discontinuation of many programs including: the Seacoast Science Center (\$1.3 million), Louisiana Brown Marsh Restoration (\$2.9 million), South Carolina Pfiesteria Research (\$0.5 million), New Hampshire Marsh Restoration (\$1.0 million), River Restorations (Dupage River, Detroit River, and Lower Rouge River - \$11.5 million), Great Lakes Community Restoration Grants (\$30.0 million) and the Northwest Straits Citizens Advisory Committee (\$0.5 million).

Detailed Program Increases by Sub-Activity

Operations, Research and Facilities (ORF)

Navigation Services

\$106.7 million

The total requests of \$106.7 million for Navigation Services represents a net increase of \$10.5 million above the FY 2001 Enacted level. The FY 2002 Presidents Budget funds a suite of navigation products and services that help ensure the safety of marine transportation, while improving the economic efficiency and competitiveness of U.S. commerce. This suite includes traditional products and services, such as paper charts and tide predictions, as well as powerful new electronic navigation charts and real-time oceanographic systems. This subactivity also supports the National Spatial Reference System (NSRS), a highly accurate and accessible geographic positioning framework which underpins a wide array of defense, transportation, public works, earth science, mapping and charting, and other activities critical to the Nation's economic infrastructure. Included in this subactivity is funding (at FY 200 levels) for the NOAA/University of New Hampshire Joint Center for Hydrographic Excellence (\$2.6 million), the Height Modernization implementation activities in conjunction with states of California and North Carolina (\$1.0 million per state), and \$20.5 million to reduce the hydrographic survey backlog. One-time funding for the Seacoast Science Center of \$1.3 million is not included.

The Navigation Services base had a net increase of \$2.9 million due to program terminations, restoration of the FY 2001 rescission and receipt of ATBs to cover non-avoidable increases for employee pay, rent and other charges.

Mapping and Charting: \$45.2 million

Electronic Navigational Charts: \$3.6 million

NOAA requests an increase of \$3.6 million for Electronic Navigational Charts. This investment is to construct additional Electronic Navigational Charts (ENCs), enhance existing ENCs to provide a more complete picture of the waterway, and provide for the continued maintenance of the completed ENCs (an estimated 200 in maintenance at the end of FY 2002). The ENC is a significant component of NOAA's integrated *systems approach* to the development and delivery of navigation services designed to provide the essential information required to navigate safely in and out of the Nation's ports and harbors. In support of ENC funding will be used to continue efforts to provide complete, quality-controlled digital bathymetric coverage of U.S. waters using the most up-to-date hydrographic survey data available. The bathymetric database will be used for navigation purposes as well as to assist in developing hydrodynamic, water quality, and ecosystem models to assess the Nation's coastal environment.

Shoreline Mapping: \$1.0 million

NOAA requests an increase of \$1.0 million for Shoreline Mapping building on the \$1.5 million appropriated in FY 2001. This investment will provide a more accurate national shoreline building on the \$1.5 million appropriated in FY 2001. Presently, one-third of the U.S. shoreline has never been mapped by NOAA. At the present rate of progress, the entire U.S. shoreline is projected to be surveyed on a 50-year cycle. An increased emphasis on shoreline is required to keep pace with the growing stress on our Nation's Marine Transportation System. NOAA has determined that in order to adequately maintain the national shoreline and support safe navigation, a 5-year average cycle is needed to resurvey those portions of the shoreline deemed critical, with the remaining areas requiring mapping on a 10-year average cycle. The FY 2002 increase will enable NOAA to maintain the critical port areas and to start addressing other less-critical coastal areas on a 5-year refreshment cycle, moving toward a 10-year refreshment cycle in those areas. Most of this work would be accomplished through contracts with the private sector.

Coastal Storms: \$1.0 million

NOAA requests \$1.0 million for this portion of Coastal Storms. This investment will allow NOAA's Coastal Storms effort to concentrate NOAA capabilities on environmental monitoring, hazard mitigation, education and outreach as part of the Coastal Storms pilot project in Florida. Billions of dollars are lost each year to disasters in coastal states or territories. This increase complements the increases requested in the Tides and Currents line item and the Ocean Resources Conservation and Assessment subactivity. NOAA's Coastal Storms proposal seeks to apply a cross-section of NOAA capabilities to: ensure the safety of the coastal population, support and enhance the coastal economy and sustain the environmental health of coastal communities and resources.

Investments in FY 2002 will provide NOAA with resources to collect crucial baseline data in bathymetric mapping, water levels, and other environmental variables in the Florida pilot region. These data are being acquired to meet the increasing demands of emergency managers, resource managers, and Marine Transportation System users who require up-to-date bathymetric mapping products to deal with storm surge, pollution plumes, resource conflicts and safe shipping. Funding will also be used to develop a

prototype hydrodynamic model for the St. Johns River which will go beyond current Physical Oceanographic Real-Time Systems (PORTS) technology, providing commercial shippers with the data needed to take full advantage of oceanographic conditions to maximize cargo shipping and profits and avoid accidents. With continued support, NOAA plans to expand Coastal Storms to other demonstration regions in future years.

Geodesy: \$23.8 million

The total request of \$23.8 million for Geodesy represents an increase of \$1.5 million above the FY 2001 Enacted level.

National Spatial Reference System (NSRS): \$0.5 million

NOAA requests an increase of \$0.5 million for activities required to improve and maintain the National Spatial Reference System (NSRS). This effort will focus primarily on providing better access to accurate and consistent height data in support of differential Global Positioning System (GPS) applications. Improved access to accurate NSRS information by the marine transportation community and many other economic activities which derive significant safety and economic benefits from accurate and timely spatial reference data. In addition, NOAA will provide selected ports with a suite of geodetic tools to enhance the capacity of the port, maximize economic efficiencies, and reduce accident potential and environmental damage.

Tide and Current Data: \$17.3 million

The total request of \$17.3 million for Tide and Current Data represents an increase of \$2.2 million above the FY 2001 Enacted level.

Coastal Storms Initiative: \$1.0 million

NOAA requests an increase of \$1.0 million for this portion of the Coastal Storms Initiative, described above. This increase is to enhance existing NOAA National Water Level Observation Network (NWLON) stations and existing water level networks of local partners located within the Coastal Storms pilot region. NWLON is an important component of our Nation's marine transportation infrastructure. The enhanced stations will be improved through the addition of meteorological and oceanographic sensors, the completion of ties to the geodetic datum through GPS surveys, and the addition of current meters at key locations.

Forecast Models: \$0.5 million

NOAA requests \$0.5 million for implementation of Forecast Models. A recent comprehensive assessment of NOAA's tidal current prediction products shows major gaps and deficiencies for the Nation's ports and harbors. This investment is requested to enhance tides and tidal current services to the user by obtaining new current meter measurements at locations critical to the navigation community. The new data will be used in the design of future PORTSTM and in the calibration and validation of hydrodynamic models for development of nowcast/forecast products of water conditions critical for supporting increasing marine commerce and safe navigation. NOAA will also enhance real-time services

to the user by building an oceanographic modeling program to meet the increasing demand for real-time and forecasted water level and other oceanographic products.

Ocean Resources Conservation and Assessment

\$117.1 million

NOAA requests a total of \$117.1 million for this subactivity for FY 2002, a net decrease of \$7.5 million from the FY 2001 Enacted level. This investment will support ocean and coastal monitoring and assessment, responses to oil and hazardous materials spills, and directed research programs to provide comprehensive scientific information for decisions about the protection and sustainable use of coastal and ocean resources. These activities also help minimize damages to natural resources in the Nation's coastal areas, estuaries, and oceans, including the Great Lakes. Included in this subactivity is continued support for the Cooperative Institute for Coastal and Estuarine Environmental Technology, a joint NOAA-University of New Hampshire Institute, at the FY 2001 Enacted level of \$5.8 million, the JASON project, at the Enacted level of \$2.5 million, and the Coastal Services Center at \$18.9 million. Also included is continuing support for NOS coral reef activities (\$14 million) and for coral reef studies in Hawaii and the Southeast (\$1.0 million for Hawaii, \$0.5 million for Florida and \$0.5 million for Puerto Rico), and funding for grants through the National Fish and Wildlife Foundation is maintained at \$1.0 million. One time funding in FY 2001 for Louisiana Brown Marsh Restoration (\$2.9 million) and the South Carolina Pfiesteria Research (\$0.5 million) are not requested in FY 2002. Additionally, no funds are requested to continue the FY 2001 projects: New Hampshire Marsh Restoration (\$1.0 million), and River Restorations (Dupage River, Detroit River, and Lower Rouge River - \$11.48 million).

A net decrease of \$12.5 million from the FY 2001 Enacted level was realized in the Ocean Resources Conservation and Assessment base after program terminations, restoration of the FY 2001 rescission and receipt of ATBs to cover non-avoidable increases for employee pay, rent and other charges.

Ocean Assessment Program: \$72.1 million

The total request of \$72.1 million for Ocean Assessment Program represents a decrease of \$0.7 million below the FY 2001 Enacted level.

Coastal Storms: \$1.0 million

NOAA requests \$1.0 million for this portion of Coastal Storms. This investment complements the increases requested in the Navigation Services subactivity to predict and reduce the watershed impacts of Coastal Storms. The new funding will allow NOAA to better provide capabilities to handle of coastal storm events by developing improved products and services that address specific state/local decision-maker needs. The Coastal Storms initiative will start to build an enhanced, seamless "observation-to-user" capability that provides accessible data and information, value-added tools, and training for users in regards to the impacts of coastal storms.

Response and Restoration: \$16.8 million

The total request of \$16.8 million for Response and Restoration represents a decrease of \$7.3 million below the FY 2001 Enacted level.

Spill Response and Habitat Restoration: \$2.0 million

The total request of \$2.0 million for Spill Response and Habitat Restoration represents an increase of \$2.0 million above the FY 2001 Enacted level. This investment will strengthen the capabilities of NOAA and its partners to protect and restore coastal resources under the Oil Pollution Act and CERCLA (Superfund), and improve NOAA's prevention and response capabilities. NOAA will develop and distribute tools and guidance to assist decision-makers tasked with protecting and restoring coastal resources impacted by contaminants, while also expanding its work at clean-up sites around the country. Increased funding will also enable NOAA to more accurately gauge the effectiveness of its spill response measures, leading to improved methods of restoring injured resources.

Estuary Restoration Act: \$2.0 million

The total request of \$2.0 million for Estuary Restoration Act represents an increase of \$2.0 million above the FY 2001 Enacted level. This investment will support agency-wide activities mandated by the Estuary Restoration Act of 2000. NOAA will work with other partners to implement a national estuary habitat restoration strategy designed to ensure a comprehensive approach towards habitat restoration projects. NOAA's activities include the development of scientifically sound monitoring protocols and standards for coastal habitat restoration projects. In addition, NOAA will develop restoration databases that provide quick and easy access to accurate and up to date information regarding all projects funded under the Estuary Restoration Act of 2000, as well as information on projects throughout the country that meet the standards established as a part of the Act for monitoring and data collection. This work will provide scientists and resource managers with information critical to successful estuary habitat restoration efforts.

Ocean and Coastal Management**\$140.7 million**

The total request of \$140.7 million for Ocean and Coastal Management represents a net decrease of \$9.5 million from the FY 2001 Enacted level. This investment supports the coastal states and territories in implementing Federal partnership programs that promote sustainable use of the Nation's coastal zone, and designating and managing unique and nationally significant marine and estuarine areas. Funding for the Nonpoint Pollution Control Implementation Grant program is continued at the FY 2001 Enacted level of \$10.0 million. Funding of \$29.9 million for the Great Lakes Community Restoration Grants program is not included, nor is funding of \$0.5 million for the Northwest Straits Citizens Advisory Committee.

The Ocean and Coastal Management base shows a net decrease of \$27.1 million below the FY 2001 Enacted level after program terminations, restoration of the FY 2001 rescission and receipt of ATBs for non-avoidable cost increases.

CZM Administration: \$6.4 million

The total request of \$6.4 million for Coastal Zone Management Administration represents an increase of \$0.4 million from FY 2001 Enacted levels. In addition, in order to streamline administrative processes, NOAA proposes to consolidate all funding for Program Administration under ORF, requiring replacement of the \$3.2 million that had been transferred from the CZM Fund in prior years. In FY 2002, the CZM Fund is proposed as a general offset to CZM Act activities. The CZM Administration funds are requested to support NOAA's National program administration responsibilities under the Coastal Zone Management Act (CZMA), which continue to grow. The increase will assist NOAA's ability to bring together representatives from state, Federal, and tribal governments and the private sector, and to conduct outreach to coastal decision-makers and the public to address issues such as coastal hazards, habitat and polluted runoff. It will enable NOAA to meet the increasing requests of the states (33 in the program, one state program in development) for support and technical assistance. The increase will also enable NOAA to address National support for the 25 existing and 2 proposed National Estuarine Research Reserves.

Coastal Zone Management Grants: \$69.0 million

The total request of \$69.0 million for Coastal Zone Management Grants represents an increase of \$8.6 million from FY 2001 Enacted levels. This continued investment will provide direct support to coastal states for implementing and improving their approved coastal management programs. Currently 33 of the 35 eligible coastal states have an approved coastal management program, with approval of the 34th state program, Indiana, expected in FY 2002. Combined, these programs serve to manage and protect 99.9% of the Nation's shoreline to the benefit of the environment and the economy. This increase would provide resources for coastal states to more fully implement their coastal management plans and assist states in enhancing their management programs through implementation of Enhancement Strategies under Section 309 of the Coastal Zone Management Act (CZMA).

The Coastal Zone Management Program is a Federal-state partnership which works to ensure the wise use of coastal resources for the benefit of the entire nation and which allows coastal states and communities to address issues of coastal resources and development. The CZMA provides grants to coastal states and territories to address issues of national importance such as the impact of coastal storms and flooding, declining water quality, shortage of public access to the shoreline, loss of wetlands, deteriorating waterfronts and harbors, and the challenge of balancing economic and environmental demands in increasingly competitive ports.

National Estuarine Research Reserves: \$16.4 million

The total request of \$16.4 million for National Estuarine Research Reserves operations represents an increase of \$1.7 million from FY 2001 Enacted levels. This continued investment will improve the ability of NOAA and its state partners to understand, manage, and protect coastal habitats and biodiversity. The NERRS is a network of protected areas established to improve the health of the Nation's estuaries and coastal habitats through long-term research and protection, and to address such issues as water quality, loss and degradation of habitat, and loss of species biodiversity. The increase will significantly enhance the monitoring and training programs at the 25 designated reserves, and ultimately lead to healthier estuaries, coastal water quality, and fisheries. Funding will also support the two new sites in development in California and New York.

NOAA and state reserve staff will continue to expand the System-Wide Monitoring Program (SWMP) by increasing spatial coverage of water quality stations, and by monitoring additional biological indicators. The SWMP is a national monitoring system that will integrate water quality, biological, and land-cover change elements, making the information available to scientists managers. Reserve staff will also improve estuarine resource management by providing enhanced technical training for planners, policy-makers, and other state and local coastal decision-makers by focusing on water quality, habitat, invasive species, and sustainable ecosystem issues. Funding of \$9.9 million is requested in the PAC account to complement these activities by providing resources for research, education, and visitor facilities at the various reserve sites.

Marine Sanctuary Program: \$36.0 million

The total request of \$36.0 million for the National Marine Sanctuary Program (NMSP) operations represents an increase of \$3.6 million from FY 2001 Enacted levels. This continued investment will allow for upgrading the operating and technical capacity in the thirteen national marine sanctuaries. Congress has required NOAA to invest in providing adequate resources for the management and protection of existing sanctuaries prior to designating new sanctuary sites. The Congress has called for sufficient resources for operational staff, facilities and equipment, effective implementation of management plans, enforcement, and particularly for site characterization including cultural resources and inventory of existing natural resources. The FY 2002 increase will those efforts, which will improve protection of important sanctuary resources, including coral reefs, endangered marine mammal, sensitive habitats, and significant cultural resources.

Specifically, funds will be used to hire personnel at the Channel Islands and Thunder Bay Sanctuaries, provide vessel time to conduct deep water ocean research, implement management changes and new regulations. NOAA will use vessels and aircrafts to inventory natural and cultural resources at all thirteen sanctuaries, and the Northwest Hawaiian Islands coral reserve including activities conducted under the Sustainable Seas Expeditions.

Marine Protected Areas Program: \$3.0 million

NOAA requests a total of \$3.0 million for Marine Protected Areas. This investment will strengthen and improve agency-wide Marine Protected Area (MPA) programs and their conservation goals. This effort supports NOAA's responsibilities for fulfilling the National Marine Sanctuaries Program, National Estuarine Research Reserve Program, Coastal Zone Management Program, and coral reefs. This funding will foster collaboration with the Department of the Interior and other Federal agencies, state, local, tribal and territorial governments as well as non-governmental partners. Efforts will focus on developing a supporting framework for effective communication and collaboration among MPA programs by creating a national system of marine protected areas including NMS, NERRS, and other Federal, state, and tribal marine protected areas. These funds will also support preparation of the first comprehensive inventory and assessment of the existing system of U.S. MPAs. The NOAA MPA Program will consist of a Marine Protected Areas Center, comprised of a small core staff in Washington, DC and two regional Institutes of Excellence.

Acquisition of Data

All funding for this program has been transferred to the Office of Marine and Aviation Operations

(OMAO) under the Marine Operations subactivity. The transfer of these activities to OMAO will allow for the management of the fleet operations as a NOAA-wide asset. The NOAA fleet and charter vessels provide NOS with collection of hydrographic and coastal assessment data through days-at-sea for programs of significant National interest.

Procurement, Acquisition and Construction (PAC)

National Ocean Service

\$27.9 million

NOAA requests a total of \$27.9 million in the PAC account for NOS, a decrease of \$37.9 million from FY 2001 Enacted levels.

Beaufort Lab Repairs: \$1.0 million

NOAA requests \$1.0 million for critically needed renovations at the Center for Coastal Fisheries Habitat Research in Beaufort, North Carolina to address sewage waste problems and major electrical repairs.

Coastal Services Center: \$1.0 million

NOAA requests \$1.0 million for the Coastal Services Center in Charleston, South Carolina to partially demolish some of the obsolete and deteriorating structures that pose safety hazards and to begin an expansion of the facility to provide additional office spaces, a storage area and loading dock.

National Marine Sanctuary Program: \$16.0 million

NOAA requests total funding of \$16.0 million for the National Marine Sanctuary Program, \$13.0 million above FY 2001 Enacted levels, that will begin the implementation of a facilities plan that prioritizes needs and opportunities at individual sites in order to construct visitor centers and conduct collaborative education projects. This linked network of interpretive facilities will actively engage the public in the spirit of ocean exploration and discovery and includes sites in the Florida Keys, Hawaii, Massachusetts, Georgia, and California.

National Estuarine Research Reserve: \$9.9 million

NOAA request \$9.9 million total requested for the NERRS, a decrease of \$28.0 million below FY 2001 Enacted levels, will provide protection of key estuarine habitats (i.e., wetlands and other habitat slated for development; threatened and endangered species habitat; areas for habitat restoration; etc.) through state land acquisition and construction of facilities for existing and new reserves. Improved or expanded NERRS facilities will provide needed visitor, research and education centers and interpretive exhibits for visitor access and resource protection.

Other Accounts

Coastal Impact Assistance Fund (CIAF)

NOAA does not request funding to continue the Coastal Impact Assistance Fund. NOAA had to make hard choices to meet efforts to slow government growth. NOAA already has Coastal Zone Management grants (for which NOAA is requesting an increase in FY 2002) for all 33 eligible states which address many of the same issues. The CIAF was targeted at only seven states.

Coastal Zone Management Fund (CZMF) [Offset to ORF]

The Coastal Zone Management Fund was established by the Coastal Zone Reauthorization Amendments of 1990. The fund consists of loan repayments from the former Coastal Energy Impact Program. The proceeds are to be used to offset the ORF account for the costs implementing the Coastal Zone Management Act of 1972, as amended. As part of this transfer, 49 FTE will be moved to the CZM Administration line in ORF. Due to declining loan repayments into the fund, this amount will be only \$3.0 million, \$0.2 million less than in FY 2001.

Environmental Improvement and Restoration Fund (EIRF): \$5.2 million

NOS requests a total of \$5.2 million of a total NOAA request of \$10.4 million for the Environmental Improvement and Restoration Fund (EIRF). The other half of the EIRF is described under the National Marine Fisheries Service. The EIRF was created by the Department of Interior and the Related Agencies Act of 1998 for the purpose of carrying out marine research activities in the North Pacific. The EIRF provides funds for the purpose of carrying out marine research activities in the North Pacific. These funds will provide grants to Federal, State, private or foreign organizations or individuals to conduct research activities on or relating to the fisheries or marine ecosystems in the North Pacific Ocean, Bering Sea, and Arctic Ocean.



National Marine Fisheries Service

Total Request: \$734,211,000

ORF: \$598,036,000

PAC: \$14,700,000

Fishermen's Contingency Fund: \$952,000

Foreign Fishing Observer Fund: \$191,000

Fisheries Finance Program: \$287,000

Promote & Develop: \$4,828,000

Pacific Coastal Salmon: \$90,000,000

Pacific Salmon Treaty: \$20,000,000

Environmental Improvement & Restoration Fund: \$5,217,000

The National Marine Fisheries Service (NMFS) is responsible for the management and conservation of living marine resources within the United States' Exclusive Economic Zone. NMFS also provides critical support and plays a key advisory role in the management of living marine resources in coastal areas under state jurisdiction, provides scientific and policy leadership in the international arena, and implements internationally agreed-upon conservation and management measures. Through science-based conservation, management actions aimed at sustaining long-term use, and promoting of the health of coastal and marine ecosystems, benefits to the Nation from the use of living marine resources are maximized. Programmatic authorities for NMFS' fisheries management, protected species, and habitat conservation activities derive primarily from the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), the Sustainable Fisheries Act (SFA), the Marine Mammal Protection Act (MMPA), and the Endangered Species Act (ESA). Other acts provide additional authorities for enforcement, seafood safety, habitat restoration, and cooperative efforts with states, interstate fish commissions, and other countries. All these activities rely on a strong scientific and research competency to support the challenging public policy decision process associated with this stewardship responsibility.

Fisheries Modernization. When NMFS' predecessor (the Bureau of Commercial Fisheries) was

incorporated into NOAA 30 years ago, no one predicted the current complexity of living marine resource stewardship. Maximizing the value - commercial, recreational, intrinsic, and ecological - of living marine resources to the Nation in the 21st Century requires NMFS to take a fresh approach to its stewardship role and make basic changes in the way it conducts business. The FY 2002 *Fisheries Modernization* initiative begins this change. NMFS proposes a long-term commitment to improve its structure, processes, and business approaches to meet its mission of sustaining the Nation's living marine resources and their habitat. This initiative will improve NMFS' science, management, and enforcement programs and begin to rebuild its aging infrastructure. These improvements will result in measurable progress in rebuilding or rehabilitating and sustaining the biological and economic health of fisheries and protected species in the United States. Increased funding for improved data collection by NMFS and its industry and state partners, more accurate stock assessment models, and better management processes that synthesize information into successful public policies is essential to achieving its legislative mandates of building sustainable fisheries, restoring healthy coastal ecosystems, and enhancing the recovery of protected species.

For FY 2002, NMFS requests a total of \$734.2 million, \$598.0 million in the ORF account, \$14.7 million in the PAC account, and \$121.5 million in other related accounts. The ORF total includes an increase of 60 FTE and a decrease of \$36.0 million from the FY 2001 Enacted level.

Significant Adjustments-to-Base

Mandatory Pay and Inflationary Costs: \$11.2 million

NOAA requests an increase of \$11.2 million to fund Adjustments-to-Base (ATBs) for NMFS base activities. The increase will fund the FY 2002 federal pay raise of 3.6% and annualize the FY 2001 pay raise of 3.8%. The increase will also provide mandatory inflationary increases for non-labor activities, including service contracts, field office lease payments, and rent charges from the General Service Administration (GSA).

Adjustments: -\$26.8 million

The NMFS base was also adjusted to transfer \$26.8 million for NMFS Acquisition of Data to the Office of Marine and Aviation Operations under the Marine Operations subactivity.

Restoration of FY 2001 Rescission: \$1.2 million

NOAA requests an increase of \$1.2 million to restore the FY 2001 rescission. Restoration of these funds in FY 2002 is required to sustain NMFS current services.

Detailed Program Increases by Sub-Activity

Operations, Research, and Facilities (ORF)

Information Collection and Analysis

\$273.8 million

The total request of \$273.8 million represents an increase of \$18.5 million over the FY 2001 Enacted level for this subactivity. The goal of this budget subactivity is to provide accurate and timely analyses of the biological, ecological, economic, and social aspects related to the use of the Nation's living marine resources. This information is provided through various research, stock assessments, and data collection activities conducted by NMFS, states, interstate commissions, universities, and the industry. Also included are activities to: determine the impacts of the incidental taking of marine mammals and endangered species in fishing operations; develop forecast models for marine resource populations, ecosystems, and fishery systems; improve the quality and timeliness of information on living marine resources, and their habitats.

Resource Information

\$200.8 million

The total request of \$200.8 million reflects an increase of 19 FTE and \$7.6 million over the FY 2001 Enacted level for Resource Information. This level of funding will continue to support many of the programs funded in FY 2001 including: \$4.3 million for west coast groundfish research, \$7.3 million for Magnuson-Stevens Act implementation activities, \$3.4 million for Chesapeake Bay research, \$0.3 million for Southeastern sea turtle research and recovery, and \$8.3 million for red snapper research. Funding within Resource Information to address Steller sea lion recovery is continued at \$29.3 million (additional funding for Steller sea lions is included in the Fisheries Management Programs line). Below are details outlining the increases within the FY 2002 request for Resource Information:

- **Expand annual stock assessments: \$15.0 million**

The total request of \$15.0 million represents an increase of 19 FTE and \$13.3 million above the FY 2001 Enacted level. Funding will provide for additional data collections to improve NMFS' ability to make accurate, timely stock predictions around the country. Funding at this level would add 829 chartered ship days toward the gap of 2,564 days identified in the NMFS Stock Fisheries Data Acquisition Plan as needed for adequate stock assessment coverage. The additional 829 charter ship days would provide 2,265 charter days at sea. Within this total amount is an increase of \$1.0 million to specifically enhance the assessment of marine mammal population status and trends as required by the Marine Mammal Protection Act.

- **Fisheries oceanography: \$1.5 million**

The total request of \$1.5 million for fisheries oceanography represents an increase of \$1.5 million over the FY 2001 Enacted level. Funding will better enable NMFS to assess how long-term environmental factors affect fish stocks, thereby identifying the causes of population fluctuations and improving stock predictions. This program provides an ecosystem context for measuring and predicting population health of species within the ecosystem (e.g., fish and marine mammals), and

to model and forecast how these populations respond to environmental and climate changes.

- **South Florida: \$1.9 million**

The total request of \$1.9 million for South Florida represents an increase of \$0.6 million over the FY 2001 Enacted level. Funding will be used to expand research and monitoring activities in South Florida. As a result of the U.S. Army Corps of Engineers construction projects within the Florida Everglades, NMFS must monitor the impact of inland restoration efforts and the changing freshwater inflow on Florida Bay habitats, nutrient flow, hydrodynamics, and ultimately on measurable ecosystem productivity and health.

- **Aquaculture: \$1.0 million**

The request of \$1.0 million for aquaculture is needed to conduct activities that support the development and implementation of a code of conduct for responsible aquaculture in the Exclusive Economic Zone that will improve the regulatory framework for aquaculture. NMFS will address the important environmental aspects of aquaculture and enhancement activities by developing and implementing environmental monitoring programs, investing in science and technology, and increasing work in the non-indigenous species area, especially for shrimp viruses.

- **Pacific highly migratory species: \$1.0 million**

The request of \$1.0 million will address this growing and critical research need as a new regional council Fishery Management Plan for these species is developed. Among the specific tasks to be undertaken are:

- conduct stock assessments and biological studies for four major tuna species, and three species of sharks;
- address issues affecting management policy choices such as fleet capacity and compliance;
- implement research, monitoring, and management measures under the West Coast Highly Migratory Species Fishery Management Plan;
- conduct research to evaluate the extent of bycatch and effectiveness of mitigation measures in purse seine fishing using fish aggregating devices;
- develop and implement assessment methodology tailored for highly migratory species.

- **Southeast Cooperative Research: \$3.0 million**

The total request of \$3.0 million represents an increase of \$0.5 million over the FY 2001 Enacted level for Southeast cooperative research activities. This program, as well as the National program funded within Resource Information and the Northeast Cooperative Research program funded under the Fisheries Management Programs subactivity involves fishermen in designing and conducting research programs utilizing the expertise and insights of people who have been close to the environment for the duration of their career - fishermen - in resource survey design and interpretation. These cooperative efforts also work to dispel some of the misperceptions of the methods employed by government scientists responsible for providing scientific advice for fisheries management. Working together to design and implement data collection programs helps all involved parties and strengthens the resultant product. NMFS is addressing regional issues and species-specific needs in various programs around the country through these cooperative programs.

Fishery Industry Information

\$47.1 million

The request of \$47.1 million for Fishery Industry Information represents an increase of \$9.6 million over the FY 2001 Enacted level. Below are details outlining the FY 2002 request for Fishery Industry Information:

- **Fish Economics and Statistics research: \$3.4 million**

The total request of \$3.4 million for Fish Economics and Statistics research represents an increase of \$1.4 million over the FY 2001 Enacted level. This funding will increase NMFS' capability to conduct economic and social assessments of policy alternatives by improving the economic and social science staff capability, and initiation of data and applied research programs. The outcome will enable NMFS to evaluate and predict the economic and community impacts of policy alternatives, and satisfy statutory, regulatory and Executive Order requirements for assessing the benefits and costs of fisheries management and endangered/protected species management actions. This will help close economic and social science vulnerabilities in NMFS' stewardship processes, including compliance with the National Environmental Policy Act and Regulatory Flexibility Act, that have been identified by internal and external advisory and oversight groups.

- **National Fisheries Information System: \$8.0 million**

The total request of \$8.0 million for the National Fisheries Information System will be used to implement a National Fisheries Information System to improve the quality, timeliness, coverage and access to data collected by State and Federal entities for use in the science and management of fisheries. This System has been developed in cooperation with the fishing industry, states, and interstate fisheries commissions as outlined under section 401 of the Magnuson-Stevens Act. The additional \$1.5 million for the Atlantic States Marine Fisheries Commission is continued in the FY 2002 request.

Information Analyses and Dissemination

\$25.9 million

The total request of \$25.9 million for Information Analyses and Dissemination represents an increase of \$1.3 million over the FY 2001 Enacted level. This request includes \$4.0 million for **information technology refreshment** within the Computer Hardware and Software line an increase of \$0.5 million over the FY 2001 Enacted level. These funds support the scientific and computational technology infrastructure necessary to analyze data through computer models used to forecast changes in resource abundance required for long-range management. NMFS' current computer infrastructure is outdated (over 8 years old) and must be updated to keep pace with the ever increasing flow of fisheries information.

Conservation and Management Operations

\$302.9 million

The total Request of \$302.9 million for this subactivity represents an increase of \$13.1 million over the FY 2001 Enacted level. Funding provides for the development and implementation of Fishery Management Plans (FMPs) under the Magnuson-Stevens Fishery Conservation and Management Act and the

Sustainable Fisheries Act, and for the management of protected species under the Endangered Species Act and Marine Mammal Protection Act. It also includes funding for the enforcement of laws and regulations under these and other statutes. This subactivity also funds NMFS efforts to protect fisheries habitats, the eight Regional Fishery Management Councils, and Mitchell Act hatcheries along the Columbia River in the Pacific Northwest.

Fisheries Management Programs

\$140.1 million

The total request of \$140.1 million for the Fisheries Management programs represents an increase of 4 FTE and a decrease of \$7.5 million from the FY 2001 Enacted level. This level of funding will continue to support many of the programs funded in the FY 2001 appropriation including: \$6.7 million for American Fisheries Act implementation, \$21.0 million for data collection for fishery management programs including implementation of National Environmental Policy Act requirements, and \$11.0 million for coral reef programs. Below are details outlining the FY 2002 request for the Fisheries Management Programs:

- **NMFS Facilities Operations and Maintenance: \$4.4 million**

The total request of \$4.4 million represents an increase of \$0.4 million over the FY 2001 Enacted level to cover operation and maintenance costs at two key facilities, the new Santa Cruz, California, Laboratory and Kodiak, Alaska, Laboratory.

- **Essential Fish Habitat: \$2.5 million**

NOAA requests a total of \$2.5 million for essential fish habitat (EFH) activities. This investment will enable NMFS to collect critical scientific data that are needed to identify EFH more precisely for managed species, enhancing the effectiveness of fishery management actions, and filling data gaps that can provoke litigation. Research will also focus on the effects of specific fishing activities on EFH, comparing those impacts to other sources of habitat degradation, monitoring habitat recovery in areas where fishing has been curtailed, and developing management strategies to ensure sustainable harvesting practices. NMFS will enhance its ability to provide timely and meaningful conservation recommendations for activities that have the potential to impact EFH.

- **Fisheries Observers: \$4.0 million**

NOAA requests a total of \$4.0 million to support the National Observer Program. This investment would provide increased observer coverage to minimum levels as required by regulation or to optimal levels as recommended by fisheries scientists for statistical validity, and initiate coverage in fisheries that were previously not observed.

- **Fisheries Habitat Restoration: \$12.0 million**

The total request of \$12.0 million represents a decrease of \$5.9 million from the FY 2001 Enacted level for the Fisheries Habitat Restoration program. Within this amount and increase of \$2.0 million is requested to expand community-based restoration projects. Within the FY 2002

request, both the Bronx River restoration project and the Pinellas County, Florida restoration project will continue at the \$1.0 million level.

- **Northeast Fisheries Management: \$3.5 million**

NOAA requests a total of \$3.5 million for Northeast Fisheries Management. This investment will enable NMFS to continue rebuilding overfished and overcapitalized Northeast fisheries including groundfish and scallops. Additionally, this funding provides programmatic support for NMFS' participation in regional cooperative research programs.

- **Cooperative Research in the Northeast: \$5.0 million**

NMFS requests \$5.0 million to continue cooperative research activities in the Northeast that was started in FY 2001 as a transfer from USDA. This program, as well as, the Southeast Cooperative Research program and National Cooperative Research programs funded in Resource Information involves fishermen in designing and conducting research programs utilizing the expertise and insights of people who have been close to the environment for the duration of their career - fishermen - in resource survey design and interpretation. NMFS is addressing regional issues and species specific needs in various programs around the country through these other cooperative programs. An additional \$5.0 million for the Northeast Consortium, included in the FY 2001 appropriation, is maintained in the FY 2002 request.

- **Regional Councils: \$15.7 million**

The total request of \$15.7 million represents an increase of \$2.5 million over the FY 2001 Enacted level for the eight Regional Fishery Management Councils. This request supports all eight Councils' increased workload from new programs and regulations as a result of implementing the Sustainable Fisheries Act amendments to the Magnuson-Stevens Act. NMFS is the Councils' only source of funding to carry out their vital mission.

Protected Species Management

\$105.0 million

The total request of \$105.0 million for the Protected Species Management program represents an increase of \$10.2 million over the FY 2001 Enacted level. This request proposes to continue protected species recovery and management efforts including Atlantic salmon, California sea lions, Atlantic right whales, native marine mammals, Pacific salmon, and the marine mammal stranding network.

- **Endangered Species Act Recovery Plan: \$62.8 million**

The total request of \$62.8 million represents an increase of 12 FTE and \$7.6 million over the FY 2001 Enacted level for the Endangered Species Act Recovery Plan. This level of funding continues current base programs and includes \$0.9 million for Steller sea lion Recovery and \$38.0 million for Pacific Salmon.

- **Sea Turtles: \$6.3 million**

The total request of \$6.3 million represents an increase of 6 FTE and \$3.0 million over the FY 2001 Enacted level for marine sea turtle activities to recover Atlantic and Pacific stocks threatened by domestic and international fisheries interactions as well as inadequate conservation of marine turtle nesting beaches.

- **Marine Mammals: \$4.5 million**

The total request of \$4.5 million represents an increase of \$1.0 million over the FY 2001 Enacted level for **dolphin** conservation and recovery to expand current activities in stock identification and assessment, to reduce mortality incidental to commercial fishing activities, and to initiate efforts to use bottlenose dolphins as an indicator of the health of the ecosystems they occupy.

- **Atlantic Salmon: \$6.3 million**

The total request of \$6.3 million represents an increase of 6 FTE and \$1.5 million over the FY 2001 Enacted level to conserve and restore healthy populations of Atlantic salmon in the Gulf of Maine Distinct Population Segment and their habitats. NOAA will use this increase to expand the monitoring of Atlantic salmon population dynamics, expand habitat assessment and conservation, enhance scientific knowledge related to human resource usage and development activities that are affecting species survival, and strengthen evaluations to minimize risk through coordinated planning, innovative partnering, and on-site involvement in restoration, conservation, and protection activities.

- **Right Whales: \$7.0 million**

The total request of \$7.0 million represents an increase of \$2.0 million over the FY 2001 Enacted level for Northern right whales to expand current population and health assessments and recovery efforts in the North Atlantic and in the North Pacific.

Enforcement and Surveillance

\$47.3 million

The total request of \$47.3 million represent an increase of 27 FTE and \$10.1 million over the FY 2001 Enacted level for Enforcement and Surveillance activities to modernize NMFS' fisheries and protected species enforcement programs. Of this amount, \$7.4 million is needed for additional support, continued modernization and expansion of the vessel management system (VMS) program. This national program is capable of accommodating nearly 10,000 vessels throughout a number of different fisheries. The remaining \$39.9 million is requested to expand and modernize base enforcement programs, an increase of \$3.9 million over FY 2001 Enacted level. These programs include, Alaska and west coast groundfish enforcement, protected species enforcement, state and local partnerships, specialized Magnuson-Stevens Act

investigatory functions, community oriented policing and problem solving, and swordfish/Patagonian toothfish import investigations.

State and Industry Assistance Programs

\$21.4 million

The total request of \$21.4 million for State and Industry Assistance is \$40.8 million below the FY 2001 Enacted level. This continued investment provides the same level as the FY 2001 Enacted for product quality and safety research, grants to states under the Anadromous and Interjurisdictional Fisheries Acts, the three interstate fisheries commissions, and implementation of the Atlantic Coastal Fisheries Act.

Acquisition of Data

All funding for this program has been transferred to the Office of Marine and Aviation Operations (OMAO) under the Marine Operations subactivity. The transfer of these activities to OMAO will allow for the management of the fleet operations as a NOAA-wide asset.

Procurement Acquisition and Construction Account (PAC)

Construction

\$14.7 million

The total request of \$14.7 million for this activity represents a decrease of \$39.5 million from the FY 2001 Enacted level.

- **Juneau Research Facility: \$11.7 million**

The total request of \$11.7 million for the Juneau Research Facility represents a decrease of \$3.2 million from the FY 2001 Enacted level. Funds will be used to continue the construction of a new state-of-the-art research facility at Lena Point. This facility will replace the current outdated laboratory and expand NMFS groundfish and ecosystem research capabilities significantly. This facility will also include a sea water storage and distribution system. The proposed facility will enable NMFS to more adequately manage the commercial, recreational and environmental resources in the North Pacific. The University of Alaska Fairbanks, School of Fisheries and Ocean Sciences continues to plan to co-locate their new facility at Lena Point.

- **Honolulu Facility: \$3.0 million**

NOAA requests a total of \$3.0 million to continue the replacement of the Honolulu Laboratory. Compliance with current building code and disability standards continues to be a serious concern. This funding will enable the project to proceed with work needed to correct several deficiencies, such as overcrowding, lack of laboratories, inadequate or nonexistent handicap access, and hazardous materials. Specific activities to be completed under this initial phase will include preparations for relocating personnel to temporary facilities during construction, construction of mitigation parking for neighboring University of Hawaii, and initial site preparations.

Fleet Replacement

In January of 2001, NOAA awarded a construction contract to Halter Marine, Inc. of Gulfport, Mississippi for the first FRV. The Fisheries Research Vessel (FRV) program contract includes options for up to three additional vessels. No funds are requested for a second vessel in FY 2002. The state-of-the-art ship, which will be NOAA's first acoustically quiet fisheries research vessel, will become operational in three years. This vessel will be capable of conducting a wide variety of scientific missions, including fisheries stock assessments, physical and biological oceanography, marine mammal research, atmospheric and sea surface research, and development of advanced technologies for fisheries research and assessment. This program remains a high priority for NOAA and NMFS.

Fishermen's Contingency Fund (FCF) \$0.9 million

The total request of \$0.9 million continues this Fund at the FY 2001 Enacted level. Title IV of the Outer Continental Shelf Lands Act Amendments of September 18, 1978, (P.L. 95-372, Section 402) as amended, established the Fisherman's Contingency Fund. This Fund provides compensation to domestic fishermen for the damage or loss of fishing gear, and resulting economic loss due to obstructions related to oil and gas exploration, development, or production in areas of the Outer Continental Shelf.

The Fund is supported by assessments on holders of leases, explorations, permits, easements, and rights of way in areas of the Outer Continental Shelf.

Foreign Fishing Observer Fund (FFOF) \$0.2 million

The total request of \$0.2 million continues this Fund at the FY 2001 Enacted level. The Foreign Fishing Observer Fund provides observer coverage of foreign fishing activities within the 200-mile Exclusive Economic Zone (EEZ). The Fund is supported by fees charged to foreign fishermen for the cost of placing an observer aboard their vessel while operating within the EEZ. Beginning in FY 1985, foreign fishermen were also permitted to contract directly with NMFS approved observer contractors to obtain observers (the Supplemental Observer Program). Appropriated funds plus direct contracting under the Supplemental Observer Program will provide 100% observer coverage.

Fisheries Finance, Program Account \$0.3 million

NOAA requests a total of \$0.3 million for the Fisheries Finance, Program Account. Under the authority of the Merchant Marine Act of 1936 and the provisions of the Federal Credit Reform Act of 1990, the Federal Ship Financing Fund became a liquidating account for loan guarantees made prior to FY 1992. Loan guarantees made on or after October 1, 1991, were made under the Fishing Vessel Obligation Guarantee (FVOG) appropriation. The re-authorization of the Magnuson-Stevens Fishery Conservation and Management Act in September 1996 changed the program to direct loans, from loan guarantees. The loans awarded under the base Fisheries Finance Program can be used to provide long-term fisheries loans for vessels and shoreside facilities (including aquaculture facilities) and for industry-funded capacity reduction programs.

Promote and Develop Fishery Products & Research Pertaining to American Fisheries (P&D)

The American Fisheries Promotion Act (AFPA) of 1980 authorized a grants program for fisheries research and development projects to be carried out with Saltonstall-Kennedy (S-K) funds. S-K funds are derived from duties on imported fisheries products. An amount equal to 30% of these duties is being transferred to the Department of Commerce from the Department of Agriculture. FY 2002 estimates this transfer at \$72.8 million. Of this amount, \$4.8 million will be used for the S-K grants program to develop a healthy fishing industry (including costs of program administration). The remainder of the transfer (\$68.0 million) will be used to offset the Operations, Research, and Facilities (ORF) account. The duties transferred to this account are calculated on a calendar year basis and, if necessary, will be revised after the submission of the President's request.

Pacific Coastal Salmon Recovery Program \$90.0 million

The total request of \$90.0 million continues the Pacific Coastal Salmon Recovery Fund at the FY 2001 Enacted level. The states and tribes will use these funds for habitat restoration and protection, research and enhancement, monitoring and evaluation, and salmon recovery planning and implementation. These funds will be used to enhance Pacific Coastal Salmon for the purpose of helping share the costs of state, tribal and local conservation initiatives. Programs funded within this account will bolster existing State and tribal capabilities to assist in the conservation of Pacific salmon runs, some of which are at risk of extinction in the states of California, Oregon, Washington, and Alaska. Funds provided to these states will have at least a 25 percent match. Funds provided to Pacific coastal and Columbia River tribes do not require matching dollars. This budget responds to current and proposed listings of coastal salmon and steelhead runs under the Endangered Species Act by forming lasting partnerships with states, local and tribal governments and the public for saving Pacific salmon and their important habitats.

Pacific Salmon Treaty \$20.0 million

The total request of \$20.0 million continues to implement the Pacific Salmon Agreement at the FY 2001 Enacted level. This level of funding will provide \$10.0 million to capitalize the Southern Boundary Restoration and Enhancement Fund and \$10.0 million to the Northern Boundary and Transboundary Rivers Restoration Fund. The treaties are also supported by funds from the State Department. By FY 2003, a total of \$65.0 million is needed to fully fund the Southern Fund and \$75.0 million is needed to fully fund the Northern Fund. The two endowment funds are administered by the Pacific Salmon Commission for habitat, stock enhancement, science and salmon management initiatives in both the United States and Canada.

Environmental Improvement and Restoration Fund \$5.2 million

NMFS requests a total of \$5.2 million out of a total NOAA request of \$10.4 million for the Environmental Improvement and Restoration Fund (EIRF). The other half of the EIRF is described under the National Ocean Service. The EIRF was created by the Department of Interior and the Related Agencies Act of 1998 for the purpose of carrying out marine research activities in the North Pacific. The EIRF provides funds for the purpose of carrying out marine research activities in the North Pacific. These funds will provide grants to Federal, State, private or foreign organizations or individuals to conduct research activities on or relating to the fisheries or marine ecosystems in the North Pacific Ocean, Bering Sea, and Arctic Ocean.



Oceanic and Atmospheric Research

Total Request: \$340,798,000

ORF: \$330,188,000

PAC: \$10,610,000

The Office of Oceanic and Atmospheric Research (OAR), frequently called “NOAA Research,” conducts the scientific research, environmental studies, and technology development needed to improve NOAA’s operations and broaden our understanding of Earth’s atmospheric and marine environmental systems. NOAA Research currently contributes directly to the attainment of six of the seven goals of NOAA’s strategic plan, which articulates NOAA’s mission to support the Nation’s economic growth in an environmentally sound manner.

The NOAA Research budget activity supports joint programs with other Federal agencies, including the U.S. Weather Research Program, U.S. Global Change Research Program, Health of the Atmosphere, and Ocean Exploration. NOAA Research is also active in High Performance Computing and Communications, the Climate and Global Change Program, and efforts to sustain our coral reefs.



A coordinated national network of Federal laboratories and university partnerships carries out the NOAA research mission. Located in NOAA Research Laboratories, Office of Global Programs, Undersea Research Centers, Sea Grant Colleges, and university-based Joint and Cooperative Institutes, NOAA Research personnel are internationally recognized for their contributions to such fields of science as oceanography, climatology, and meteorology. These dedicated scientists translate new discoveries and technological developments into improvements to

NOAA's operations in weather, climate, and solar-terrestrial forecasting; coastal resource conservation; fisheries enhancement; and other areas. NOAA Research provides the sound science upon which decision makers can frame effective regulations to solve such environmental problems as the rehabilitation of the ozone layer. NOAA Research promotes economic growth by developing new products and techniques in marine biotechnology and aquaculture and improving economic resilience by improving the lead-time, accuracy, and specificity of climate and weather predictions. Ultimately, NOAA Research is dedicated to promoting the environmental sustainability of our Nation's economic competitiveness and well-being.



The total request of \$340.8 million for the OAR Budget Activity represents a level of funding of \$9.6 million less than the FY 2001 Enacted level. This continued investment will provide the resources necessary to continue vital research in fields ranging from climate and air quality to the oceans and Great Lakes. This request consists of program increases of \$26.0 million, a reduction of \$28.9 million for program terminations, \$0.7 million to restore the FY 2001 rescission, and a decrease of \$7.4 million in adjustments-to-base which include transferring Acquisition of Data to Program Support, and a \$2.0 million transfer to the new Ocean Exploration line item.

Significant Adjustments-to-Base

A key component of this request is an increase of \$5.5 million in base adjustments to cover the increased costs of pay, benefits, and other objects. Failure to receive these adjustments in any given year results in program dislocations and minor cutbacks. Failure to receive these adjustments over time has a cumulative impact that is programmatically devastating. Over the past six years, NOAA Research has received only 3 percent of the cumulative adjustments required to keep pace with inflation (or \$1.1 million of \$33 million required). Many laboratories can no longer cover their payroll out of base funding and have been forced to seek ever increasing amounts of reimbursable funding. Although this work supports NOAA missions, its shorter time frame does not fund the long-term focus needed to improve NOAA service delivery and provide the scientific input required to support our Nation's major environmental policy decisions.

Detailed Program Changes by Sub-Activity

Operations, Research and Facilities (ORF)

Climate and Air Quality Research: \$158.5 million

The total request of \$158.5 million for this subactivity represents an increase of \$14.4 million over the FY 2001 Enacted level. This continued investment in Climate and Air Quality Research focuses on learning the physical processes of the ocean and atmosphere to increase

modeling accuracy, thus furthering NOAA's predictive capabilities. Within this total, the following increases are included:

Climate Observations & Services: \$24.0 million (and \$3.6 million in PAC)

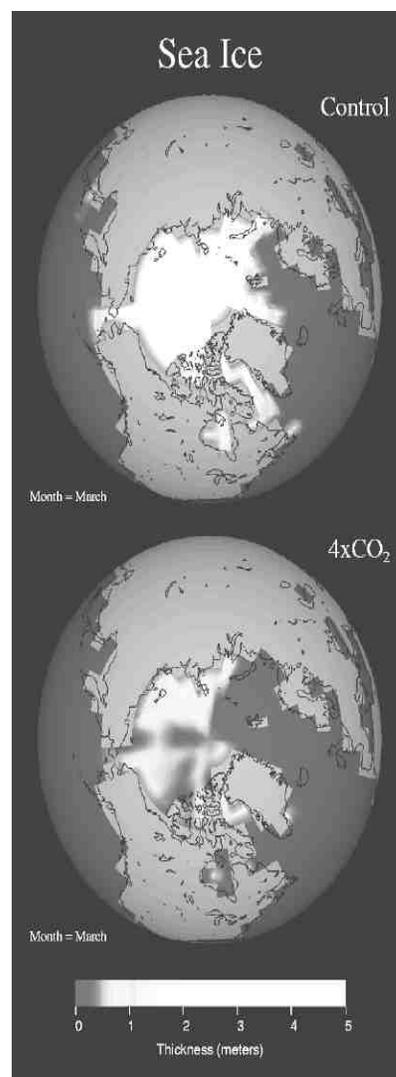
NOAA requests an increase of \$13.0 million for a total of \$24.0 million to advance the Climate Services Program (an additional \$1.6 million increase for a total \$3.6 million is requested in PAC for the Comprehensive Large Array data Stewardship System Initiative). The NOAA Climate Services program was initiated in FY2001 with the request of a new line under the OAR Climate and Air Quality subactivity and \$12.2 million was enacted. NOAA plans to develop complete climate services with initial emphasis on building an ocean observing system to address scientific and operational aspects of climate. The funds will be jointly managed by OAR, NESDIS, and NWS, with the specific increases as described below.

Regional Assessments, Education and Outreach: \$1.9 million

NOAA requests a total of \$1.9 million for investments in regional assessments, education and outreach. The impacts of climate variability from season-to-season or year-to-year manifest themselves on regional and local levels. The goal is utilization of climate variability information by regional and local managers and decision-makers to maximize economic gain and mitigate potential harmful impacts. This initiative addresses all aspects of the process by: (1) strengthening existing successful university-based, regional integrated assessments and creating new ones, (2) initiating an ambitious education and training program for NWS and private sector field meteorologists, hydrologists, and climatologists, (3) developing the tools, materials, and mechanisms for an effective NWS customer/decision-maker outreach program, (4) effecting the transition of the Pacific ENSO Applications Center from demonstration project to long-term operational status.

Climate Change Assessments: \$0.7 million

NOAA requests a total of \$0.7 million for climate change assessments. This investment will expand and improve the accessibility and availability of weather, water, and climate information to the American people and high-risk communities. The environmental assessments have become the primary tool to deliver information and knowledge on decadal-to-centennial climate change to governments, industry, the scientific community and the general public. Over the past two years we have led and contributed to Ozone, IPCC and US National Assessments. Other assessments being proposed are: Arctic Change, and Science of North American Fine Particles (Canada, US, Mexico). NOAA will: contribute a leadership role in the North American Research Strategy for Tropospheric Ozone (NARSTO) Assessment of Surface-level Ozone and fine particles for Canada, U.S., and Mexico; complete the first draft of the circum-Arctic assessment of what is known about climate variability in the Arctic and how this variability affects



ecosystems and human activities; interpret for key U.S. regions the major findings on fine-particle and ozone levels and how choices associated with one influence the others; provide governments, industry, and the general public a summary of the major findings of the IPCC assessments on climate change; and contribute to a follow-on to the current U.S. National Assessment.

Weather-Climate Connection: \$0.9 million

NOAA requests \$0.9 million for the weather-climate connection. This investment will enable NOAA to expand its diagnostic and modeling efforts to understand the relationship between sub-seasonal tropical variability and changes in the frequency, location, and intensity of extreme weather events over the United States. Observational and modeling efforts will aim to document the pattern of variations in tropical rainfall on weekly-to-monthly time scales as well as air-sea interactions both in tropical systems and in mid-latitude oceanic and land-falling storms. During El Niño, shifts in the Pacific storm track affect the paths of storms approaching the U.S. west coast and influence weather across the entire country. Other tropical fluctuations at sub-seasonal scales can also lead to similar effects on U.S. weather. At present, operational forecast models do not simulate these week-to-week tropical fluctuations well, if at all.

Carbon Cycle: \$2.3 million

NOAA requests \$2.3 million for this activity. This investment will enable NOAA to establish a network of more densely spaced airborne and tall-tower-based sampling sites over North America as part of a multi-agency effort to quantify, understand, and project the evolution of global carbon sources and sinks in order to better predict future climate. This sampling program will complement local-scale process research managed by other agencies and provide an estimate of the magnitude of regional terrestrial sinks on a continental scale. Finally, data obtained through process studies and observational networks must be analyzed. These studies include analyzing the causes of variability of carbon sinks from year to year and decade to decade, understanding the feedbacks between the carbon cycle and the physical climate system and quantifying and incorporating the effects of human land-use change into climate models.

Ocean System for Improved Climate Services: \$7.3 million

NOAA requests \$7.3 million for ocean system for improved climate services. This investment will enable NOAA to implement and maintain a global operational ocean observing system by enhancing its present components and establishing new ones. The system is based on a firm scientific foundation and closely coupled to other U.S. and international observing efforts. The National Ocean Research Leadership Council has recently created an office under the National Oceanographic Partnership Program (NOPP) whose function will be to integrate existing and new ocean observational efforts of the NOPP agencies and their international, state, local, and private-sector partners. The integration effort will facilitate broad user access to ocean knowledge, data, tools, and product specific components, such as networks and other aspects of the observing system. Additional components are briefly described below:

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- **Argo Floats** (\$3.2 million): Funding supports the U.S. commitment to provide and maintain one-third of the global array of 3,000 profiling floats to observe the ocean's upper layer in real time. These floats, together with satellites, will be the oceanic equivalent of today's operational observing system for the global atmosphere. This is a truly international effort with 7 nations plus the European Union currently providing floats and 4 additional nations planning to provide floats in the very near future. The additional funds will permit NOAA to reach an annual deployment level of about 280 floats, which should be sufficient (given an annual expected loss rate of about 10 percent) to reach an array of 1,000 floats during FY 2005. After this point, new floats deployed would be replacements (since the design lifetime of an Argo float is 4-5 years).
 - **Ocean Reference Stations** (\$0.9 million): NOAA will implement a global network of ocean reference station moorings, expanding from the present two pilot stations to a permanent network of 16 by 2010. These have been a cornerstone of decadal-to-centennial documentation of changes in ocean properties and will also improve seasonal-to-interannual forecasting ability by providing calibration/validation data for remote sensing of surface-flux fields.
 - **Volunteer Observing Ships (VOS)** (\$0.5 million): The global atmospheric and oceanic data from ships of opportunity have been the foundation for understanding long-term changes in marine climate and are essential input to climate and weather forecast models. In order to satisfy climate-prediction needs, NOAA will increase the quality of these data by adding new sensors for surface-flux observations as well as bio-geochemical sensors.
 - **Ocean Carbon** (\$0.9 million): Projecting decadal-to-centennial global climate change is closely linked to assumptions about feedback effects between the ocean and atmosphere related to additional input of carbon dioxide into the atmosphere. NOAA will add autonomous carbon-dioxide sampling instruments to the moored arrays and the VOS fleet and will begin to implement an ongoing ocean-carbon inventory that will survey the globe once every ten years.
 - **Arctic Ocean Fluxes** (\$0.5 million): Over the past 20 or more years, significant changes have been noted in the Arctic, such as thawing of permafrost, earlier break-up of ice on rivers, and thinning of the ice cover on the Arctic Ocean. Recent studies conclude that changes seen in the extent of Arctic ice are unlikely to have been caused by natural variability, and substantial decreases in sea-ice thickness and extent are predicted to occur in the 21st century. NOAA proposes to join with other Federal agencies and international collaborators to begin a long-term effort to quantify the flux of fresh water from the Arctic to the North Atlantic. The initial steps will be made through deployment of moorings at critical locations in the Arctic.
 - **Data Management & Data Assimilation** (\$1.3 million): A robust and scalable data management infrastructure is essential to the vision of a sustained ocean-observing system. The data must be retained and made available for retrospective analyses to understand climate change and for managing observing system operations and improvements. To utilize effectively the new observations, NOAA will expand the current ocean analyses to the global domain and develop and implement improved assimilation systems that can more effectively use the new data types that are being collected. Our participation in the Global Ocean Data Assimilation Experiment (GODAE) is one vehicle for doing this, involving both national and international communities, producing a variety of marine products, and using these observations in forecast systems.



Atmospheric Programs: \$51.8 million

The total request of \$51.8 million for this sub-activity represents an increase of \$3.7 million over the FY 2001 Enacted level. This continued investment in Atmospheric Programs supports improvements in weather, solar-terrestrial, and air-quality monitoring and prediction. Within this total, the following program increases are included:

U.S. Weather Research Program: \$3.7 million

NOAA requests a total of \$3.7 million for USWRP, an increase of \$2.2 million over the FY 2001 Enacted level. This investment continues the cooperative effort among OAR, NWS, and NESDIS within NOAA, three other USWRP agencies (NSF, NASA, and the Navy), and the university community. The USWRP will conduct research and development on experimental numerical model algorithms, provide field observational support, and strive for information and technology transfer to operations and services in order to reach performance goals defined for the following high priority areas:

- *Hurricanes at Landfall* - USWRP will focus on extending hurricane track predictions up to five days, improving the accuracy of the hurricane landfall location and improving the forecasts of hurricane intensity at landfall, surface wind forecasts, and providing more precise quantitative precipitation forecasts in conditions under which precipitation may lead to inland flooding. Field observations are planned during hurricane seasons in the western Atlantic, Caribbean, and Gulf of Mexico. The NOAA P3 and Gulfstream IV as well as NASA aircraft, each with state-of-the-art instrumentation, will be deployed in coordinated campaigns. Observations from NOAA, NASA, and Defense Meteorological Satellite Program (DMSP) satellites will be combined with other data sources to provide information for: hurricane process studies, assimilation into operational and experimental numerical models, and real-time use at national and local forecast offices.
- *Optimal Mix of Observations/Quantitative Precipitation Forecasts (QPF)* - This effort, also coordinated between the four agencies, will improve our understanding of the use of data from advanced observing systems which will improve numerical weather prediction. Although its initial focus will be mostly on hurricane landfall research, the USWRP will, over time, focus increasingly on accelerated research to improve quantitative precipitation forecasts. The goals of this effort are to improve the forecasts of winter coastal storms and severe winter weather (e.g., blizzards, ice storms, and winter flooding in the southern portions of the U.S.) and to extend these weather forecasts out to day 7 with acceptable skill. Research will also be directed toward better representation of convection in forecast models through the storm-scale experiments, understanding orographic effects, and development of coupled atmospheric and hydrologic models to better represent runoff and flooding potential.

Critical to USWRP success in meeting its goals is its ability to transfer research results to operations. This will be done in the form of weather prediction test beds, including Joint Hurricane Test Bed; the regional weather prediction test bed in Boulder, Co, for QPF; and the NOAA-NASA Joint Center for Satellite Data Assimilation.

Oceans and Great Lakes Programs: \$119.8 million

The total request of \$119.8 million for this subactivity represents a decrease of \$2.5 million from the FY 2001 Enacted level. This continued investment enhances our knowledge of ocean and Great Lakes environments so that they can be managed in a sustainable manner, promoting economic growth in marine industries while conserving the underlying environments and resources upon which these industries depend. Because of its record in generating critically needed research, educational, and advisory services in a successful partnership between the Administration, Congress, and academia, the National Sea Grant College Program is supported at the FY 2001 Enacted level plus a small adjustment to base for a total funding level of \$62.4 million. The National Undersea Research Program (NURP) also is supported at slightly above the FY 2001 Enacted level for a total funding level of \$13.8 million. This will help ensure that NURP will be able to play a role in the new Ocean-Exploration Initiative. Future plans include strengthening the partnership with the Congress in shaping NURP and continuing important undersea research in fisheries habitats, coral-reef ecosystems, and fisheries management issues. Finally, the program expects in future years to encourage new research related to understanding deep-ocean environments. Within the total sub-activity level are requests for the following program increases:

Marine Environmental Research: \$22.6 million

NOAA requests a total \$22.6 million for marine environmental research. Details of the program changes are as follows:

Marine Environmental Research and Coral Reef Watch: \$11.6 million.

NOAA requests an increase of \$0.5 million for ongoing Marine Environmental Research. This investment will allow:

- NOAA's Atlantic Oceanographic and Meteorological Laboratory's (AOML) Remote Sensing Division to reactivate its field measurements that provide data critically needed for major community health-related decisions in contaminant-release emergencies in Florida and elsewhere as well as resource management decisions related to releases of dredged material.
- PMEL's Fisheries Oceanography program would be able to restore its ocean measurements program in the Gulf of Alaska and Bering Sea. In these areas, recent climate changes have led to shifts in the species composition of these ecosystems. Using an integrated system of moored buoys and other oceanographic platforms, measurements will be collected to help develop models to better assess climate variability in the north Pacific.

NOAA requests an increase of \$0.5 million for Coral Reef Watch. This investment will improve the understanding of coral reef ecosystems through monitoring and predicting changes in coral reef ecosystems. The AOML laboratory in Miami, FL, will manage this research effort in



coordination with NURP field observations at Caribbean Marine Research Center (Lee Stocking Island (LSI), Bahamas) to better understand ecosystem response. This investment will allow AOML to:

- Predict coral bleaching episodes through Coral Reef Early Warning System (CREWS) software in support of the *in-situ* field monitoring station and to further develop the collaborative NESDIS/OAR Coral Reef Watch early-warning system.
- Establish an additional *in-situ* monitoring station in the U.S. Virgin Islands and provide continuing support for CREWS stations already established (e.g., LSI, NW Hawaiian Islands), providing near-real-time data to predict coral bleaching and other coral phenomena. The U.S. Virgin Islands site is one of twenty recommended by the U.S. Coral Reef Task Force/Monitoring Working Group.
- Provide long-term, near-real-time data and data interpretation, upon which sound coastal and coral-reef management decisions can be made. The data will also be used to ground-truth NESDIS' satellite monitoring of coastal health and corals.
- In addition, AOML will continue to maintain the Coral Health and Monitoring Program Web page and its international coral-list server and will collaborate with National Oceanographic Data Center and other NOAA Line Offices in support of NOAA's Coral Reef Data and Information Management System.

NOAA Marine Aquaculture Program: \$3.6 million

NOAA requests \$3.6 million for marine aquaculture. This continued investment is designed to meet the new DOC Aquaculture Policy Goals and conform to the National Aquaculture Development Plan soon to be released by the Joint Subcommittee on Aquaculture. NOAA will proceed with its Competitive Grants Program that funds projects to: expand the appropriate regional and issue efforts in selecting new species for aquaculture; test new production systems under actual field conditions; improve and clarify the regulatory framework and coastal zoning for aquaculture; support hatchery development technology; conduct environmental research relative to aquaculture; provide the regulatory, environmental, developmental, and scientific base for U.S. aquaculture; and support the more basic research in genetics, disease diagnosis and control, nutrition, hormonal manipulation, and biotechnology. The projects funded are expected to help lead this industry toward becoming an environmentally sustainable industry.

Ocean Exploration

\$14.0

million

The total request of \$14.0 million represents an increase of \$10.0 million over the FY 2001 Enacted level. This continued investment will allow OAR, NOS, NMFS, NESDIS, and external partners (e.g. EPA, NASA, NSF, MMS, DOE, Navy, USGS, and universities) to join together in a cross-agency, multi-institution partnership with a common goal of discovery and exploration of the last major frontier on Earth. This activity is NOAA's investment in undersea exploration, research, and technology in both the deep ocean and areas of special concern, such as the National Marine Sanctuaries (NMS). This

proposal supports NOAA's Sustain Healthy Coasts, Recover Protected Species, and Build Sustainable Fisheries goals and is fully consistent with the recommendations of the President's Panel on Ocean Exploration.

NOAA proposes to embark on a national endeavor; build on our initial efforts in ocean research; partner with existing public, private, and academic ocean exploration programs and promote undersea exploration and research. This proposal calls for an aggressive plan of action to build our National understanding of ocean systems and processes and to develop partnerships for sharing information through education, outreach, and communications. This exploration effort will focus in five areas:

- **New Ocean Resources** (\$1.4 million). The oceans hold vast untapped economic potential beyond fishing. Ocean floor energy-resource deposits, such as methane hydrates may revolutionize patterns of current fossil fuel consumption. Microbial organisms that thrive in deep-sea vents have already been found to have significant biotechnological potential. Medical science is struggling to find new chemical compounds for pharmaceutical applications derived from land-based plants and animals, while the wealth of marine-based counterparts has scarcely begun to be explored and discovered. While it is reasonable to expect significant economic payback from exploration of new ocean resources, it is initially risky and unlikely that the private sector would fund early-phase exploration. NOAA proposes to undertake the early-phase exploration that may lead to the discovery of new resources in which the private sector will be interested. As a follow-up to initial exploration, we do expect both federal agencies and private-sector stakeholders to support research on the development and sustainable use of these resources. Government funding will also ensure that we take steps from the beginning to protect new resources from over exploitation.
- **Exploring Ocean Acoustics** (\$1.4 million). This program will begin to: (1) create a network for monitoring marine sound of natural and human origin in the Pacific and North Atlantic Oceans and (2) determine the effects of this noise on marine mammals and turtles. Some sound producing underwater objects can be detected thousands of miles away. Until recently, this sound has been monitored only by the military. There are, however, important civilian uses for these technologies, such as locating earthquakes, tracking whale migrations, and assessing the impact of noise on marine animals. Finally, NOAA needs to understand the normal hearing of many marine species and determine if behavioral disruption is caused by noise to provide an information base for management of these species.
- **America's Maritime Heritage** (\$1.3 million). The U.S. maritime historical record is largely underwater and awaiting discovery and documentation. This initiative will create a meaningful national effort to survey, locate, map, inventory, and explore historic shipwrecks and archeological sites, principally within U.S. jurisdiction and sanctuaries. Experts estimate that 50,000 shipwrecks are in U.S. waters. This effort will push the development and application of deep ocean technology. By understanding the location, condition and value of such underwater treasures, sound public policy decisions can be made about commercial, academic, and stewardship opportunities.
- **Exploring Ocean Frontiers** (\$5.0 million). The sea floor, from the upper edge of the continental shelf to the bottom of the ocean's deepest trenches, covers approximately two-thirds of Earth's surface, most of which is still unexplored and un-surveyed. The overlying oceans cover more than 140 million square miles and constitute the largest habitat by volume on our planet. Yet, it is estimated we know fewer than 25% of the species that live in the oceans. This initiative will focus

initially on expeditions planned for such areas as the Gulf of Mexico, South Atlantic Bight, NW Hawaiian Islands, North East Pacific, California, and Gulf of Alaska. Future expeditions will include the Gulf of Maine, the Arctic, the Blake Plateau, the Caribbean, and the Central West Pacific. These have been chosen because of their unique features, processes, and information gaps. This work will focus on: water masses and ocean fronts, benthic life, submarine trenches and canyons, submarine volcanoes, polar seas, sea-mounts, hydrocarbon seeps and hydrate beds, and living and working in the sea. NOAA and its partners will explore and characterize areas where the habitats are not well known or understood (e.g., deep canyons, deep-reef ecosystems).

- **Census of Marine Life** (\$0.9 million): The Census of Marine Life is an emerging international research program conceived by the broad marine science community and initially supported by the Sloan Foundation. The Census will support studies over the next 5-10 years to examine the diversity, distribution, and abundance of marine organisms. NOAA's proposed Census activities will: (1) fund inclusion of the U.S. fisheries data in the Census of Marine Life's International Ocean Biogeographical Information System (OBIS - envisioned as a data system of global marine animal and plant distributions, which is critical to understanding the global and regional patterns in marine diversity); (2) initiate the development of new technologies to more efficiently assess marine fisheries and their habitats (emphasis on emerging optical and acoustical technologies); and (3) improve the classification of marine fishes.

Acquisition of Data

All funding for this program has been transferred to the Office of Marine and Aviation Operations (OMAO) under the Marine Operations subactivity. The transfer of these activities to OMAO will allow for the management of the fleet operations as a NOAA-wide asset. The NOAA fleet and charter vessels provide NOS with collection of hydrographic and coastal assessment data through days-at-sea for programs of significant National interest.

Procurement, Acquisition, and Construction (PAC)

The total request of \$10.6 million represents a decrease of \$12.5 million from the FY 2001 Enacted level.

High-Performance Computing & Communications \$7.0 million at the Geophysical Fluid Dynamics Laboratory (GFDL)

NOAA requests \$7.0 million for GFDL, which represents an increase of \$3.0 million from the FY 2001 Enacted level. This continued investment supports the full-year lease and provides software support for the supercomputer located at the GFDL in Princeton, NJ. The computer will be used full-time to address some of the most difficult but critical obstacles to developing and testing new and more realistic models for predicting climate variability, detecting climate change, and forecasting hurricanes.

**Comprehensive Large-Array data Stewardship
System (CLASS)**

\$3.6 million

The total request of \$3.6 million represents an increase of \$1.6 million over the FY 2001 Enacted level. As part of NOAA's Climate Services initiative begun in FY 2001, this continued investment will provide a data system to manage the high volumes (petabytes) of data critical to USGCRP and the scientific community. NOAA is enhancing its current archiving capabilities into a Comprehensive Large Array-Data Stewardship System that is fully operational and managed at the enterprise level. This system will afford efficient management of high volumes of data that are critical to the U.S. Global Change Research Program (USGCRP) and the scientific community. The target data originates from the National Polar-orbiting Environmental Satellite System, the Defense Meteorological Satellite Program, the Department of Commerce Next Generation Weather Radar, and Polar-orbiting Operational Environmental Satellite. Management of these data can be accomplished only through a rapid expansion in storage capacity at the Data Centers and automating the means of data ingest, quality control, and access through a phased systems buy. The early implementation of this archive and access system will pave the way to accommodate additional massive data volumes from the EOS satellites.

Detailed information regarding adjustments to base, program reductions and terminations are shown in Section 4:Supplementary Information.



National Weather Service

Total Request: \$727,607,000

ORF: \$658,456,000

PAC: \$ 69,151,000

The National Weather Service (NWS) provides weather, water, 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 governmental agencies, the private sector, the public, and the global community.

America's vulnerability to weather related hazards is rising as more of the population moves into weather threatened regions, and national and global economies become more complex. Approximately 40 percent of all Americans, some 100 million people, currently reside in areas of high risk to natural disasters, with the number climbing yearly. Today, 90 percent of all presidentially declared disasters are weather and flood related. Moreover, water resources are the lifeblood of the economy and our standard of living. During the next century, weather will continue to impact our lives and significantly impact the U.S. economy. In fact, the NWS was recognized last year as one of thirty-two high impact federal agencies. By working with our partners, especially the private sector and emergency management community, NWS is striving to ensure our products and services are responsive to the needs of the American public.

The FY 2002 President's Budget Request supports the funding and program requirements to enable the NWS to better use science to serve our citizens and fulfill its vision of becoming America's "no surprise" weather service. This vision states that the NWS will produce and deliver forecasts you can trust when you need them most, use cutting-edge technologies, provide services in a cost-effective manner, strive to eliminate weather related fatalities, and improve the economic value of weather information. In FY 2002, the NWS will continue its mission of providing weather and flood warnings and forecasts to the public and improve the overall warning lead times for tornadoes, severe thunderstorms, flash floods, as well as improve the accuracy of hurricane landfall predictions.

The NWS contributes to three of NOAA's Strategic Plan goals: Advance Short-Term Warning and Forecast Services, Implement Seasonal to Interannual Climate Forecasts, and Predict and Assess Decadal to Centennial Change. The NWS request also supports investments in the Natural Disaster Reduction Initiative (NDRI) as well as the NOAA Climate Services Initiative.

Overall, NOAA requests a total of \$727.6 million for the National Weather Service, a net increase of \$34.8 million above the FY 2001 Enacted level. This continued investment includes a total of \$658.5 million for Operations, Research, and Facilities (ORF) and \$69.1 million for Procurement, Acquisition, and Construction (PAC). In FY 2002, the budget priorities for NWS include sustaining current services, replacing obsolete technology, enhancing services to the public and its private partners, and infusing new technology.

Significant Adjustments-to-Base

NWS requests a net increase of \$16.7 million to maintain current services and abate declining base resources from mandatory pay and inflation. Detailed estimates are as follows:

Mandatory Pay, Inflationary Costs, and Adjustment: \$24.3 million

NOAA requests an increase of \$24.3 million to fund Adjustments-to-Base (ATBs) for NWS base operations and system accounts. The increase will fund the FY 2002 federal pay raise of 3.6 percent and annualize the FY 2001 pay raise of 3.8 percent. The increase will also provide mandatory inflationary increases for non-labor activities, including service contracts, field office lease payments, and rent charges from the General Services Administration (GSA). The base was also adjusted to transfer the Office of the Federal Coordinator for Meteorology to Program Support.

Restoration of FY 2001 Rescission: \$1.2 million

NOAA requests an increase of \$1.2 million to restore the FY 2001 rescission. Restoration of these funds in FY 2002 is required to sustain NWS warning and forecast services to the Public. In FY 2002, NWS will restore funding to provide critical training for weather office staff, repair and maintenance of the NOAA Weather Radio network, and replacement of remote river and flood gage communication devices.

Terminations: -\$8.8 million

The NWS requests a decrease of \$3.3 million to reflect the completion of the following one-time activities or programs: the Cooperative Institute for Regional Prediction in support of the 2002 Winter Olympics in Salt Lake City, UT (\$0.6 million); acquisition and installation of NOAA Weather Radio Transmitters at specified locations during FY 2001 (\$1.9 million); Mt. Washington Observatory (\$0.5 million); and the North Dakota Agricultural Weather Network (\$0.3 million).

In the PAC account, a requested decrease of \$5.5 million for the completion of the Evansville, Doppler Radar project. This decrease reflects the completion of one-time costs associated with the planned acquisition, deployment, and installation of a Doppler weather radar for the Evansville, IN during FY 2001.

Detailed Program Changes by Sub-Activity

Operations, Research, and Facilities

The total request of \$658.5 million for operations and research represents an increase of \$29.1 million over the FY 2001 Enacted level. This continued investment will allow NWS to maintain current services, begin modernization of the Cooperative Observer Network, and sustain operations at the National Centers for Environmental Prediction (NCEP). Specifically, the net increase of \$29.0 million includes \$24.3 million for Mandatory Pay Raises and Inflationary Costs, \$1.2 million to restore the FY 2001 rescission, \$1.9 million to sustain the Co-Operative Observer Network, \$1.7 million to sustain operational forecast models at NCEP's Environmental Modeling Center, \$3.0 million to increase the NWS investment in data assimilation development efforts at NCEP including the NOAA/NASA Joint Center for Satellite Data Assimilation, and \$0.3 million for Weather Forecast Office (WFO) Maintenance. In addition, the NWS request includes a reduction of \$3.3 million to reflect completion of one-time activities or programs. The specific details on each of these requests are outlined below:

Sustain Cooperative Observer Network: \$2.3 million

NOAA requests a total of \$2.3 million to sustain the Nation's cooperative observer network, an increase of \$1.9 million over the FY 2001 Enacted level. This continued investment will maintain a nationwide network of over 11,000 volunteer operated weather observing sites used by NOAA to prepare climate forecasts and flood outlooks, monitor droughts, and issue local weather forecasts. In a recent report, the National Research Council recommended that NOAA take immediate steps to sustain and modernize this critical network. The instruments used to detect daily minimum and maximum temperatures as well as rain gage recording devices for measuring precipitation are obsolete and costly to maintain. In many instances, spare parts are no longer commercially available for these measuring devices. In FY 2002, NWS plans to replace 900 rain gauges and 200 temperature sensors. This rescue effort will proceed over three years with the replacement of 2700 rain gauges and 5000 temperature sensors.



Weather Forecast Office (WFO) Maintenance & Repair: \$4.6 million

NWS requests a total of \$4.6 million for WFO Maintenance, an increase of \$0.3 million over the FY 2001 Enacted level. This continued investment will allow NWS to fund recurring maintenance contracts and address a backlog of over \$7.0 million in deferred maintenance repair actions. WFOs provide forecasters with modernized facilities, supporting the advanced technology systems and the provision of weather service to the public. As the WFOs continue to age, the facilities require a significant investment in recurring and cyclic maintenance, including replacement of major facility support systems such as power backup and heating, ventilation, and air conditioning (HVAC). The request will allow NWS to protect the \$250 million capital investment in modernized facilities in accordance with GSA and private industry standards.

NCEP Environmental Modeling Center - Sustain Current Operations: \$1.7 million

NOAA requests \$1.7 million to sustain operations at NCEP's Environmental Modeling Center (EMC). The EMC develops the computer models and other numerical forecast products which provide the basic guidance that forecasters use in making weather and climate forecasts. Today, the EMC is overly dependent on external sources of funding for its operations, degrading its ability to transfer proven weather forecasting science into NWS operations. The National Research Council in its report *From Research to Operations in Weather Satellites and Numerical Weather Prediction: Crossing the Valley of Death*, states "Almost all of the Nation's operational weather and climate guidance products come from EMC, which does not presently possess the necessary resources to transfer many of the U.S. advances in observations and modeling to operations." This investment will enable implementation of NWS plans to provide direct base support for its suite of operational forecast models, including the aviation, regional, hurricane, and global models.

NCEP Data Assimilation and Modeling: \$3.0 million

NOAA requests a total of \$3.0 million to improve data assimilation and modeling at NCEP. Data assimilation is the collection and processing of weather observations (satellite, aircraft, radar, data buoys, upper-air balloons) for use in operational numerical weather prediction models. These models are the foundation for all general weather forecasts (2 days and beyond) including aviation, marine, hurricane, rainfall, and severe weather. The objective of this critical funding request is to improve forecasts through the use of enhanced satellite data and other data-sets in the NCEP prediction models, leveraging the Nation's large capital investment in global observing systems. These activities will be implemented through the NOAA/NASA Joint Center for Satellite Data Assimilation which is funded in part through this initiative. Today, only 1/7th of the Nation's satellite data are utilized in operational weather forecasts models and too few resources are available for assimilating new satellite data. The National Research Council in its report *From Research to Operations in Weather Satellites and Numerical Weather Prediction: Crossing the Valley of Death*, states "In most cases, when new sensors are developed, insufficient budgetary resources are provided to develop algorithms necessary to introduce those sensors into the operational system. There is limited capability to address the special needs associated with assimilation of large volume of new satellite observations." The report also stated the slow pace of improving weather prediction models could place U.S. industry at a competitive disadvantage and potentially impact National Security. In FY 2002, NWS plans to provide critical funding support to the NOAA/NASA Joint Center, enhance efforts to develop a community weather prediction model, and improve and accelerate assimilation of new satellite data-sets into NCEP operational prediction models.

Advanced Hydrologic Prediction Service (AHPS): \$1.0 million

NOAA will also continue implementation of AHPS in the Upper Mississippi and Ohio River Basin, focusing on high priority flood prone areas. The ORF request includes a total of \$1.0 million for this critical service improvement program. AHPS is already improving both the lead time and accuracy of flood forecasts as well as water resource management by extending river flood stage forecasts from days to months in the future. The AHPS is also providing new probability forecasts for rivers, providing critical information which can be used by water resource and emergency managers for risk based decision making. The Service has been successfully tested on major river basins in North Dakota, Iowa, Georgia, West

Virginia, and Pennsylvania. Once deployed, AHPS will save lives and provide over \$600 million in annual savings to the U.S. economy.

Systems Operation & Maintenance (O&M): \$84.1 million

The total requests of \$84.1 million in Systems Operation and Maintenance (O&M) represents an increase of \$2.7 million from the FY 2001 Enacted level. This continued investment will provide the necessary resources to maintain these capital investments. The Systems O&M total also includes \$40.0 million for NEXRAD O&M, \$7.6 million for ASOS O&M, and \$36.5 million for AWIPS O&M.

Procurement, Acquisition and Construction (PAC)

The total request of \$69.1 million represents an increase of \$5.7 million over the FY 2001 Enacted level. The specific requests are listed below:

Systems Acquisition: \$57.2 million

Automated Surface Observing System (ASOS): \$5.1 million

NOAA requests a total of \$5.1 million for the ASOS PAC account, an increase of \$1.3 million over the FY 2001 Enacted level. This continued investment will ensure planned completion of the new ASOS dewpoint sensor acquisition (the highest failure rate sensor in the ASOS suite), and ASOS processor unit acquisition (current processor over capacity), and begin acquisition of the all-weather precipitation gauge necessary for climate record continuity and aviation safety. Specifically, in FY 2002, the NWS will complete acquisition of 346 dewpoint sensors, and 346 processors; deploy 314 processors; and acquire 115 all-weather precipitation gauges.



Advanced Weather Interactive Processing System (AWIPS): \$16.3 million

NOAA requests a total of \$16.3 million for the AWIPS PAC Account. This continued investment will enable NWS to complete a three year effort to develop and deploy AWIPS build 5 software. NWS is deploying AWIPS build 5 in three major builds (5.0, 5.1, 5.2) over a 3 year period, beginning in October of FY 2000 and ending in October of FY 2003. In FY 2002, NWS will complete the distribution of build 5.1 and 5.2 after a rigorous test and evaluation process. AWIPS Build 5 technology will provide NWS field forecasters with critical warning decision support systems to monitor and prioritize severe weather systems, automated product generation to improve efficiency, and improved radar and satellite display imagery. Combined with NEXRAD Product Improvement, AWIPS build 5 will allow NWS forecasters to significantly improve tornado warning lead times and improve the accuracy of severe thunderstorms forecasts.

Central Computer Facility - NWS Weather and Climate Supercomputing: \$15.1 million

NOAA requests a total of \$15.1 million to continue the operation and maintenance of the NWS (Class VIII) Weather and Climate Supercomputer located in the Census Facility in Bowie, Maryland. The NWS supercomputer is the foundation for all NWS weather and climate forecasts. In FY 2002, NWS plans to improve weather forecasts by improving the resolution of the regional weather model (Eta) from 22 to 12 kilometers and the global weather model from 75 kilometers to 55 kilometers. The NWS also plans to improve and expand operational climate forecasts and implement a new regional climate model. NWS will continue to issue the Drought Monitor, Climate Threats Assessment, and the Extreme Heat Index. NWS will also utilize the supercomputer to improve forecasts for El Nino and La Nina events, and other climate oscillations.

Next Generation Weather Radar (NEXRAD):

\$8.3 million

NOAA requests a total of \$8.3 million for the NEXRAD PAC account. The request will allow NWS to continue NEXRAD product improvement (NPI) activities by infusing new technology into the current radar network. The current system processor utilizes obsolete technology developed in the late 1980s. As a result, a number of new forecast and detection techniques, that are tested and ready for operational use, cannot run on the current system. Combined with AWIPS build 5.0 technology, NEXRAD NPI will allow NWS forecasters to improve the lead times for tornado warnings and the accuracy of severe thunderstorms forecasts. In FY 2002, NWS will complete critical hardware retrofits at a total of 126 NWS NEXRAD sites.



NWS Telecommunications Gateway Backup - Critical Infrastructure Protection: \$7.5 million

NOAA requests a total of \$7.5 million to provide critical infrastructure protection for the NWS Telecommunications Gateway (NWSTG). This investment will enable NWS to acquire the equipment and facility infrastructure necessary to ensure continuity of operations at the NWSTG. The NWSTG is the Nation's critical telecommunications hub for collecting, processing, and distributing weather data and information. The data processed by the NWSTG are used by hundreds of customers world-wide, affecting a wide-range of economic and emergency management decisions. These users include: the NWS WFOs and NCEP, the private meteorological industry, broadcast media, Foreign countries, and the U.S. Military. The current NWSTG facility, located in NWS headquarters in Silver Spring, MD has no operational backup and is therefore a single point of failure vulnerable to natural disasters, human error, computer viruses, hacker attacks, and terrorism. Today, if the NWSTG were to fail, 90 percent of weather observations required for weather prediction models would be lost; no national radar or prediction models would be sent to the field; no weather observations or products would be sent to commercial users/vendors;

no access or exchange of observations and products with other Federal agencies or Nations would be possible; and all NWS centrally provided Internet services would be halted. This investment will mitigate these risks and will enable the NWS to comply with Presidential Directives on critical infrastructure protection and continuity of government operations.

Radiosonde Replacement Network: \$5.0 million

NOAA requests a total of \$5.0 million to continue the replacement and modernization of the upper air radiosonde network. The radiosonde network provides critical upper air observations for NWS weather forecasters and serves as the principle data source for all weather forecast models. The current network is obsolete and nearing collapse, risking widespread loss of data within the next two to three years. In FY 2002, NWS plans to complete the third year of a multi-year modernization effort by replacing 35 (out of 102) ground tracking systems. NWS also plans to replace the remaining obsolete IBM XT microcomputers that are used to track and process data.

Construction

NWS Weather Forecast Office (WFO) Construction: \$12.0 million

NOAA requests a total of \$12 million to continue critical facility modernization efforts in the National Weather Service. The request represents an increase of \$2.5 million over the FY 2001 Enacted level. In FY 2002, NWS plans to finalize construction of the new Weather Forecast Office in Caribou, Maine and complete the new Alaska Tsunami Warning Center in Palmer, Alaska. NWS also plans to complete modernization of the weather offices in Hilo, Hawaii and Kotzebue, Alaska.

Detailed information regarding adjustments to base, program reductions, and terminations are shown in Section 4: Supplementary Information.







GOES (I-M) Spacecraft

GOES-8

National Environmental Satellite, Data, and Information Service

Total Request: \$738,038,000

ORF: \$131,662,000

PAC: \$606,376,000

The following narrative describes the activities of the National Environmental Satellite, Data, and Information Service (NESDIS) and its Operations, Research and Facilities (ORF) and Procurement, Acquisition and Construction (PAC) accounts requests.

NESDIS provides for procurement, launch, operation, data ingesting, and product development and distribution for the polar orbiting and geostationary environmental satellites. NESDIS is also responsible for the management of NOAA's environmental data collections and acquiring operational data from non-NOAA environmental satellites that include Department of Defense (DOD) and foreign satellite missions. The satellites provide meteorological data to the National Weather Service and other environmental data users. Environmental data and information are collected from NOAA and other sources, disseminated in real time, and archived for future use to meet the needs of users in commerce, industry, agriculture, science and engineering, and in Federal, state and local agencies.

NESDIS contributes to the achievement of six of NOAA's Strategic Plan goals: Advance Short-Term Warning and Forecast Services, Implement Seasonal to Interannual Climate Forecasts, Predict and Assess Decadal to Centennial Change, Recover Protected Species, Sustain Healthy Coasts and Build Sustainable Fisheries.

For FY 2002, the National Environmental Satellite, Data, and Information Service requests a total of \$738.0 million, of which \$131.7 million is requested in the ORF account and \$606.3 million is requested in the PAC account.

Significant Adjustments-to-Base

NESDIS requests a decrease of \$0.8 million to maintain current services and abate declining base resources from mandatory pay and inflation. Detailed estimates are as follows:

Mandatory Pay, Inflationary Costs, and Adjustment: \$4.3 million

NOAA requests an increase of \$4.3 million to fund Adjustments-to-Base (ATBs) for NESDIS base operations and system accounts. The increase will fund the FY 2002 federal pay raise of 3.6 percent and annualize the FY 2001 pay raise of 3.8 percent. The increase will also provide mandatory inflationary increases for non-labor activities, including service contracts, field office lease payments, and rent charges from the General Services Administration (GSA).

Restoration of FY 2001 Rescission: \$0.3 million

NOAA requests an increase of \$0.3 million to restore the FY 2001 rescission. Restoration of these funds in FY 2002 is required to sustain NESDIS operations.

Non-Recurring Terminations: -\$5.4 million

The NESDIS requests a decrease of \$5.4 million to reflect the termination or reduction of the following activities or programs: Center for Spatial Data Research and Application at Jackson State (-\$2.5 million); and Regional Climate Centers (-\$2.9 million)

Detailed Program Increase by Sub-Activity Operations, Research and Facilities (ORF)

Satellite Observing Systems \$75.9 million

NOAA requests a total of \$75.9 million in this sub-activity, an increase of \$15.7 million over the FY 2001 Enacted level. This sub-activity provides for the operation of current polar-orbiting and geostationary satellites, and production and distribution of satellite products for a wide range of Federal agencies, State and Local governments, and private users. As part of this sub-activity, funding will be provided for continuation of Ocean Remote Sensing, Global Wind Demonstration, National Hazards Information Strategy, and Environmental Observing Services.

Environmental Observing Services \$68.9 million

NOAA requests \$68.9 million for Environmental Observing Systems an increase of \$15.7 million over the FY 01 Enacted level. This continued investment supports the operations of all of the NESDIS satellite systems, the ingesting and processing of satellite data, and the development of

new product applications required for continuity of operations. NESDIS provides satellite command and control services on a 24 hours per day, 365 days per year schedule. Funding is required to keep up with increases in labor costs, software licensing, communications, and ground system maintenance. Requirements have expanded due to greater demands on operations and control, greater amounts of data requirements for new products, requirements for more advanced software and the development of improved products, and increased demand to support our user's requirements. As part of the total \$68,908,000 below are enhancement areas.

Commercial Remote Sensing License: \$1.2 million

NOAA requests within Environmental Observing Services, \$1.2 million for the Commercial Remote Sensing Licensing Program to ensure the timely review and processing of satellite license applications. This investment will be used to establish a program to provide technical support for such reviews, support of an industry advisory mechanism, and a computer infrastructure. Major Monitoring and Compliance activities will include review of quarterly licensee reports, on-site inspections, audits, license violation enforcement, and implementation of shutter control in national security and foreign policy crisis situations.

Joint Center for Satellite Data Assimilation: \$0.8 million

NOAA requests a total of \$0.8 million to establish a Joint Center for Satellite Data Assimilation with NWS and OAR in order to accelerate the use of satellite data in forecast models. This investment will fund work to accelerate the use of current and scheduled satellite data in NWS weather and climate prediction operations. NASA, with its own funding, will be a partner in a coordinated national effort to realize the full potential of the vast quantities of new satellite data that are becoming available. The core scientific staff and computing facilities of the Center will consist of current NOAA resources.

Coral Reef Monitoring: \$0.8 million

NOAA requests total of \$0.8 million for the development of a Coral Reef Watch Program to transition existing experimental satellite coral reef health monitoring capabilities into a viable operational capability, and to provide for a solid scientific basis for future monitoring and assessment products/capabilities. Coral Reef Watch strengthens NOAA's position as the world leader in operational environmental monitoring and early warnings. This is a joint NOAA effort spearheaded by NESDIS in partnership with OAR and NOS.

Critical Single Point of Failure: \$0.3 million

NOAA requests a total of \$0.3 million to study the requirements for backup capabilities for critical products and services at alternate sites. This investment supports the requirement to have continuity of critical operational satellite products and services in the event of a catastrophic outage. Federal Building 4 in Suitland, MD is potentially a single point of failure for every operational NOAA satellite product and service that the NWS and other users rely on.

Environmental Data Management Systems

\$55.8 million

NOAA requests a total of \$55.8 million in this sub-activity for environmental data and information systems, a decrease of -\$9.0 million from FY 2001 Enacted level. The FY 2002 request continues to provide environmental data and information to commerce, industry, agriculture, science and engineering, the general public, and Federal, State and Local governments. As part of this sub-activity, funding will be provided for continuation of the Climate Reference Network, National Coastal Ocean Data Development Center, and Climate Database Modernization and Utilization.

Data and Information Services: \$43.4 million

NOAA requests \$43.4 million for Data and Information Services. This continued investment, a decrease of \$6.2 million from FY 2001 Enacted level, will increase the Data Centers capacity to ingest, process, and archive data as well as continue the rescue of valuable environmental data. Requirements have expanded due to growing customer demands for data and products, and increased data management as the volume of new data continues to grow. Below are two enhancement areas of the Environmental Data Management Systems line.

- **Fisheries Oceanography: \$0.5 million**

NOAA requests \$0.5 million to explore using the full potential of modern technology in fishery resources monitoring, utilizing Synthetic Aperture Radar data. This investment would build on applications demonstrated in October 1999, for near real-time calculation of coastal ocean surface winds and vessel positions using RADARSAT-1 imagery in Alaska. Imagery would be produced at selected sites and sent in near real-time to the NESDIS Satellite Active Archive for imagery dissemination. NESDIS would also derive products from the SAR data for NOAA and other agencies such as the Coast Guard. The full system would consist of four reception capabilities specific sites, covering the entire U.S. coastal waters, which will host the required X-band antennas for reception of SAR data from the ENVISAT, ADARSAT II, and ALOS satellites.

- **Habitat Characterization: \$0.3 million**

NOAA requests a total of \$0.3 million to develop the ability to map fishery habitat distributions in space and time, and to answer important questions with such maps. A computer mapping capability will be created that will allow spatial/statistical delineations (stratification) of the landscape. Such maps can represent inferred ecosystem “potentials” that are critical in monitoring, assessment, and management. The system will allow rapid iteration of the mapping process, thus affording opportunities to test, modify, and document model criteria, statistical mapping technique, and data selection. In this manner, habitat maps can be adaptively maintained.

Procurement Acquisition and Construction Account (PAC)

Satellite Observing Systems

\$596.1 million

NOAA requests \$596.1 million for Satellite Observing Systems operations, an increase of \$96.1 million over the FY 2001 Enacted level. This sub-activity provides funding for the multi-year procurement of spacecraft, launches and associated ground system changes for the current series NOAA K-N' of polar-orbiting operational satellites, the National Polar Orbiting Operational Environmental Satellite System (NPOESS), and the Geostationary Operational Environmental Satellite (GOES).

NOAA Polar K-N: \$146.3 million

NOAA requests \$146.3 million for the NOAA Polar K-N', an increase of \$9.6 million over the FY 2001 Enacted level to fund the continuation of the production and launch of this series of satellites. This continued investment required to maintain spacecraft production. The request also includes funds necessary to complete the instruments for the European METOP satellites which will replace NOAA's morning polar orbiting satellite no earlier than calendar year 2005. Funding is included for upgrading and replacing aging and deteriorating ground systems to allow for continuation of operations for the remainder of the NOAA Polar K-N' series through the end of its lifetime in about 2012. In addition, funds provide for replacing and upgrading the aging product generation and distribution system.

NPOESS: \$156.6 million

NOAA requests \$156.6 million for the Polar Orbiting Systems, an increase of \$83.4 million over the FY 2001 Enacted level for NOAA's share of the converged NOAA/DOD/NASA polar-orbiting program. This program is to be jointly and equally funded by NOAA and DOD. In FY 2002, funds will be required to continue the post-Preliminary Design Review (PDR) development for the five most technologically challenging NPOESS instruments. Continuation of the instrument development contracts is critical to a successful risk reduction strategy for NPOESS to assure a successful schedule for the availability of the NPOESS satellites to replace both the Defense Meteorological Satellite Program and the NOAA Polar Orbiting Environmental Satellite system when needed. FY 2002 funds are also required to continue critical contracts on NPOESS program definition and risk reduction efforts which include the NPOESS Preparatory Project (NPP). The NPP is a joint NOAA/NASA program that will demonstrate and test new NPOESS instruments and data utilization systems before the launch of the first NPOESS satellite. In FY 2002, a single prime contractor to build and deploy the total NPOESS program will be selected.

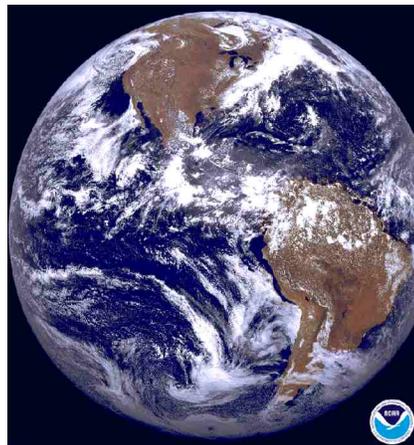
GOES: \$293.3 million

NOAA requests \$293.3 million for the Geostationary Orbiting Environmental Satellite program an increase of \$3.1 million over the FY 2001 Enacted level for the systems spacecraft and launch services program. Funding is necessary to maintain continuity of geostationary satellites. In FY 2002 these funds will be used to continue funding the firm fixed price contract for GOES N-Q spacecraft and launch services which was awarded in January 1998. In addition, under separate contract, production will continue for the Imager and Sounder instruments required for these satellites. The production of the Solar X-ray Imager (SXI) instruments will also continue under a third contract. The first in this series of satellites will be available for launch in fall of 2002.

Construction

Continuity of Critical Facilities for Satellite Operations: \$4.6 million

NOAA requests a total of \$4.6 million to address deficiencies and risks associated with the infrastructure facilities of the NOAA environmental satellite command and control centers at Wallops, VA and Fairbanks, AK. This investment addresses sustaining satellite ground systems/control centers for the Fairbanks Command and Data Acquisition Station (FCDAS) and the acquisition of patent mining claims adjacent to FCDAS. This initiative forms a cohesive approach to resolving known infrastructure problems by reducing facilities' threats and risks, and completing the renovation/repair of the Satellite Operations Control Center. These problems could jeopardize NESDIS' ability to control the nation's environmental satellite systems and potentially lose in-orbit assets.



Program reductions and terminations are shown in Section 4: Supplementary Information.





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Office of Marine and Aviation Operations

Total Request: \$124,048,000

ORF: \$89,133,000

PAC: \$19,515,000

OTHER: \$15,400,000

The Office of Marine and Aviation Operations (OMAO), using ships and aircraft, collects data required to meet NOAA's mission and provides operational, technical, and managing support to NOAA programs through the NOAA Commissioned Corps. OMAO operates and maintains NOAA's fleet of 15 research and survey ships and 13 aircraft and assists with outsourcing for ship and aircraft support. These platforms support the missions of NOAA's five line offices and support all of the seven goals in the strategic plan. OMAO manages the NOAA Diving Program, which provides support to the largest complement of divers of any civilian federal agency.



NOAA Ship *Gordon Gunter*, a converted T-AGOS ship. The T-AGOS ship *Adventurous* is scheduled for a similar conversion in 2001.



NOAA's Gulfstream Jet is used for hurricane surveillance.

NOAA's diverse fleet of ships conducts research and gathers data relating to the oceans and the atmosphere. The ships have varied scientific capabilities and range from small coastal craft used for research in estuaries and near-shore areas to deepwater oceanographic ships that provide scientists access to the waters of the world. The ships conduct hydrographic surveys to support nautical charting requirements, oceanic and atmospheric research to determine both short- and long-term global climate changes, fisheries stock and marine mammal assessments, and monitoring of coastal habitats and pollution trends. NOAA ships also provide immediate response capabilities for unpredictable events, such as the search and location of wreckage from EgyptAir Flight 990, John F. Kennedy, Jr.'s aircraft, and TWA Flight 800.



NOAA's hydrographic ship *Rainier* & its launches conduct surveys in Alaska

NOAA's fleet of aircraft conduct research and collect data on the atmosphere, environment, and geography. The aircraft collect data throughout the United States and around the world, over open ocean, mountains, coastal wetlands, and the Arctic pack ice. NOAA aircraft conduct varied missions such as flying into hurricanes and winter storms to determine their intensity and path, air-quality research, aerial photography for shoreline surveys, marine mammal and fish surveys, and snow surveys to determine water measurements for predicting spring floods from snow melt.

The NOAA Commissioned Corps is the nation's seventh and smallest uniformed service. The officers of the NOAA Corps command NOAA's research and survey vessels, fly NOAA's "hurricane hunter" and environmental monitoring aircraft, work on mobile field survey parties, and serve in a variety of technical and management positions throughout the agency.

NOAA also meets ship- and aircraft-support needs with ships and aircraft from other sources, including the private sector and the university fleet. These platform charters help meet NOAA's needs for oceanographic and fisheries research data. NOAA also contracts directly for collection of approximately 50 percent of its hydrographic data collection needs.

The ORF funds shown above include funds for operation, maintenance, routine repair and outsourcing of aircraft and ships. The PAC funds shown above are for ship conversion and rehabilitation.

For FY 2002, NOAA requests a total of \$124.0 million for OMAO, including \$89.1 million in ORF, \$19.5 million in PAC, and \$15.4 in Other, Mandatory. The mandatory amount, which remains at the same level as in FY 2001, is for payments required as an entitlement to OMAO commissioned officers under 33 U.S.C. 853o, 33 U.S.C. 853p, and 33 U.S.C. 857-2. These funds are transferred directly to the Coast Guard each year.

Significant Adjustments to Base: OMAO's base had a net increase of \$63.0 million due to restoration of the rescission and receipt of adjustments to base for OMAO programs, including a technical

the rescission and receipt of adjustments to base for OMAO programs, including a technical adjustment of \$62.0 million to transfer Acquisition of Data from the NOS, NMFS, and OAR to OMAO. The transfer will allow for the management of the fleet operations as a NOAA-wide asset. This increase also will fund the FY 2002 pay raise and will provide inflationary increases for certain non-labor activities including service contracts.

Detailed Program Increases by Sub-Activity

Operations, Research, and Facilities (ORF)

Aircraft Services

\$14.2 million

The total request of \$14.2 million for Aircraft Services represents an increase of \$2.4 million above the FY 2001 Enacted level. This continued investment will allow Aircraft Services, which operates a fleet of 13 NOAA aircraft, to complete a second flight crew for the G-IV aircraft and to add 300 additional flight hours and associated dropwindsondes for data collection for Hurricane & Severe Winter Storm Prediction (\$888,000) and for Ocean Winds Research (\$600,000). The completion of the second flight crew for the G-IV will allow for 24-hour hurricane or winter storm coverage needed to increase lead time for hurricane evacuations and reductions in unnecessary warnings. The additional flight hours will allow improved winter storm prediction. The increase for flight hours for Ocean Winds Research will provide data to calibrate satellite wind instruments.. This is critical for planning for future deployment of satellite sensors.

Marine Services

\$74.9 million

The total request of \$74.9 million for Marine Services, largely for data acquisition, represents an increase of \$64.0 million above the FY 2001 Enacted level. This continued investment will allow the consolidation of funds for marine services under OMAO. The funds previously were transferred to OMAO on an annual basis from NOS, NMFS, OAR, and Executive Direction and Administration. This consolidation will promote a more efficient and flexible utilization of resources through an enhanced centralized management of NOAA's vessels operations. Funds for Data Acquisition have been moved to OMAO permanently, since they provide for NOAA-wide assets.

Marine Services operates a fleet of 15 NOAA vessels capable of safely collecting hydrographic and coastal assessment data, conducting fishery independent scientific and survey operations, and conducting sustained oceanographic and atmospheric data collection in various marine environments and provides funds for outsourcing to meet many data-collection requirements. The request includes an increase of \$1 million to provide days-at-sea, primarily through charter vessels, to support research in the Gulf of Mexico concerning the interactions of the Mississippi River plume, nutrient loading, and resulting hypoxia of Gulf fisheries. The funding also will maintain or increase day-at-sea levels supporting other NOAA programs, including the science programs in NOS and the sanctuary program. In addition, an increase of \$855,000 will be used for both the ADVENTUROUS' operating differential and to add days-at-sea on fisheries research vessels. The ADVENTUROUS will replace the TOWNSEND CROMWELL and is a

larger and more capable vessel that will carry more scientists to complete more research on a daily basis.

Procurement, Acquisition, and Construction (PAC)

Fleet Replacement

\$19.5 million

The total request of \$19.5 million for OMAO's fleet replacement represents a decrease of \$242,000 million below the FY 2001 Enacted level. This continued investment will allow the remaining funds to be used for the following items:

ADVENTUROUS Refurbishment

\$4.2 million

The total request of \$4.2 million for the ADVENTUROUS represents a decrease of \$3.8 million below the FY 2001 Enacted level. Funding in the amount of \$8.0 million was provided in FY 2001 to begin the conversion of the ADVENTUROUS to a fisheries research vessel to replace the aging TOWNSEND CROMWELL home-ported in Honolulu, Hawaii. This continued investment will allow OMAO to complete the conversion and upgrade of the vessel.

ALBATROSS IV Repairs

\$4.0 million

NOAA requests a total of \$4.0 million for repairs to the NOAA ship, the ALBATROSS IV. This investment will allow OMAO to extend the ship's useful life until a new FRV is delivered to the Northeast Fisheries Science Center (NEFSC), located in Woods Hole, MA. The ALBATROSS IV must be operated beyond FY 2006 to protect the integrity of long-term surveys of fish stock.

FAIRWEATHER Refurbishment

\$9.5 million

The total request of \$9.5 million for the FAIRWEATHER represents an increase of \$2.7 million above the FY 2001 Enacted level. This continued investment will allow OMAO to complete the refurbishment of the NOAA ship. The amount of \$6.8 million was appropriated in FY 2001 to begin this effort, and a total of \$9.5 million will be needed in FY 2002 in order to complete the project. The refurbishment of the FAIRWEATHER, with its home-port in Alaska, will provide a platform which will allow significant progress to be made in reducing the critical backlog of hydrographic surveys.

GORDON GUNTER Upgrade

\$1.8 million

NOAA requests a total of \$1.8 million for the upgrade of the NOAA ship, the GORDON GUNTER. This investment will allow OMAO to fully meet modern safety standards and provide a more capable platform to support fisheries research and stock assessment projects. The upgrade will include modifications to an engine room bulkhead that will enable the ship to meet modern safety standards for one-compartment damage stability. This will allow a compartment to be fully flooded and the ship to

remain afloat with stability. The increase would also provide positioning and instrumentation upgrades.

Naval Surplus Vessel for Coastal Research (YTT)

NOAA is not requesting any funding for the YTT in FY 2002, which represents a decrease of \$5.0 million below the FY 2001 Enacted level. Funding for the partial conversion of the YTT was provided in FY 2001. This phase has been completed, allowing the vessel to be used for some coastal research.

Detailed information regarding adjustments to base, program reductions, and terminations are shown in Section 4: Supplementary Information.



Program Support

Total Request: \$237,200,000

ORF: \$182,481,000

PAC: \$39,319,000

Other, Mandatory: \$15,400,000¹

Program Support has been realigned into three subactivities:

- 1) Corporate Services (formerly known as Administration and Services),
- 2) Office of Marine and Aviation Operations (OMAO), and
- 3) Facilities.

Within Program Support, Corporate Services has been subdivided into a) Under Secretary and Associate Offices and b) Policy Formulation and Direction. OMAO's portion of Executive Direction and Administration funds has been moved to OMAO, along with Aircraft Services funds. This realignment provides a clearer linkage of administrative services to NOAA program activities.

¹ These costs are for the retired pay of NOAA Corps officers.

Overall, NOAA requests a total of \$237.2 million for Program Support, a net increase of \$78.2 million above the FY 2001 Enacted level. This continued investment includes a total of \$182.5 million for Operations, Research, and Facilities (ORF) and \$39.3 million for Procurement, Acquisition, and Construction (PAC).

Corporate Services **\$95.2**
million

ORF: \$75,347,000

PAC: \$19,804,000

NOAA requests \$95.2 million for Corporate Services, a net increase of \$5.3 million over the FY 2001 Enacted level. This includes a total of \$75.3 million for ORF and \$19.8 million for PAC. Fundamental to NOAA's mission success is clarity of corporate vision, effectiveness of functional direction, and efficiency of operational support. The ORF amount includes funds for the Under Secretary and Associate Offices, Policy Formulation and Direction, and the Educational Partnership Program with Minority Serving Institutions.

- **Under Secretary and Associate Offices** - The Under Secretary and Associate Offices line item includes resources to provide centralized executive management and decisions concerning: NOAA policy and planning objective; statutory, budget resources, and other legal requirements; congressional relations; public and educational affairs; and strategic planning.
- **Policy Formulation and Direction** - The Policy Formulation and Direction line item includes resources to: develop and implement policy and planning objectives; support development and acquisition of major NOAA modernization systems; provide individual program operations; promote corporate budget priorities and financial management; provide timely, high quality, and cost-effective administrative support to NOAA and the Department of Commerce field programs; and ensure compliance with laws, regulations and guidelines.
- **Educational Partnership Program with Minority Serving Institutions** - The Educational Partnership Program with Minority Serving Institutions is one part of a larger Department of Commerce Center of Excellence Initiative. Minorities are under-represented among the Nation's professional scientists and among NOAA's scientific personnel. This program will increase the number of students that graduate and receive training in the natural and physical sciences by establishing four Collaborative Science Centers.

Significant Adjustments to Base

Corporate Services requests a net increase of \$5.3 million to maintain current services and abate declining base resources from mandatory pay and inflation. Detailed estimates are as follows:



Mandatory Pay, Inflationary Costs, and Adjustments: \$6.4 million

NOAA requests an increase of \$6.4 million to fund Adjustments-to-Base (ATBs) for Corporate Services' base operations. The increase will fund the FY 2002 federal pay raise of 3.6 percent and annualize the FY 2001 pay raise of 3.8 percent. The increase also will provide mandatory inflationary increases for non-labor activities, including service contracts and rent charges from the General Services Administration (GSA). Also included is the transfer of the Office of the Federal Coordinator for Meteorological Services and Supporting Research (OFCM) and its base funding of \$1.1 million from the National Weather Services to Corporate Services. The mission of this interdepartmental office is to ensure the effective use of federal meteorological resources by leading the systematic coordination of operational weather requirements and services and supporting research among 15 federal agencies.

Restoration of FY 2001 Rescission: \$324,000

NOAA requests an increase of \$324,000 to restore the FY 2001 rescission. This increase includes \$299,000 in ORF and \$25,000 in PAC. Restoration of these funds in FY 2002 is required to sustain Corporate Services' services. In FY 2002, Corporate Services will restore funding to provide critical training to office staff, purchase office supplies, and repair and maintain equipment.

Terminations: \$1.5 million

Corporate Services requests a decrease of \$1.5 million to reflect the completion of two Congressionally-directed, one-year activities: the NOAA study of NMFS' meeting its legal missions and requirements (\$748,000) and the National Academy of Sciences Oceanographic Study for OAR (\$748,000).

Detailed Program Changes by Sub-Activity

Operations, Research, and Facilities (ORF)

Under Secretary and Associate Offices \$24.0 million

The total request of \$24.0 million for the Under Secretary and Associate Offices represents an increase of \$2.6 million above the FY 2001 Enacted level. This continued investment will allow the Under Secretary and Associate Offices to continue to provide centralized executive management and decisions concerning policy and planning objectives; statutory and other legal requirements; congressional relations; public and educational affairs; and strategic planning. The \$2.6 million includes the adjustment to base to offset cumulative effects of deferring past adjustments to base, the restoration of the FY 2001 rescission, in addition to an increase of \$67,000 to facilitate coordination of interagency and intra-agency efforts and to address the Administration's new priorities. In addition, this request includes \$1.1 million for the Office of the Federal Coordinator for Meteorological Services.

Policy Formulation and Direction

\$51.4 million

The total request of \$51.4 million for Policy Formulation and Direction represents an increase of \$2.6 million above the FY 2001 Enacted level. This continued investment will allow Policy Formulation and Direction to continue to provide for NOAA's overall management of personnel, acquisition and grants, finance, facilities and logistics, and information technology system. These offices have had to take "belt-tightening" measures such as stretching equipment-replacement schedules, reduce training, lapsing some replacement personnel and maintaining some vacancies.

Central Administration Support: \$32.2 million

The total request of \$32.2 million for Central Administration Support represents a decrease of \$842,000 below the FY 2001 Enacted level. This continued investment will allow the four field offices to provide timely, high-quality, cost-effective administrative support to all of NOAA and to the Department of Commerce programs in the field, while ensuring that all laws, regulations, and guidelines are followed.

Educational Partnership Program with Minority Serving Institutions (EPPMSI): \$15.0 million

The total request of \$15.0 million for EPPMSI represents an increase of \$33,000 above the FY 2001 Enacted level. This initiative is one part of a larger Department of Commerce Center of Excellence Initiative. Minorities are under represented among the nation's professional scientists, and among NOAA's scientific personnel. This program will increase the number of minorities that graduate and receive training in the natural and physical sciences by establishing a Collaborative Science Center for each field of study at three MSIs, centered around distinguished faculties with expertise in these scientific disciplines. The funds will provide financial support for graduate study, an Environmental Entrepreneurship Program, and a student fellowship program targeted for third-year undergraduates. NOAA will also provide internship opportunities for these students. The number of minorities graduating with science and engineering degrees continues to be disturbingly low. By targeting students at MSIs, this initiative will provide NOAA and the MSIs with the means of strengthening their educational outreach to minority communities and populations, thus helping to correct this professional and educational imbalance.

Systems Acquisition Office (SAO): \$0.7 million

The total request of \$712,000 for the Systems Acquisition Office (SAO) represents an increase of \$2,000 above the FY 2001 Enacted level. This continued investment will allow SAO to provide oversight and control of acquisition of NOAA major systems and to assist NOAA organizations in the assessment of needs and development of future systems requirements. The SAO provides procurement and engineering expertise for complex systems acquisitions and technical projects throughout NOAA and effectively administers NOAA acquisition resources. The SAO has strengthened NOAA management of systems acquisition by consolidating responsibility for the design, procurement, and acceptance of new systems into a single NOAA acquisition office and by maintaining a balance among technical requirements, cost/schedule constraints, and user needs.

Restoration of DOC Security Appropriation: \$3.4 million

NOAA requests \$3.4 million for restoration of security funding for NOAA's facilities and personnel to the level funded in FY 2000. This will ensure that NOAA's personnel and assets are adequately and uniformly protected. The FY 2001 President's budget requested a separate line item in the Department of Commerce's budget to fund management and delivery of security services, with funds transferred from the various bureau's budgets to offset the new appropriation. The FY 2001 appropriation failed to provide the requested funding as a direct appropriation, nor did it restore NOAA budgets to support this critical function. Since this critical requirement must be maintained, NOAA is being forced to offset the cost by reducing programmatic requirements. This request will allow for the restoration of the funding requirement.

Procurement, Acquisition , and Construction (PAC)

CAMS

\$19.8 million

The PAC request of \$19.8 million for the Commerce Administrative Management System (CAMS) represents an increase of \$25,000 above the FY 2001 Enacted level. This continued investment will allow for the full benefit and value of CAMS to be realized in NOAA. CAMS is in the final stages of completion, and adequate funding will ensure that CAMS is deployed in a timely manner, allowing all modules to progress toward completion. Once fully deployed, CAMS will contribute in significant ways to maintaining a clean NOAA audit through systematic controls rather than through labor-intensive manual efforts. It will provide managers with on-line, real-time, and accurate financial information and will enable NOAA and DOC to meet statutory obligations under the Federal Managers' Financial Integrity Act (FMFIA) and the Chief Financial Officer Act (CFO Act).



Silver Spring, Maryland



Santa Cruz, California

Facilities

Total Request: \$18,001,000

ORF: \$18,001,000

NOAA's strategic mission and activities require state-of-the-art facilities and high technology capabilities located nationwide. NOAA has a facility inventory of assets valued in the tens of millions of dollars, with physical properties in every state and territory, and inclusive of specialized laboratories, large and small concentrations of office and storage space, and remote observations. NOAA headquarters and its field installations are major national assets, and they are fundamental to the accomplishment of NOAA's mission. NOAA must provide safe, healthful facilities that comply with state and local regulations; that are in good repair and run efficiently; and that are in locations that support and enhance agency missions. The integral relationship between the physical infrastructure of the facilities we occupy and the research and operations conducted in those facilities contributes directly to the attainment of the seven goals of NOAA's strategic plan, and NOAA's mission to support the Nation's economic growth in an environmentally sound manner.

NOAA's facility program responsibility is to plan, acquire, maintain, and support NOAA's facility to continue to successfully fulfill NOAA's missions. The facilities program encompasses land and facility acquisition and construction; repairs, modifications, and additions to NOAA-operated facilities; environmental compliance; facilities maintenance; and ensuring a high standard of employee health and safety.

Significant Adjustments to Base

Facilities' base had a net increase of \$6.8 million, of which \$6.0 million is a transfer of cleanup funds for Pribilof Island from the PAC account to the ORF account. The balance of the net increase (\$808,000) is due to restoration of the rescission (\$38,000) and receipt of adjustments to base for the NOAA Maintenance, Repairs, and Safety program (\$770,000). This increase will fund the FY 2002 cost-of-living pay increase for the Facilities Office and provide inflationary increases for certain non-labor activities including service contracts.

Detailed Program Increases by Sub-Activity

Operations, Research and Facilities (ORF)

NOAA Facilities Maintenance, Repair and Safety **\$3.6 million**

The total request of \$3.6 million for Facilities Maintenance, Repairs and Safety activities represents an increase of \$1.8 million above the FY 2001 Enacted level. This continued investment will allow Facilities to pursue the elimination of numerous health and safety issues related to the poor condition of NOAA's facilities. These funds will address NOAA's current backlog of projects in the Capital Improvement Program (CIP) and will begin the establishment of a focused NOAA safety program. The CIP provides for major repairs, renovations and alterations to NOAA facilities. The CIP's purpose is to identify and correct deficiencies in those facilities, to include needed major and minor repairs, renovations and alterations, and provide limited construction of "like" replacement space. Scientists' abilities to perform advanced research has been constrained in some cases by obsolete and inadequate laboratory facilities.

NOAA employees may be subject to health and safety threats, including sinus problems and allergic reactions from inadequate ventilation standards, employees accidents related to poorly maintained stair coverings and floors, and potential structural failure and collapse. The social consequence of poor facilities may be seen in reduced worker productivity, poor morale and an inability to attract and retain personnel.

The NOAA Maintenance, Repair, and Safety program vision is to provide to NOAA units a national network of facilities that are safe and healthful, in compliance with all existing Federal, state and local laws and regulations, efficient, in proper repair, in appropriate locations and configurations, and designed to fully support and enhance the completion of agency missions.

Boulder Facilities Operations **\$5.0 million**

The total request of \$5.0 million for Boulder Facilities Operations represents an increase of \$1.0 million above the FY 2001 Enacted level. This continued investment will allow Facilities to fully fund the operating costs for space, above-standard utilities, maintenance and security at the new David Skaggs Research Center. By providing sufficient funds to meet the requirements negotiated with GSA, this initiative will avoid an overall base reduction to NOAA's Boulder organizations of approximately 2.3 percent.

Pribilof Island Cleanup **\$4.0 million**

The total request of \$4.0 million in ORF for the Pribilof Island Cleanup represents a decrease of \$2.0 million below the FY 2001 Enacted amount previously in the PAC account. This continued investment will enable NOAA to continue restoration work on the Pribilof Islands. The environmental cleanup includes treating petroleum-contaminated soils, continuing actions related to the closure of the existing landfill, and remediation at various sites and the NOAA portion of an oil-drum dump site. Under P.L. 104-91 and the "Two-Party Agreement between NOAA and the State of Alaska, NOAA is responsible for an extensive environmental cleanup on the islands in preparation for transfer of Federal lands on the islands to the local communities. The specified cleanup activities will be undertaken primarily through grants or other agreements with qualified contractors and/or local entities and residents of the Pribilof Islands.