



Executive Summary

NOAA, a key component of the Department of Commerce, plays a vital role in the everyday lives of our citizens through our numerous contributions to the Nation's economic and environmental health. In a period of strongly competing Government priorities, the President's FY 2002 Budget Request for NOAA is \$3,152.3 million in total budget authority for NOAA and represents a decrease of \$60.8 million below the FY 2001 Enacted levels. Within this funding level, NOAA proposes essential realignments that allow for a total of \$270.0 million in program increases in critical areas such as infrastructure, severe weather prediction, coastal conservation, living marine resources, and climate.



Funding requested in the FY 2002 President's Budget Request will allow NOAA to ensure that our vision for environmental stewardship and assessment and prediction of the Nation's resources becomes a reality and that NOAA will continue to excel in our science and service for the American people.

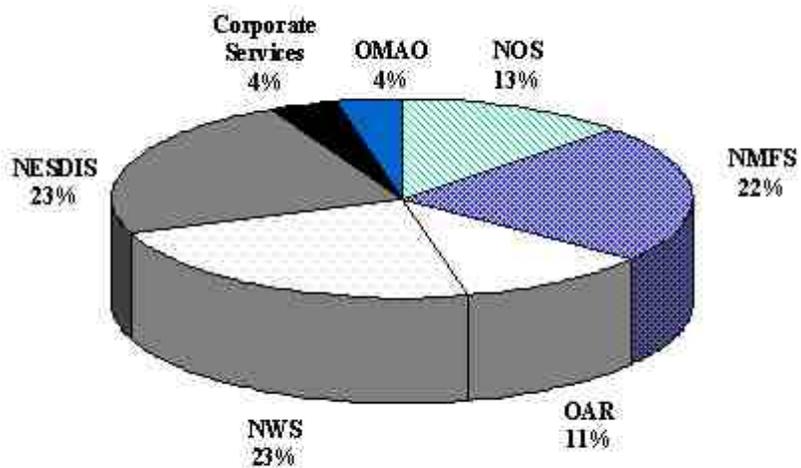
From weather forecasting to fisheries management, from safe navigation to coastal services, remote sensing to climate research and ocean exploration, NOAA is at the forefront of many of this Nation's most critical issues. NOAA's people, products and services provide vital support to the domestic security and global competitiveness of the United States, and positively impact the lives of our citizens, directly and indirectly, every single day.





NOAA's mission is to describe and predict changes in the Earth's environment and to conserve and manage the Nation's coastal and marine resources to ensure sustainable economic opportunities. NOAA implements its mission through its line and staff offices: the National Ocean Service (NOS); the National Marine Fisheries Service (NMFS); the Office of Oceanic and Atmospheric Research (OAR); the National Weather Service (NWS); the National Environmental, Satellite, Data and Information Service (NESDIS); the Office of Marine and Aviation Operations (OMAO); and Corporate Services (CS). The following chart illustrates the distribution of NOAA's Budget Request among these offices.

FY 2002 Budget Request by Line Office





Today, the Nation and the world look to NOAA to provide timely and precise weather forecasts that protect lives and property; to manage fisheries and protected species; to promote and sustain healthy coastlines; to make America more competitive through safe navigation; to examine changes in the oceans; and to inspire and create approaches that will protect and keep our precious natural resources alive for the generations to come.

NOAA conducts research to develop new technologies, improve operations, and supply the scientific basis for managing natural resources and solving environmental problems. NOAA's comprehensive system for acquiring observations – from satellites and radars to ships and submersibles – provides critical data and quality information needed for the safe conduct of daily life and the basic functioning of a modern society.



NOAA's products and services include short-term weather and space-weather forecasts, seasonal climate predictions, long-term global change prognoses, environmental technologies, nautical charts, marine fisheries statistics and regulations, assessments of environmental changes, hazardous materials response information, and stewardship of the Nation's ocean, coastal, and living marine resources.

NOAA's programs for FY 2002 support several key cross-cutting initiatives. These cross-cutting initiatives illustrate the degree to which NOAA's programs are inter-related. Each of the component programs within a cross-cutting initiative uniquely contributes to NOAA's ability to meet its mission.

The FY 2002 President's Budget Request supports the following cross-cutting initiatives, each of which is discussed in greater detail on the following pages:

- People and Infrastructure
- Maintain Satellite Continuity and Severe Weather Forecasts
- Coastal Conservation Activities
- Climate Services
- Modernization of NOAA Fisheries (NMFS)
- Modernization of the Marine Transportation System (MTS)



People and Infrastructure

Line Office/ Strategic Plan	Item	FY 2001 Enacted	Increase/ Decrease	FY 2002 Total
	<u>People</u>			
NOAA/All goals	Mandatory Costs (all accounts)		[\$60.0]	[\$60.0]
	<u>Infrastructure</u>			
	<u>Systems</u>			
NMFS/BSF	NMFS Computer Hardware and Software	3.5	0.5	4.0
NWS/ASTWF	NWSTG Backup - Critical Infrastructure Protection (CIP)	0.0	7.5	7.5
NESDIS/ASTWF	Critical Single Point of Failure	0.0	0.3	0.3
NESDIS/ASTWF	Continuity of Critical Facilities - Satellite Ops. (PAC)	0.0	4.6	4.6
	Subtotal, Systems	3.5	12.9	16.4
	<u>Construction*</u>			
NMFS/BSF	Honolulu Laboratory	0.0	3.0	3.0
NWS/ASTWF	NWS Weather Forecasting Office (WFO) Construction	9.5	2.5	12.0
NOS/SHC	Coastal Services Center (CSC) Wing	0.0	1.0	1.0
	Subtotal, Construction	9.5	6.5	16.0
	<u>Operations and Maintenance</u>			
NMFS/BSF	NMFS Facilities Operations and Maintenance	4.0	0.4	4.4
NWS/ASTWF	Weather Forecasting Office (WFO) Maintenance	4.3	0.3	4.6
Facilities/All goals	NOAA Maintenance, Repairs, and Safety	1.9	1.7	3.6
NOS/SHC	Beaufort Lab Repairs	0.0	1.0	1.0
OMAO/BSF	GORDON G UNTER upgrade	0.0	1.8	1.8
OMAO/BSF	ALBATROSS IV repairs	0.0	4.0	4.0
Facilities/All goals	Boulder Facilities Operations	4.0	1.0	5.0
	Subtotal, Maintenance	14.2	10.2	24.4
	<u>Support</u>			
NWS/ASTWF	Cooperative Observers Network	0.4	1.9	2.3
OMAO/ASTWF	Aircraft Services (Flight Hours)	11.8	2.4	14.2
	Subtotal, Support	12.2	4.3	16.5
	Subtotal, Infrastructure	39.4	33.9	73.3
	TOTAL	\$39.4	\$33.9	\$73.3

* Funding is also provided for the Alaska Facilities Fisheries Center in Juneau at \$11.7 million for FY 2002.

People and Infrastructure**\$73.3 million**

The People and Infrastructure cross-cutting initiative brings together the heart of what NOAA is and does. These are the underlying and interconnecting threads that hold NOAA and its programs together. Investments in NOAA's scientific and technical workforce and NOAA's facilities and equipment is essential to the agency carrying on its mission into the 21st Century. "People and Infrastructure" is about investing in the future.

PEOPLE**\$60.0 million**

NOAA requests \$60.0 million in base adjustments that are critical to preserve and develop NOAA's human capital, our greatest asset. The demand for NOAA's scientific work products and services is expected to increase significantly in FY 2002 and beyond. This trend is evidenced by market responses to increasingly accurate seasonal forecasts, protection of life and safety, competing interests for marine resources and the need to protect and recover endangered species, and the application in pharmaceutical manufacturing of the earliest rewards from increased ocean exploration. Similar increases in demand for NOAA's products and services are expected from the national energy community and other potential user communities. To ensure NOAA's mission capacity is adequate to respond to these demands, NOAA must continue to invest in its people.

This investment will ensure NOAA's programs are maintained at the current services level. These are "must-pay" bills like pay raises, benefits, inflation, and rent. 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 erosion effect that can be programmatically devastating. Consequently, these adjustments to NOAA's funding base are essential for NOAA to continue meeting core mission-related requirements and the expectations of the American public. Detailed information regarding ATBs is shown in Section 2: *Budget Request by Activity - Traditional Structure*.

INFRASTRUCTURE**\$73.3 million**

NOAA's facilities and information technology infrastructure directly and immediately impacts the ability of NOAA's program offices to satisfy mission demands. The condition, readiness and vulnerabilities of this infrastructure have direct consequences on human welfare, economic well being, and the advancement of the state of the sciences. To ensure mission capacity, NOAA requests infrastructure funding in the following key categories: critical systems, construction, maintenance and repair, and NOAA program support.

Systems**\$16.4 million****National Marine Fisheries Service (NMFS) Computer Hardware and Software: \$4.0 million**

The total request of \$4.0 million for NMFS Computer Hardware and Software represents an increase of \$0.5 million. This continued investment will be used for information technology refreshment to support the scientific and computational needs of the NMFS. Many of the observational data elements obtained from the new sensors, observers, Fisheries Research Vessels (FRVs) and survey and census data collection programs in this budget submission will rely on the NMFS Information Technology infrastructure for all or part of their life cycle. The cumulative effect of rising costs, the unmet need for adjustments to base, and expanding requirements have created an erosion of base program functionality. These funds will result in a continuous process of technology refreshment to keep pace with the increasing information flow created by the deployment of new sensors, platforms and data collection activities throughout NMFS' initiatives.

National Weather Service Telecommunications Gateway (NWSTG) Backup- Critical Infrastructure Protection: \$7.5 million

NOAA requests a total of \$7.5 million for the NWS Telecommunications Gateway (NWSTG) Backup, to provide critical infrastructure protection. This investment will enable NOAA 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 worldwide but 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. This investment will mitigate these risks and will enable NOAA to comply with Presidential Directives on critical infrastructure protection and continuity of government operations.

Critical Single Point of Failure: \$0.3 million

NOAA requests a total of \$0.3 million to begin to address the critical single point of failure for NOAA's satellite products. This investment will fund a study to evaluate the backup capabilities for critical satellite products and services currently delivered from Federal Building 4 in Suitland, MD. This initiative is essential to address the potential for a catastrophic outage, which would prevent the delivery of critical satellite data and products to the NWS. In the event of such an outage, approximately 85 percent of the information used in weather forecast models would be lost, seriously limiting the ability to make accurate weather forecasts. This would be particularly dangerous if data was not available during times of severe weather events.

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

NOAA requests a total of \$4.6 million to ensure Continuity of Critical Facilities for Satellite Operations. This investment will allow NOAA to address deficiencies and risks associated with the infrastructure of the NOAA environmental satellite command and control centers at Wallops, VA and Fairbanks, AK. 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.

Construction

\$16.0 million

Honolulu Laboratory: \$3.0 million

NOAA requests a total of \$3.0 for the Honolulu laboratory. This investment will continue the replacement of the Honolulu Laboratory which consists of a main lab building and two annex building. 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.

National Weather Service Weather Forecast Office Construction: \$12.0 million

The total request of \$12.0 million for National Weather Service (NWS) Weather Forecast Office Construction represents an increase of \$2.5 million above the FY 2001 Enacted level. This continued investment will ensure the continuation of critical facility modernization efforts in the NWS. 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.

Coastal Services Center Wing: \$1.0 million

NOAA requests a total of \$1.0 million for the Coastal Services Center Wing. This investment will allow for construction of a new wing adjacent to the main facility of the Coastal Services Center (CSC) in Charleston, SC. This small expansion will add an estimated 6,000 square feet to house office space, a storage area and a loading dock. The funding will also allow for a partial demolition of CSC's obsolete and deteriorating structures. The demolition would eradicate some, but not all, of the structures that pose threats to CSC's inhabited buildings. Additional needs for security enhancements and other expansion remain under consideration in the comprehensive facilities plan being completed in FY 2001.

Maintenance

\$24.4 million

National Marine Fisheries Service Facilities Operations and Maintenance: \$4.4 million

The total request of \$4.4 million for NMFS Facilities Operations and Maintenance represents an increase of \$0.4 million above the FY 2001 Enacted level. This continued investment will be used to cover increased operation and maintenance costs of two key NMFS facilities, the new Santa Cruz, California Laboratory, and the Kodiak, Alaska Laboratory.

Weather Forecast Office Maintenance: \$4.6 million

The total request of \$4.6 million for Weather Forecast Office (WFO) Maintenance represents an increase of \$0.3 million above 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. The request will allow NWS to protect the \$250 million capital investment in modernized facilities in accordance with GSA and private industry standards.

NOAA Maintenance, Repairs and Safety: \$3.6 million

The total request of \$3.6 million for Facilities Maintenance, Repairs and Safety represents an increase of \$1.7 million above the FY 2001 Enacted level. This continued investment will allow for remediation of NOAA's deteriorating facilities. NOAA's capital assets, totaling 496 installations spread across all 50 states are valued in the hundreds of millions of dollars. The majority of these facilities are over 30 years old, and 29 percent are over 40 years in age. To date, renovations have been relatively few, and maintenance has been chronically deferred. NOAA has already identified a project backlog of over \$50 million in maintenance and repair, and this continues to grow as a comprehensive facility assessment unfolds. Major systems in many facilities are in imminent danger of failure, or are well past their useful lives. These requested funds will help address this backlog of facilities maintenance, repair and safety.

Beaufort Laboratory Repairs: \$1.0 million

NOAA requests a total of \$1.0 million for Beaufort Laboratory Repairs. This investment will allow for repairs at NOAA's Beaufort, NC Laboratory. The funds will be used to address health and safety issues, primarily the installation of a sanitary sewage connection and electrical repairs. The Beaufort Laboratory is the Nation's second oldest marine research center – a national treasure – and is collocated with the Rachel Carson National Estuarine Research Reserve.

GORDON GUNTER Upgrade: \$1.8 million

NOAA requests a total of \$1.8 million for the GORDON GUNTER. This investment will allow for the upgrade of the GORDON GUNTER to meet modern safety standards and to provide a more capable platform to support fisheries research, stock assessment and other missions such as submersible operations. 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. This funding also would provide positioning and instrumentation upgrades. The GORDON GUNTER, homeported in Pascagoula, MS, is a former Navy T-AGOS vessel which has been converted and currently serves in the Gulf of Mexico, the Caribbean Sea and the Southeast Atlantic Ocean.

ALBATROSS IV Repairs: \$4.0 million

NOAA requests a total of \$4.0 million for the ALBATROSS IV. This investment will allow for repairs and the extension of the ship's useful life until a new Fisheries Research Vessel (FRV) can be constructed for the Northeast Fisheries Science Center (NEFSC). In order to calibrate the new vessel with the ALBATROSS IV, the ALBATROSS IV must be upgraded and its service extended until a new vessel is completed. This calibration-overlap protects the integrity of long-term surveys.

Funding for the FAIRWEATHER is identified under the Marine Transportation System crosscut.

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 provides funds for rent charges levied by the GSA which owns and operates the facility. This is a “must pay” bill, without which the science programs would bear the burden.

Support

\$16.5 million

Cooperative Observer Network: \$2.3 million

The total of \$2.3 million for the Cooperative Observer Network represents an increase of \$1.9 million above the FY 2001 Enacted level. This continued investment supports a nationwide network of over 11,000 volunteer operated weather observing sites used by NOAA to maintain the Nation’s climate record and to provide data to local NWS field offices. These sites are staffed by citizens dedicated to maintaining climate records and assisting the NWS. In a recent report, the National Research Council recommended that NOAA take immediate steps to sustain and modernize this critical network. NWS plans to replace 900 rain gauges and 200 temperature sensors in FY 2002. This is the first of an anticipated 3 year rescue effort which will result in the total replacement of 2700 rain gauges and 5000 temperature sensors.

Aircraft Services (Flight Hours): \$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 provide an additional 300 flight hours for data collection for a total of 1970 flight hours. Of these additional flight hours, 150 flight hours are specifically for hurricane surveillance and for severe winter storms. Another 150 flight hours will support measurements of ocean winds during high windspeed conditions, which are critical to planning for future satellite sensors. These flying hours will enable NOAA to more efficiently use its heavy aircraft and to maintain pilot proficiency during data collection under severe weather conditions.

Maintain Satellite Continuity and Severe Weather Forecasts

Line Office/ Strategic Plan	Item	FY 2001 Enacted	Increase/ Decrease	FY 2002 Total
<u>Satellite and Data Services</u>				
NESDIS/ASTWF	Environmental Observing Services	\$50.7	\$14.3	\$65.0
NESDIS/ASTWF	Polar orbiting satellites (current generation)	136.7	9.6	146.3
NESDIS/ASTWF	National Polar Orbiting Environmental Satellite System (NPOESS)	73.2	83.4	156.6
NESDIS/ASTWF	Geostationary Operational Environmental Satellites (GOES)	290.2	3.1	293.3
NESDIS/ASTWF	Commercial Remote Sensing License	0.0	1.2	1.2
NESDIS/ASTWF	Data & Information Services - operational activities	24.9	6.5	31.4
Subtotal, Satellite & Data Services		575.7	118.1	693.8
<u>Severe Weather Forecasts</u>				
OAR/ASTWF	U.S. Weather Research Program	1.5	2.2	3.7
NWS/ASTWF	Automated Surface Observing Systems (ASOS)	3.8	1.3	5.1
NWS/ASTWF	National Center for Environmental Prediction - Environmental Modeling Center (EMC) - Sustain operations	4.2	1.7	5.9
NWS/NESDIS/ ASTWF	Data Assimilation & the Joint Center for Satellite Data Assimilation	0.0	3.8	3.8
Subtotal, Severe Weather Forecasts		9.5	9.0	18.5
TOTAL		\$585.2	\$127.1	\$712.3

* Aircraft flight hours in support of Severe Weather Forecasts are also requested and are included in the People and Infrastructure cross-cutting initiative.

Maintain Satellite Continuity and Severe Weather Forecasts**\$712.3 million**

Critical to meeting our 21st Century mission is the continuity of NOAA's Satellites and Severe Weather Forecasts. In order to ensure our success, the FY 2002 President's Budget Request includes a total of \$712.3 million, of which \$127.1 million is new funding. The programs that comprise this initiative are summarized in the preceding table and the program descriptions below.

SATELLITE AND DATA SERVICES**\$693.8 million****Environmental Observing Services: \$65.0 million**

The total request of \$65.0 million for Environmental Observing Services represents an increase of \$14.3 million above the FY 2001 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 users.

Polar Orbiting Satellites (current generation): \$146.3 million

The total request of \$146.3 million for Polar Orbiting Satellites represents an increase of \$9.6 million above the FY 2001 Enacted level. This continued investment will allow for the continuation of spacecraft production (NOAA K-N'). It will also allow for completion of the instruments for the European Meteorological Operational (METOP) satellites which will replace NOAA's morning polar orbiting satellite during calendar year 2005. Funding is included for upgrading and replacing aging and deteriorating ground systems to allow for continuation of operations for the Polar K-N' series through the end of its lifetime in about 2012. These ground systems are needed in order to communicate with the satellites until the last of the series is decommissioned. In addition, funds provide for replacing and upgrading the aging product generation and distribution system.

National Polar Orbiting Environmental Satellite System: \$156.6 million

The total request of \$156.6 million for the National Polar Orbiting Environmental Satellite System (NPOESS) represents an increase of \$83.4 million above the FY 2001 Enacted level. This continued investment will allow for the convergence of NOAA's Polar program, the Department of Defense's (DOD) Defense Meteorological Satellite Program and National Aeronautic and Space Agency's (NASA) research and development into a single satellite system that will save the United States Government millions of dollars over the life of the program. NPOESS is essential to meeting both NOAA's requirements in weather forecasting, oceanography, climate and search and rescue services as well as the DOD's National Security mission. NOAA has only three remaining current generation satellites on the ground to use until the first NPOESS satellite is delivered in late 2008. NPOESS needs to stay on schedule as provided for in this FY 2002 Budget Request to help ensure that polar data continuity is maintained. NPOESS satellites

are critical for weather forecasting, climate observations, U.S. military operations on a worldwide basis, and search and rescue operations.

Geostationary Operational Environmental Satellites: \$293.3 million

The total request of \$293.3 million for the Geostationary Orbiting Environmental Satellite (GOES) Program represents an increase of \$3.1 million above the FY 2001 Enacted level. This continued investment will fund the spacecrafts and launch services, including the launch vehicle and launch control personnel. Funding is necessary to maintain continuity of geostationary operations.

Commercial Remote Sensing License: \$1.2 million

NOAA requests a total of \$1.2 million for the Commercial Remote Sensing Licensing Program. This investment will ensure the timely review and processing of satellite license applications. Under the Land Remote Sensing Policy Act of 1992 (as amended in 1998), NOAA is charged with licensing and enforcing licenses of the U.S. private sector remote sensing industry. Funding will be used to establish a program to provide technical support for such reviews, support of an industry advisory mechanism, and 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.

Data and Information Services - operational activities: \$31.4 million

The total request of \$31.4 million for Data and Information Services - operational activities represents an increase of \$6.5 million above the FY 2001 Enacted level. This continued investment is for core operational activities and 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 has become a necessity as the volume of new data continues to grow. Combined with other funding for fisheries oceanography, habitat characterization, the climate reference network, climate database modernization, and environmental data systems modernization, these funds support NESDIS' Data and Information sub-activity request.

SEVERE WEATHER FORECASTS

\$18.5 million

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

The total request of \$3.7 million for the U.S. Weather Research Program (USWRP) represents an increase of \$2.2 million above the FY 2001 Enacted level. This continued investment in research will improve the accuracy of hurricane landfall predictions for location, intensity, and rainfall estimates. Decreased error and uncertainty in hurricane forecasts will save lives and will help reduce the length of coastline recommended for evacuation during these powerful storms. This will allow localities to avoid millions of dollars worth of unnecessary preparations, and, at the same time, encourage those in the warned areas to have greater confidence in the accuracy of the warnings. The USWRP is a partnership between NOAA, other Federal Agencies, and universities.

Automated Surface Observing Systems: \$5.1 million

The total request of \$5.1 million for Automated Surface Observing Systems (ASOS) represents an increase of \$1.3 million above the FY 2001 Enacted level. This continued investment will complete the acquisition of 346 new ASOS dewpoint sensors. The existing dewpoint sensors fail on average every ten days and have the highest failure rate in the ASOS suite of sensors, and consequently are in need of replacement. These funds will also complete the acquisition of 346 new ASOS processor units which are needed because the current processors are over capacity. Lastly, these funds will allow NOAA to begin acquisition of the all-weather precipitation gauge necessary for climate record continuity and aviation safety. In FY 2002, NOAA will acquire 115 all-weather precipitation gauges.

National Center for Environmental Prediction - Environmental Modeling Center: \$5.9 million

The total request of \$5.9 million for the National Center for Environmental Prediction (NCEP) - Environmental Modeling Center represents an increase of \$1.7 million above the FY 2001 Enacted level. This continued investment will 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." In FY 2002, NWS plans to provide direct base support for its suite of operational forecast models, including the aviation, regional, and global models.

Data Assimilation and the Joint Center for Satellite Data Assimilation: \$3.8 million

NOAA requests a total of \$3.8 million for Data Assimilation and the Joint Center for Satellite Data Assimilation. This request comprises \$3.0 million for data assimilation and \$0.8 million for the Joint Center for Satellite Data Assimilation. The investment for data assimilation will allow NOAA to improve data assimilation and modeling at the National Center for Environmental Prediction (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 short and medium range and severe weather forecasts including aviation, marine, hurricane, rainfall, and severe weather. This critical funding request aims to improve forecasts through the use of enhanced satellite data and other data-sets in the NCEP prediction models, leveraging one of the Nation's largest capital investments in global and environmental observing systems. Investment in data assimilation ensures that the large investment in observing systems and computers has maximum benefit for the public.

In addition to data assimilation, \$0.8 million will be used to establish the Joint Center for Satellite Data Assimilation with NWS, NESDIS and NOAA Research in order to accelerate and improve the use of satellite data in forecast models. The core scientific staff and computing facilities of this "virtual" Center will consist of current NOAA resources. This request will allow for NOAA to accelerate the use of current and future satellite data in NWS weather and climate prediction operations. In addition to the NOAA contributions, NASA, with a similar level of support, 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. This center will make more effective use of NOAA remotely sensed data as well as integrate NASA, Department of Defense, and international satellite data into NOAA's operational models.

Coastal Conservation Activities

Line Office/ Strategic Plan	Item	FY 2001 Enacted	Increase/ Decrease	FY 2002 Total
NOS/SHC	Coral Reef Institutes and Program	\$16.0	\$0.0	\$16.0
NMFS/BSF	Coral Reef Program	11.0	0.0	11.0
NESDIS/SHC	Coral Reef Monitoring	0.0	0.7	0.7
	Subtotal, Coral Reef Activities	27.0	0.7	27.7
NOS/SHC	Coastal Zone Management (CZM) Program Administration	2.8	3.6	6.4
	Transfer from CZM Fund*	3.2	(3.2)	0.0
NOS/SHC	CZM Grants	60.4	8.6	69.0
	Subtotal, CZMA	63.2	12.2	75.4
NOS/SHC	Nonpoint Pollution Implementation Grants	10.0	0.0	10.0
NOS/SHC	National Estuarine Research Reserves (NERRS) (ORF)	14.7	1.7	16.4
NOS/SHC	National Estuarine Research Reserves land acquisition and facilities (PAC)	37.9	(28.0)	9.9
	Great Bay Partnership	3.0	(3.0)	0.0
	Subtotal, National Estuarine Research Reserves	55.6	(29.3)	26.3
NOS/SHC	National Marine Sanctuaries (ORF)	32.4	3.6	36.0
NOS/SHC	National Marine Sanctuaries facilities (PAC)	3.0	13.0	16.0
	Subtotal, National Marine Sanctuaries	35.4	16.6	52.0
NOS/RPS	Marine Protected Areas	0.0	3.0	3.0
NMFS/RPS	Pacific Coastal Salmon Recovery Fund**	89.8	0.2	90.0
	TOTAL	\$281.0	\$3.4	\$284.4

* Proposed as a general offset to CZM Act activities in FY 2002.

** The FY 2002 total does not include Pacific Salmon Treaty funding of \$20 million or other NMFS salmon activities. See Section 4, *Supplemental Information* for additional details on salmon funding. Italicized numbers are non-adds.

Coastal Conservation Activities

\$284.4 million

The History

Over the past several years NOAA has proposed, through various initiatives and programs, funding to address some of the most serious challenges facing the U.S. coasts and oceans. Through those programs NOAA has made significant progress in addressing a number of critical environmental issues. The Coastal Conservation Activities Initiative will continue to build on the progress made to preserve the Nation's coasts and oceans.

NOAA's Role

In the FY 2002 President's Budget, NOAA requests \$284.4 million to continue environmental programs that are critical to ensuring the continued preservation of our Nation's coastal and ocean resources. The FY 2002 Budget Request includes resources to enhance our ability to effectively manage the National Marine Sanctuaries, enhance habitat protection through the National Estuarine Research Reserve System and strengthen and improve Marine Protected Area (MPA) programs and their conservation goals. These funds will be leveraged through improved Federal, state, local, tribal, and territorial coordination and collaboration to fill shared information, technical and operational needs. Also included are additional resources to increase Coastal Zone Management grants to states 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. With the funds requested in FY 2002 NOAA will also continue to implement recommendations of the Coral Reef Task Force and enhance the recovery of threatened and endangered coastal salmon. The programs that comprise the Coastal Conservation Activities cross-cut are highlighted below.

Coral Reef Activities: \$27.7 million

The total request of \$27.7 million for Coral Reef Activities represents an increase of \$0.7 million above the FY 2001 Enacted level. This continued investment will allow for NOAA's support for coral reef activities across the Nation. Funding will enable NOAA to continue implementing priorities of the U.S. Coral Reef Task Force and recommendations included in the America's Ocean Future Report. Working with state, territorial, and local partners, this level of funding will support research, monitoring, and local level projects to reduce human impacts and increase sustainable use of America's valuable coral reefs.

Coastal Zone Management Program: \$75.4 million

The total request of \$75.4 million for the Coastal Zone Management (CZM) Program represents an increase of \$12.2 million above the FY 2001 Enacted level. This includes an increase of \$8.6 million for CZM grants, a technical change in the transfer from the CZM Fund, and an increase of \$0.4 million for Program Administration.

The total request of \$69.0 million for CZM Grants represents an increase of \$8.6 million over the FY 2001 Enacted level. This continued investment will allow NOAA to provide direct grants 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 percent of the Nation's shoreline to the benefit of the environment and the economy. The requested investment would provide resources for coastal states to more fully implement their coastal management plans. Specifically, NOAA 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.

In order to streamline CZM administrative processes, NOAA proposes to consolidate all funding for CZM Program Administration under ORF. Doing so requires replacement of the \$3.2 million that had been transferred from the CZM Fund (a non-ORF account) in prior years. In FY 2002, the CZM Fund is proposed as a general offset to CZM Act activities.

The total request of \$6.4 million for the CZM Program Administration represents an increase of \$0.4 million above the FY 2001 Enacted level. This continued investment will support NOAA's national program administration responsibilities under the Coastal Zone Management Act (CZMA), which continues to grow. This request will assist NOAA's ability to bring together representatives from state, Federal, and tribal governments and the private sector, to address issues such as coastal hazards, habitat and polluted runoff. It will allow NOAA to address the increasing requests of the states (33 in the program, one state program in development) for support and technical assistance. This level of funding will also enable NOAA to maintain national support for the 25 National Estuarine Research Reserves.

Nonpoint Pollution Implementation Grants: \$10.0 million

NOAA requests a total of \$10.0 million for Nonpoint Pollution Implementation Grants. This investment will provide states with resources to reduce nonpoint pollution, the greatest single threat to coastal water quality. Coastal waters are increasingly impacted by polluted runoff. Symptoms include the impacts of Pfiesteria in coastal waters of the eastern seaboard, nutrient over-enrichment in the Gulf of Mexico, the loss of salmon fisheries in the Pacific Northwest and local closures of shellfish beds and beaches throughout the country. NOAA will provide grants to states with approved plans to address the causes of these and other symptoms of the degradation of our coastal water quality.

National Estuarine Research Reserves: \$26.3 million

The total request of \$26.3 million for the National Estuarine Research Reserves (NERRS) represents a decrease of \$29.3 million below the FY 2001 Enacted level. This funding level supports an increase in operations of \$1.7 million for a total of \$16.4 million in the Operations, Research and Facilities (ORF) Account, and a decrease in one-time construction items of \$24.5 million, for a total request of \$9.9 million in the PAC Account. With regard to the increase for NERRS operations, these funds will improve the ability of NOAA and its state partners to understand, manage, and protect these special estuarine 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, protection, and education 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 technical training programs at the 25 designated reserves, and ultimately lead to healthier estuaries, coastal water quality, and fisheries.

Of particular interest is the NERRS' System-Wide Monitoring Program (SWMP). The SWMP is a national monitoring system that will integrate water quality, and biological and land-cover change elements, making the information available to scientists and managers. The 25 existing reserves will expand their participation in SWMP by increasing spatial coverage of water quality stations, and by monitoring additional biological indicators. 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 on water quality, habitat, invasive species, and sustainable ecosystem issues.

Funding of \$9.9 million for infrastructure investments in the Procurement, Acquisition, and Construction (PAC) account includes resources to complement these activities by providing resources for research, education, and visitor facilities at multiple reserve sites across the Nation. The NERR system uses a competitive priority -setting process each year to fund the best projects from the long list of eligible proposals. At some sites, land acquisition from willing sellers may be a high priority to enhance the protection of key resources. At other sites, facilities and related structures, such as interpretive centers, laboratories, boardwalks, and boat docks may be the best use of funds to enhance the outreach, education, and research programs within the NERRS.

National Marine Sanctuaries: \$52.0 million

The total request of \$52.0 million for the National Marine Sanctuaries represents an increase of \$16.6 million above the FY 2001 Enacted level. This increase of \$16.6 million is comprised of \$3.6 million for operations (for a total ORF request of \$36.0 million), and an increase of \$13.0 million for new construction (for a total PAC request of \$16.0 million). With regard to National Marine Sanctuaries operations, this continued investment will provide funding to upgrade the operating and technical capacity in the thirteen national marine sanctuaries. The results will improve protection of important sanctuary resources, including coral reefs, endangered marine mammals, sensitive habitats, and significant cultural resources. In addition to supporting the operations, this investment will provide for additional site characterization, additional enforcement capabilities, public education, and the implementation of key management changes. Changes are expected in a wide range of activities, including drafting and amending regulations, establishing new partnerships, expansion of outreach and education efforts, and additional research, monitoring and restoration.

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. Elements that must be compiled for cultural and natural resource inventories include location of shipwrecks, data on marine mammals, fish, shellfish and sea birds, habitat types, and physical characteristics, such as bottom topography, water quality, and water temperature. The goal is to gather enough characterization information at each site to be able to effectively manage the resources. New funding will support these efforts and the Sustainable Seas Expeditions. This FY 2002 Budget responds to Congressional direction and the recently passed National Marine Sanctuary Amendments Act.

With regard to the increase of \$13.0 million for Marine Sanctuaries construction in the PAC Account, NOAA will continue to implement the detailed, comprehensive facilities plan developed in FY 2000 in order to respond to the growing public interest in the ocean environment and the Marine Sanctuary System. NOAA will work in partnership with other Federal agencies and private institutions such as museums, aquaria, and foundations. NOAA will establish or upgrade facilities to ensure access to sanctuary resources and allow public appreciation of the unique marine habitats in those sanctuaries. These facilities provide important outreach and education functions for these special places, since many visitors are unable to visit the actual sanctuary sites which, in several cases, are many miles offshore or require individuals to be certified scuba divers in order to view firsthand these national treasures.

Within these funds, an estimated \$6.5 million is targeted for the Dr. Nancy Foster Florida Keys Environmental Center to complete renovation and construction at this former Navy installation and properly support the multi-agency partnership and the Center's mandates to promote environmental education, protection, marine safety and rescue, and coastal stewardship. This center, which was dedicated last year, stands as a tribute to the late Dr. Nancy Foster, NOAA's Assistant Administrator for the National Ocean Service. One of the two buildings will host a state-of-the-art multi-agency (NOAA, National Park Service, Fish & Wildlife Service) visitor center. The other building will become the operations center for the Florida Keys National Marine Sanctuary and host office space; laboratory space; a diving locker; a maintenance area for mooring buoys, boats and vehicles; and dock space. The new facility will also provide consolidation of office space and boat docks that are currently scattered across multiple leased facilities in the Key West area.

Marine Protected Areas: \$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.

Pacific Coastal Salmon Recovery Fund: \$90.0 million

The total request of \$90.0 million for the Pacific Coastal Salmon Recovery Fund represents an increase of \$0.2 million above the FY 2001 Enacted level. This continued investment will allow the states and tribes to continue support for habitat restoration and protection, research and enhancement, monitoring and evaluation, and salmon recovery planning and implementation efforts. Funding will be used to enhance Pacific coastal salmon recovery and for the purpose of helping share the costs of state, tribal and local conservation initiatives. Programs funded within this account will 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 matching requirement. This request 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. Other salmon increases and more detailed funding breakouts not highlighted in this cross-cutting initiative can be found in Section 4, *Supplemental Information*.

Climate Services

Line Office/ Strategic Plan	Item	FY 2001 Enacted	Increase/ Decrease	FY 2002 Total
OAR/ SI/PADCC	Continuing Climate Services	\$12.2	(\$1.2)	\$11.0
OAR/SI	Regional Assessments, Education and Outreach	0.0	1.9	1.9
OAR/SI	Weather-Climate Connection	0.0	0.9	0.9
OAR/PADCC	Carbon Cycle	0.0	2.3	2.3
OAR/SI/ PADCC	Ocean System for Improved Climate Services	0.0	7.3	7.3
OAR/PADCC	Climate Change Assessments	0.0	0.7	0.7
OAR/ All goals	HPCC Program/GFDL Supercomputer	4.0	3.0	7.0
OAR/PADCC	Comprehensive Large Array data Stewardship System (CLASS)	2.0	1.6	3.6
TOTAL		\$18.2	\$16.5	\$34.7

Climate Services

\$34.7 million

The Challenge

From the storms of next week to the drought of next season to the potential human-induced climate change over the coming century, issues of climate variability and change will continue to be a major issue for the Nation. Whether responding to the ongoing drought in the Pacific Northwest and its effect on power generation and endangered salmon, or in determining how much atmospheric carbon dioxide is taken up by the North American biosphere, these questions influence users from the Western water manager to the shapers of national policy. The challenge is to extend the research successes, maintain the observational backbone, and improve the capability to provide useful information services to our customers. Improved climate predictions will enable resource managers in climate sensitive sectors such as agriculture, water management, and energy supply to alter strategies and reduce economic vulnerability. Building on the understanding of the Earth's climate system that has resulted from the Nation's strong scientific research and numerical modeling programs, this Climate Observations and Services Program will begin the transition of research data, observing systems and understanding from experiments to applications, and from basic science to practical products.

NOAA's Role

NOAA maintains a balanced program of focused research, large-scale observational programs, modeling on seasonal-centennial time scales, and data management. In addition to its responsibilities in weather prediction, NOAA has pioneered in the research and operational prediction of climate variability associated with the El Niño Southern Oscillation (ENSO). With agency and international partners, NOAA has been a leader in the assessments of climate change, stratospheric ozone depletion, and the global carbon cycle. NOAA scientists have been leaders internationally in the Intergovernmental Panel on Climate Change (IPCC). It maintains national coordination through participation in the U.S. Global Change Research Program.

The agency-wide Climate Observations and Services activity represents a partnership that allows NOAA to facilitate the transition of research observing and data systems and knowledge into operational systems and products. During recent years, there has been a growing demand from emergency managers, the private sector, the research community, decision-makers in the United States and international governmental agencies and the general public to provide timely data and information about climate variability, climate change and trends in extreme weather events. The economic and social need for continuous, reliable climate data and longer-range climate forecasts has been clearly demonstrated. NOAA's Climate Observations and Services Initiative responds to these needs. The following efforts will be supported by this initiative:

Continuing Climate Services

The total funding request for NOAA's Continuing Climate Services is \$11.0 million. These continued investments will allow NOAA to build on the climate activities started in FY 2001. These activities include:

Climate Reference Network: \$3.0 million. In order to ensure NOAA's capability to monitor very long-term changes of temperature and precipitation, a climate reference network consisting of several hundred stations must be developed by making use of the historical data from the best sites in the network of 11,000 cooperative observing sites. This climate reference network will build on data from stations identified as those with the longest environmentally stable records, most dedicated observers, and most reliable data with few interruptions.

Improving the Availability of Climate Data and Information: \$1.0 million. As the observational capabilities increase and the observing networks expand, it is essential that data management and dissemination systems are in place to make the resulting data and information widely and easily accessible to public and private sector decision makers. During recent years, NOAA has struggled to respond adequately to questions from industry, the general public, and the Government regarding potential changes in weather and climate events. NOAA is developing the required infrastructure to assemble, develop, and communicate the data, information, and knowledge about the trends, likelihoods, and future expectations of climate and weather events.

Baseline Observatories: \$2.0 million. Funding for this activity is for operations at NOAA's remote manned Global Atmospheric Baseline Observatories, measuring up to 250 different atmospheric parameters relevant to the study of climate change at: Barrow, AK; Mauna Loa, HI (since 1957); American Samoa; and the South Pole, Antarctica (also since 1957). These observations are critical to the collection and continuity of the world's longest atmospheric time series, supplying the scientific community with information on the state and recovery of the ozone layer, global carbon dioxide, and other trace gases impacting the global climate.

Ocean Observations: \$5.0 million. NOAA maintains the sustained global observing and data stewardship system necessary for climate research and forecasting as well as the long-term monitoring system necessary for climate change detection and attribution. The observation network is based on a set of "core" observations (e.g., temperature, surface wind stress, salinity, sea level, carbon dioxide), consisting of both in-situ and remotely sensed measurements, that have been identified in NOAA and other national and international reports as needed to satisfy research and operational climate requirements.

Regional Assessments, Education and Outreach: \$1.9 million

NOAA requests a total of \$1.9 million for Regional Assessments, Education and Outreach. This investment will allow for regional assessments, education and outreach related to climate variability. 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.

Weather-Climate Connection: \$0.9 million

NOAA requests a total of \$0.9 million for Weather-Climate Connection. This investment will assist in understanding predictions variability beyond the El Niño Southern Oscillation (ENSO) and predicting the weather-climate connection. As during El Niño, other sub-seasonal tropical fluctuations can also lead to shifts in the Pacific storm track, affecting the paths of storms approaching the U.S. west coast, and influencing weather across the entire country. Sub-seasonal tropical-mid-latitude interactions thereby provide a potentially important additional source of predictability beyond ENSO. NOAA will 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 U.S., and document the structure of variations in tropical rainfall on weekly to monthly time-scales, as well as air-sea interactions in both tropical systems and in mid-latitude oceanic and land-falling storms.

Carbon Cycle: \$2.3 million

NOAA requests a total of \$2.3 million for the Carbon Cycle. This investment, as part of a multi-agency effort, will allow NOAA to establish a network of more densely spaced airborne and tall-tower based sampling sites over North America. The U.S. scientific community recently completed a plan for an integrated carbon cycle science program which aims to quantify, understand and project the evolution of global carbon sources and sinks in order to better predict future climate.

Ocean System for Improved Climate Services: \$7.3 million

NOAA requests a total of \$7.3 million for the Ocean System for Improved Climate Services. This investment will contribute to the global operational ocean-observing system by enhancing its present components and establishing new components. Of the \$7.3 million requested, \$3.2 million is required to support the U.S. commitment to deploy and maintain 1000 ARGO profiling floats in the proposed global array of 3,000 floats. This commitment requires a deployment of 280 ARGO floats per year. The remainder of this request, \$4.1 million, supports other observational components including Arctic Ocean fluxes, ocean reference stations, oceanic carbon, and augmentation of the volunteer observing ship (VOS) instrumentation. Finally, investments are to be made for data management and assimilation. Based on a firm scientific foundation, this ocean observing system is closely coupled with other U.S. and international observing efforts, and will greatly improve the data available for understanding climate variation.

Climate Change Assessments: \$0.7 million

NOAA requests a total of \$0.7 million for Climate Change Assessments. This investment will continue contributions to environmental assessments that have become the primary tool to deliver climate information to governments, industry, the scientific community and the general public. Over the past two years NOAA has led and contributed to Ozone assessments under the Montreal Protocol, the Intergovernmental Panel on Climate Change (IPCC), and U.S. National Assessments. This investment will support NOAA's leadership in assessing climate change and its global impact on the United States and other communities.

High Performance Computing and Communications Program/Geophysical Fluid Dynamics Laboratory: \$7.0 million

The total request of \$7.0 million (in the PAC Account) for the High Performance Computing and Communications (HPCC) Program and Geophysical Fluid Dynamics Laboratory represents an increase of \$3.0 million above the FY 2001 Enacted level. This continued investment will provide full-year support for the High performance supercomputer system at NOAA's Geophysical Fluid Dynamics Laboratory (GFDL). The system will be used full-time to attack some of the most difficult but critical obstacles to developing and testing new and more realistic models for predicting climatic variability, detecting climate change, and forecasting hurricanes. Expansion of GFDL's supercomputer is needed to answer questions regarding long-term global warming and to evaluate various scenarios reflecting different levels of anthropogenic influences on the atmosphere.

Comprehensive Large-Array data Stewardship System: \$3.6 million

The total request of \$3.6 million for the Comprehensive Large-Array data Stewardship System (CLASS) represents an increase of \$1.6 million in the Procurement, Acquisition and Construction (PAC) Account. This continued investment will afford efficient management of high volumes of data, including radar and satellite data, as well as data from radiosondes and ocean data buoys. This data is critical to the joint U.S. Global Change Research Program (USGCRP) and the scientific community. Significant increases in the volume of data require a rapid expansion in storage capacity, currently located in Asheville, NC. Similarly, telecommunications and automated access systems upgrades are needed to ensure easy and efficient access to the data.

Modernization of NOAA Fisheries

Line Office/ Strategic Plan	Item	FY 2001 Enacted	Increase/ Decrease	FY 2002
<u>Science</u>				
NMFS/BSF	South Florida	\$1.3	\$0.6	\$1.9
NMFS/BSF	Expand & Improve Annual Stock Assessments	1.7	13.3	15.0
NMFS/ NESDIS/BSF	Fisheries Oceanography	0.0	2.0	2.0
NMFS/BSF	Aquaculture	0.0	1.0	1.0
NMFS/BSF	Pacific Highly Migratory Species Research	0.0	1.0	1.0
NMFS/BSF	Cooperative Research	5.5	0.5	6.0
NMFS/BSF	Fisheries Economic and Social Statistics Program	3.0	1.4	4.4
NMFS/BSF	National Fisheries Information System	0.0	8.0	8.0
NMFS/BSF	Reduce Gear Impacts on Essential Fisheries Habitat	0.0	1.0	1.0
NMFS/BSF	Fishery Observers - Improve Data Collection*	0.0	4.0	4.0
NMFS/BSF	Fisheries Habitat Restoration	8.0	2.0	10.0
NESDIS/BSF	Habitat Characterization	0.0	0.3	0.3
	Subtotal, Science	19.5	35.1	54.6
<u>Management</u>				
NMFS/BSF	Refine EFH Designations	0.0	1.5	1.5
NMFS/BSF	Northeast Fisheries Management Programs	0.0	3.5	3.5
NMFS/BSF	Regional Councils	13.1	2.5	15.6
NMFS/RPS	Sea Turtles	3.3	3.0	6.3
NMFS/RPS	Marine Mammals - Dolphins	3.5	1.0	4.5
NMFS/RPS	Atlantic Salmon Conservation	2.0	1.5	3.5
NMFS/RPS	Right Whale Activities	5.0	2.0	7.0
	Subtotal, Management	26.9	15.0	41.9
<u>Enforcement</u>				
NMFS/BSF	Enforcement and Surveillance Base	36.0	3.9	39.9
NMFS/BSF	Vessel Management Systems	1.3	6.1	7.4
	Subtotal, Enforcement	37.3	10.0	47.3
TOTAL		\$83.7	\$60.1	\$143.8

* New funding included in the FY 2001 appropriation was for specific fisheries (Atlantic and West Coast groundfish).

Modernization of NOAA Fisheries

\$143.8 million

The FY 2002 President's Budget Request for the National Marine Fisheries Service (NMFS), referred to as "NOAA Fisheries," follows Congressionally enacted levels in FY 2001 and invests in core programs needed for NOAA to meet its mission to manage fisheries, rebuild stocks, and protect endangered species such as sea turtles and whales. NOAA Fisheries modernization funds will be allocated within NMFS to ensure that existing statutory and regulatory requirements are met for fisheries and protected species management programs (including the Magnuson-Stevens Act, National Environmental Protection Act, Endangered Species Act, Marine Mammal Protection Act, and other statutory requirements). In FY 2002, there are sufficient funds for NMFS to meet its statutory and regulatory requirements.

This budget request builds upon last year's effort to begin the modernization of NOAA Fisheries. The Modernization of NOAA Fisheries Initiative encompasses a long-term commitment to improve the NMFS' structure, processes, and business approaches to meet its mission of sustaining the Nation's living marine resources and their habitat. This initiative focuses on improving NMFS' science, management, and enforcement programs and beginning to rebuild its aging infrastructure. These improvements will result in measurable progress in the biological and economic sustainability of fisheries and protected resources. In order to ensure the viability of these modernization efforts, the FY 2002 President's Budget Request includes the following program investments:

SCIENCE

\$54.6 million

South Florida: \$1.9 million

A total of \$1.9 million is requested for research and monitoring activities for the South Florida ecosystem, an increase of \$0.6 million over the FY 2001 Enacted level. 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.

Expand Annual Stock Assessments: \$15.0 million

The total request of \$15.0 million for Expanding Annual Stock Assessments represents an increase of \$13.3 million above the FY 2001 Enacted level. This continued investment will provide for additional scientific survey data collection to improve NMFS' ability to make accurate, timely stock predictions. Funding at this level would add 829 chartered ship days toward the deficit of 2,564 days identified in the NMFS Stock Assessments Improvement Plan as needed for adequate stock assessment coverage. Included in this increase is \$1.0 million to enhance the assessment of marine mammal population status and trends as required by the Marine Mammal Protection Act.

Fisheries Oceanography: \$2.0 million

A total request of \$2.0 million for fisheries oceanography represents a \$2.0 million increase above the FY 2001 level. This request is comprised of two increases, \$1.5 million for NMFS and \$0.5 million for fisheries oceanography within the National Environmental Satellite, Data and Information Service

(NESDIS). The \$1.5 million increase will enable NMFS to assess how long-term environmental factors affect fish stocks. By better identifying the potential environmental causes of fish population fluctuations, NMFS will be able to improve its stock predictions and resultant management actions. The \$0.5 million increase will enable NESDIS to explore using Synthetic Aperture Radar technology and data in fishery resources monitoring. This investment would build on applications demonstrated in October 1999 using RADARSAT-1 imagery in Alaska, and would result in radar data and products useful in fisheries enforcement, NMFS laboratories and for other agencies such as the Coast Guard.

Aquaculture: \$1.0 million

NOAA requests a total of \$1.0 million to promote environmentally sound marine aquaculture.

NOAA will improve the aquaculture regulatory framework by developing and implementing of a code of conduct for responsible aquaculture. NOAA will also address the important environmental aspects of aquaculture in the non-indigenous species area, especially for shrimp viruses.

Pacific Highly Migratory Species Research: \$1.0 million

NOAA requests a total of \$1.0 million for Pacific highly migratory species research. This request would fund growing and critical research needs as a new Fishery Management Plan for these species is implemented. Activities include: conducting stock assessments and biological studies for four major tuna species and three species of sharks, conducting research to evaluate the extent of bycatch and effectiveness of mitigation measures in purse seine fishing using fish aggregating devices, and developing and implementing assessment methodologies tailored for highly migratory species.

Cooperative Research: \$6.0 million

A total request of \$6.0 million for Cooperative Research represents an increase of \$0.5 million over the FY 2001 Enacted level. This request will expand cooperative research activities in the Southeast and will involve fishermen in designing and conducting research programs, utilizing their expertise and insights in resource survey design and interpretation. By working together to design and implement data collection programs, these partnerships between NMFS and the industry significantly strengthen fisheries research. This Southeast cooperative research effort compliments similar efforts, including Northeast Cooperative Research funded at \$5.0 million, cooperative research coordinated by the Northeast Consortium funded at \$5.0 million and, and National Cooperative Research efforts, funded at \$3.0 million.

Fisheries Economic and Social Statistics Program: \$4.4 million

A total request of \$4.4 million for expanding economic and statistics research represents a \$1.4 million increase over the FY 2001 level. This request is needed to conduct economic and social assessments of management alternatives by improving NMFS' economic and social science staff capability, and initiation of data and applied research programs. This funding will enable NMFS to better evaluate and predict the economic and community impacts of potential management actions, and satisfy statutory, regulatory and Executive Order requirements for assessing the benefits and costs of fisheries management and protected species management actions

Fisheries Information System: \$8.0 million

NOAA requests a total of \$8.0 million for the National Fisheries Information System. This investment will begin the implementation of 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 will be developed in cooperation with the fishing industry, states, interstate fisheries commissions, and other stakeholders as outlined under section 401 of the Magnuson-Stevens Act. The funding provided to the Atlantic States Marine Fisheries Commission for regional implementation activities in FY 2001 is included in addition to this funding. The proposed system would improve the accuracy and effectiveness of existing data collection programs by establishing common data collection, information technology, and quality standards for regional programs, and integrating the results into unified Web-enabled information system. The proposal will also fill critical information gaps through initiation of new data collection programs that will subsequently improve living marine resource policy decisions by reducing data uncertainties.

Reduce Gear Impacts on Essential Fisheries Habitat: \$1.0 million

NOAA requests a total of \$1.0 million to reduce fishery impacts on essential fish habitat. This request funds research that will focus on the effects of specific fishing activities on essential fish habitat, comparing those impacts with other sources of habitat degradation, monitoring habitat recovery in areas where fishing has been curtailed, and developing management strategies to ensure sustainable harvesting practices.

Fishery Observers - Improve Data Collection: \$4.0 million

NOAA requests \$4.0 million for additional Fishery Observers - Improving Data Collection. This investment will provide for increased observer coverage to minimum levels around the country as required by regulation or to optimal levels as recommended by fisheries scientists for statistical validity, and initiates coverage in fisheries that were previously not observed. Observers are increasingly essential to managing fisheries and marine mammal stocks. To improve the quality of data collected by observers and to provide a more sound base for fishery management decisions, the plan includes resources to provide better coordination and consistency of NMFS observer program policies and procedures. It also provides for the development of technological enhancements to make the future observer program less costly and more efficient.

Fisheries Habitat Restoration: \$10.0 million

A total request of \$10.0 million for Fisheries Habitat Restoration represents an increase of \$2.0 million over the FY 2001 level. These funds will expand NMFS involvement in community-based restoration projects. This highly successful national effort encourages partnerships with groups outside NOAA and has regularly leveraged appropriated funds by factors of five to six, and by as much as ten to one. Presently, NOAA receives many more high-quality habitat restoration proposals than it has funds to support. The requested funds would enhance national restoration efforts to meet this enthusiastic demand.

Habitat Characterization: \$0.3 million

NOAA requests a total of \$0.3 million for Habitat Characterization. This investment will allow NESDIS 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.

MANAGEMENT**\$41.9 million****Refine Essential Fisheries Habitat Designations: \$1.5 million**

NOAA requests a total of \$1.5 million to refine essential fish habitat designations. This request funds programs to collect critical scientific data needed to identify essential fish habitat more precisely for managed species, enhancing the effectiveness of fishery management actions, and filling data gaps that can result in litigation.

Northeast Fisheries Management Programs: \$3.5 million

NOAA requests a total of \$3.5 million for the Northeast Fisheries Management program. This investment will enable NMFS to continue rebuilding overfished and overcapitalized Northeast fisheries including groundfish and scallops by reducing the amount of fish takes by fishermen, thus giving the fish stocks time to recover. Funding will also be used, in part, to implement new and innovative cooperative research efforts in the Region.

Regional Councils: \$15.6 million

The total request of \$15.6 million for Regional Councils represents an increase of \$2.5 million above the FY 2001 Enacted level. This continued investment will support all eight Regional Councils’ increased workload from new programs and regulations as a result of implementing the Sustainable Fisheries Act amendments to the Magnuson-Stevens Act. The Regional Councils are integral partners with NOAA in the management of the Nation’s fisheries. NOAA is the Regional Fisheries Councils’ only source of funding to carry out their mission.

Sea Turtles: \$6.3 million

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



Marine Mammals - Dolphins: \$4.5 million

The total request of \$4.5 million for dolphin conservation and recovery represents an increase of \$1.0 million over the FY 2001 Enacted level. This investment will allow NOAA to expand current activities in dolphin 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: \$3.5 million

The total request of \$3.5 million for Atlantic salmon represents an increase of \$1.5 million over the FY 2001 Enacted level. This investment will allow NOAA to conserve and restore healthy populations of Atlantic salmon in the Gulf of Maine Distinct Population Segment (DPS) and their habitats. NOAA will use this investment 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 for Northern Right Whales represents an increase of \$2.0 million over the FY 2001 Enacted level. This investment will allow NOAA to expand current Northern Right Whale population and health assessments and recovery efforts in the North Atlantic and in the North Pacific.

ENFORCEMENT**\$47.3 million****Enforcement Activities: \$47.3 million**

The total request of \$47.3 million for Enforcement Activities represents an increase of \$10.0 million above the FY 2001 Enacted level. This continued investment will allow NOAA to modernize its fisheries and protected species enforcement programs. Improved enforcement is essential to ensuring that fisheries regulations are effective and yield conservation benefits for the industry and the public. Of the total funding amount, \$7.4 million (of which \$6.1 million is new funding) is included for additional support, continued modernization and expansion of the vessel management system (VMS) program. The VMS national program is capable of accommodating nearly 10,000 vessels throughout a number of different fisheries. The request also includes \$39.9 million (of which \$3.9 million is new funding) to expand and modernize base enforcement programs. 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.

Modernization of the Marine Transportation System (MTS)

Line Office/ Strategic Plan	Item	FY 2001 Enacted	Increase/ Decrease	FY 2002 Total
NOS/PSN	Electronic Navigational Charts*	0.0	3.6	3.6
NOS/PSN	Shoreline Mapping*	0.0	1.0	1.0
NOS/PSN	National Spatial Reference System*	0.0	0.5	0.5
NOS/PSN	Implement Forecast Models	0.0	0.5	0.5
NOS/SHC/PSN	Coastal Storms	0.0	3.0	3.0
NOS/PSN	Spill Response and Habitat Restoration*	0.0	2.0	2.0
OMAO/PSN	FAIRWEATHER - Repair and Activation	6.8	2.7	9.5
TOTAL		\$6.8	\$13.3	\$20.1

* These programs are ongoing activities for which funding was tracked at the Subactivity rather than the programmatic level, but which support the coordinated MTS initiative. Shoreline mapping, now rolled into mapping and charting base activities, received \$1.5 million in FY 2001 Enacted funding.

Modernization of the Marine Transportation System (MTS) **\$20.1 million**

The Challenge

Since our Nation's founding, maritime trade has been vital to economic prosperity. NOAA's lineage dates back to 1807 when President Thomas Jefferson called for charting the coasts and harbors. Today, more than 95 percent of U.S. foreign trade moves by sea. In 1998, about 2.4 billion tons of cargo moved on our waterways and through our ports. U.S./foreign waterborne commerce grew about 23 percent from 1993 to 1997 – about 4.6 percent per year. Trade is projected to at least double by 2020. Vessels have also grown dramatically; over the last 50 years, the length, width, and draft of commercial vessels has doubled, pushing the limits of many ports and posing significant safety concerns. Ensuring safe and efficient port operations is vital to maintaining the competitiveness of the U.S. port industry and exports. Growth in ferry, cruise line, and recreational boating is contributing to increased congestion on our waterways. Nearly half of all goods in marine commerce are petroleum products or other hazardous materials. One key to reducing risk is to invest in the national information infrastructure that supports the safe and efficient movement of goods and people.

In 1998, Congress directed Federal agencies to produce an assessment of the U.S. Marine Transportation System (MTS) and a plan for modernizing government navigation services. This FY 2002 request is NOAA's effort to direct a set of targeted investments to expand and capitalize on its existing programs in Mapping and Charting, Survey Backlog, Geodesy, Tide and Current Data, Response and Restoration, and Fleet Replacement to further the goals of this ongoing effort. This is a first step toward developing a 21st century transportation system that can address the major issues faced by the country in maritime safety, security, infrastructure, the environment, and competitiveness.

NOAA's Role

NOAA maintains the Nation's suite of nautical charts, the coastal water level observations system, and the geodetic positioning reference system needed to ensure safe navigation. NOAA also maintains the scientific expertise to respond to hazardous releases when they occur. NOAA charts are developed from NOAA's hydrographic and shoreline surveys, tide and current measurements, and national geodetic/geographic positioning data, as well as information from other sources. Demonstration projects have shown that these programs can provide the accurate data necessary for determining precise under-keel and overhead/bridge clearances and support near zero visibility docking, allowing commercial vessels to more safely navigate and efficiently load and move cargo in and out of depth-limited harbors. 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. When accidents do occur, NOAA can provide the necessary support to ensure a scientifically-based response and restoration of damaged coastal resources. 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. Specific program increases are described in detail below.

Electronic Navigational Charts: \$3.6 million

NOAA requests an increase of \$3.6 million for Electronic Navigational Charts (ENCs). This continued investment will allow for the ongoing production and maintenance of ENCs and the ability to enhance and expand the full suite of ENCs to a total of 200 from the 70 in existence at the end of FY 2000. ENCs provide a more complete picture of coastal waterways.

Shoreline Mapping: \$1.0 million

NOAA requests an increase of \$1.0 million for Shoreline Mapping. This investment will allow for a more accurate national shoreline. An increased emphasis on shoreline mapping is required to keep pace with the growing stress on our Nation's marine transportation system and to assist states and coastal managers.

National Spatial Reference System: \$0.5 million

NOAA requests an increase of \$0.5 million for the National Spatial Reference System (NSRS). This investment will increase the Nation's access to the Continuously Operating Reference Stations (CORS), a set of Global Positioning System (GPS) stations, and the mainstay of the NSRS. This investment will expand the number of National CORS, expand the Federal Base and Cooperative Base

Network stations connected to the national standard for vertical heights, which are used for all applications that require surveying. These activities will provide better access to accurate and consistent height data for a wide-range of economic pursuits.

Implement Forecast Models: \$0.5 million

NOAA requests a total of \$0.5 million to Implement Forecast Models. This investment will enhance tides and tidal current services to the user by obtaining new current meter measurements at locations critical to the navigation community and by accelerating the development of nowcast/forecast products for users of oceanographic data.

Coastal Storms: \$3.0 million

NOAA requests a total of \$3.0 million for Coastal Storms. This investment will build upon existing NOAA environmental monitoring and data management capabilities and will enhance our efforts to provide Marine Transportation System users, as well as coastal resource managers, with the data and tools needed to safely maximize commercial shipping, mitigate hazards, and sustain the environmental health of coastal communities and resources when disasters strike. Initial efforts will focus on a pilot project in Florida and include updating shallow water bathymetry, adding sensors to National Water Level Observation Network stations, and developing a hydrodynamic model for improved forecasting applications.

Spill Response and Habitat Restoration: \$2.0 million

NOAA requests an increase of \$2.0 million for Spill Response and Habitat Restoration. This investment will develop and distribute tools and guidance to assist decision makers when releases of contaminants occur within the Marine Transportation System and other coastal environments. These funds will enable NOAA to more accurately evaluate the effectiveness of spill response measures, leading to improved response techniques as well as better methods of restoring injured resources.

FAIRWEATHER Repair and Activation: \$9.5 million

The total request of \$9.5 million for the FAIRWEATHER repair and activation represents an increase of \$2.7 million above the FY 2001 Enacted level. This continued investment will complete the refurbishment and reactivation of the FAIRWEATHER and help reduce the survey backlog, a high marine transportation priority. This project was directed by Congress in 2001 and makes efficient use of this vessel which has been located at NOAA's Pacific Marine Center. With its home port in Alaska, the FAIRWEATHER will provide a platform that will help reduce the critical hydrographic survey backlog.

Other Key NOAA Programs

Ocean Exploration: \$14.0 million

The total request of \$14.0 million for Ocean Exploration represents an increase of \$10.0 million above the FY 2001 Enacted level.

This continued investment will help re-establish NOAA's leadership in this major initiative of ocean exploration and research. Despite covering 70 percent of Earth's surface, the oceans remain largely unexplored and unknown. Not surprisingly, most of the oceans' resources remain untapped. Our best scientists believe that fewer than 25 percent of the species that live in the oceans have ever been identified. Even within America's own Exclusive Economic Zone (EEZ), less than five percent of the ocean floor has been mapped in high resolution. In fact, prior to FY 2001, the United States did not even have a concentrated program of ocean exploration. As a result, NOAA has pursued a course of ocean resource management without adequate decision-making data and information being available to policy makers, regulators, and commercial users of the ocean's resources.



However, today we live in an age of technological innovation. There are many opportunities that simply were not available in earlier decades. We now can completely rethink how we might conduct exploration in Earth's oceans. Developments in sensors, telemetry, power sources, microcomputers, and materials science have greatly improved our ability to go into and study the undersea frontier.

The benefits of such a program of exploration are potentially enormous. For example, gas hydrates comprise more than 50 percent of all of our planet's carbon – and potentially hold more than 1 000 times the fuel in all other estimated reserves combined! In addition, there are certain to be other benefits which currently are beyond our ability even to conceive. With 95 percent of the underwater world still unknown and unseen, what remains to be explored may hold clues to the origins of life on earth, cures for human diseases, answers to how to achieve sustainable use of our oceans, links to our maritime history, and information to protect the endangered species of the sea.



We are stewards of our oceans' resources. Yet, we cannot effectively manage what we do not know. We need to explore the oceans in the same way that the U.S. has successfully explored space. We need to determine what our marine resources are, their relative abundance, and the rates at which they can be used and replenished. Accurate knowledge of the oceans is essential for environmental, economic, and national security.

The FY 2002 budget increase will enable NOAA to fund six major and several minor interdisciplinary voyages of discovery that will map the physical, geological, biological, chemical, and archaeological aspects of parts of the U.S. EEZ. NOAA will conduct missions of exploration in the Gulf of Mexico, South Atlantic Bight, Northwest Hawaiian Islands, Northeast Pacific, California, and the Gulf of Alaska. Education and outreach is a major component of NOAA's Ocean Exploration Initiative. NOAA will carry-out this program relying on partnerships with universities, the private sector, and other agencies. NOAA's Ocean Exploration Initiative will help us to fulfill our national strategic goals to Sustain Healthy Coasts, Recover Protected Species, and Build Sustainable Fisheries.

Marine Environmental Research: \$11.6 million

The total request of \$11.6 million for Marine Environmental Research represents an increase of \$1.8 million above the FY 2001 Enacted level. This continued investment will support ongoing operations at OAR's Atlantic Oceanographic Meteorological Laboratory (AOML) and the Pacific Marine Environmental Laboratory (PMEL). The restored funds will enable AOML's 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. Coral reef monitoring activities are also supported. These funds will also enable PMEL's Fisheries Oceanography program to reverse its 20% reduction in ocean measurements planned for the Gulf of Alaska and the Bering Sea. These funds are important to the study of the potential influences of climate changes on recent shifts in the species composition of these ecosystems including declines in salmon and steller sea lion populations.

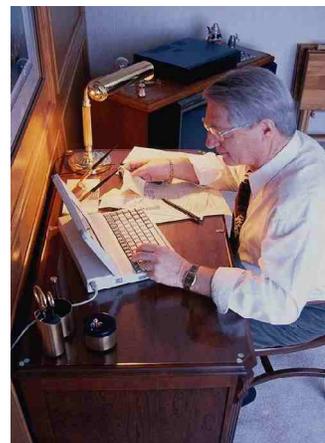
Estuary Restoration Act: \$2.0 million

NOAA requests a total of \$2.0 million for the Estuary Restoration Act. This investment will allow for NOAA-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. Healthy estuarine ecosystems provide a number of benefits pertaining to wildlife habitat, commercial and recreational fisheries, water quality, flood control, erosion, and outdoor recreation. NOAA's activities include the development of scientifically sound monitoring protocols and standards for coastal habitat restoration projects throughout the United States and its protectorates. 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. This work will provide scientists and resource managers with information critical to successful estuary habitat restoration efforts.



Commerce Administrative Management System: \$19.8 million

NOAA requests a total of \$19.8 million for the Commerce Administrative Management System (CAMS). This investment will allow for the full benefit and value of CAMS to be realized in NOAA. CAMS is in the final stages of completion, expected in FY 2003, 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 financial audit through systematic controls rather than through labor-intensive manual efforts. It will provide managers with on-line, real-time, and accurate financial information in support of their programmatic missions, and will be legally compliant. Requested funding for CAMS is vital to preserve NOAA's ability to have a satisfactory financial accounts system and allow NOAA and DOC to meet statutory obligations under the Federal Managers' Financial Integrity Act (FMFIA) and the Chief Financial Officer Act (CFO Act).



Marine Services: \$63.8 million

The total request of \$63.8 million for Marine Services represents an increase of \$1.9 million above the FY 2001 Enacted level. This continued investment will allow NOAA to operate its fleet of 15 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 some data-collection requirements. The request includes an increase of \$1.0 million to provide days-at-sea, primarily through University-National Oceanographic Laboratory System (UNOLS) and charter vessels, to support research in the Gulf of Mexico concerning the interactions of the Mississippi River plume, nutrient loading, and



resulting effects of hypoxia on Gulf fisheries. These funds will also maintain or increase day-at-sea levels supporting other NOAA programs, including the science programs in NOS and the sanctuary program. The request also includes an increase of \$0.9 million which will be used to pay the increased costs for operating the ADVENTUROUS' and to add days-at-sea on fisheries research vessels. The ADVENTUROUS, which will replace the TOWNSEND CROMWELL, is a larger and more capable vessel that will carry more scientists and complete more research on a daily basis.

NOAA's Budget and Financial Management

NOAA's FY 2000 Unqualified Financial Audit

For the Fiscal Year 2000, NOAA received an unqualified opinion on NOAA financial statements from an independent auditor. The FY 2000 audit represents the second consecutive year NOAA has received a clean audit and demonstrates the intensive efforts made by NOAA to improve financial management. NOAA continues to place a high priority on improving fiscal and financial management in order to increase accountability and efficiency.

NOAA's Budget Restructuring Efforts

Over the past several years, NOAA has been working to respond to Congressional concerns stemming from the NOAA budget structure. The Congressional Appropriation Committees have challenged NOAA to make recommendations to simplify its budget structure. NOAA has taken several actions that address the restructuring of its budget and financial management processes. The outcome of these actions is already apparent and demonstrated in its improved budgetary communications as well as in the improved accuracy of its documentation (e.g., sustaining a clean audit and improved timeliness in the distribution of funds). NOAA continues to work toward meeting the challenges of restructuring the NOAA budget and is excited about the improved efficiency a new budget structure will bring.



Conclusion

As evidenced by NOAA's improving financial and budgetary management, NOAA is doing its part to exercise fiscal responsibility as stewards of the Nation's trust as well as America's coastal and ocean resources. And, in the same way that NOAA is responsible for assessing the Nation's climate, we are responsible for assessing our management capabilities. It is within this broader management context that NOAA continues looking for opportunities to improve. As in past years, NOAA's FY 2002 Budget Request includes measures which track results to the level of public investment. NOAA will continue to leverage its programs and investments by developing those associations that most efficiently and economically leverage resources and talent, and that most effectively provide the means for successfully meeting mission requirements.