NOAA FY 2000 Budget Request

National Oceanic and Atmospheric Administration
U.S. Department of Commerce
Washington, DC

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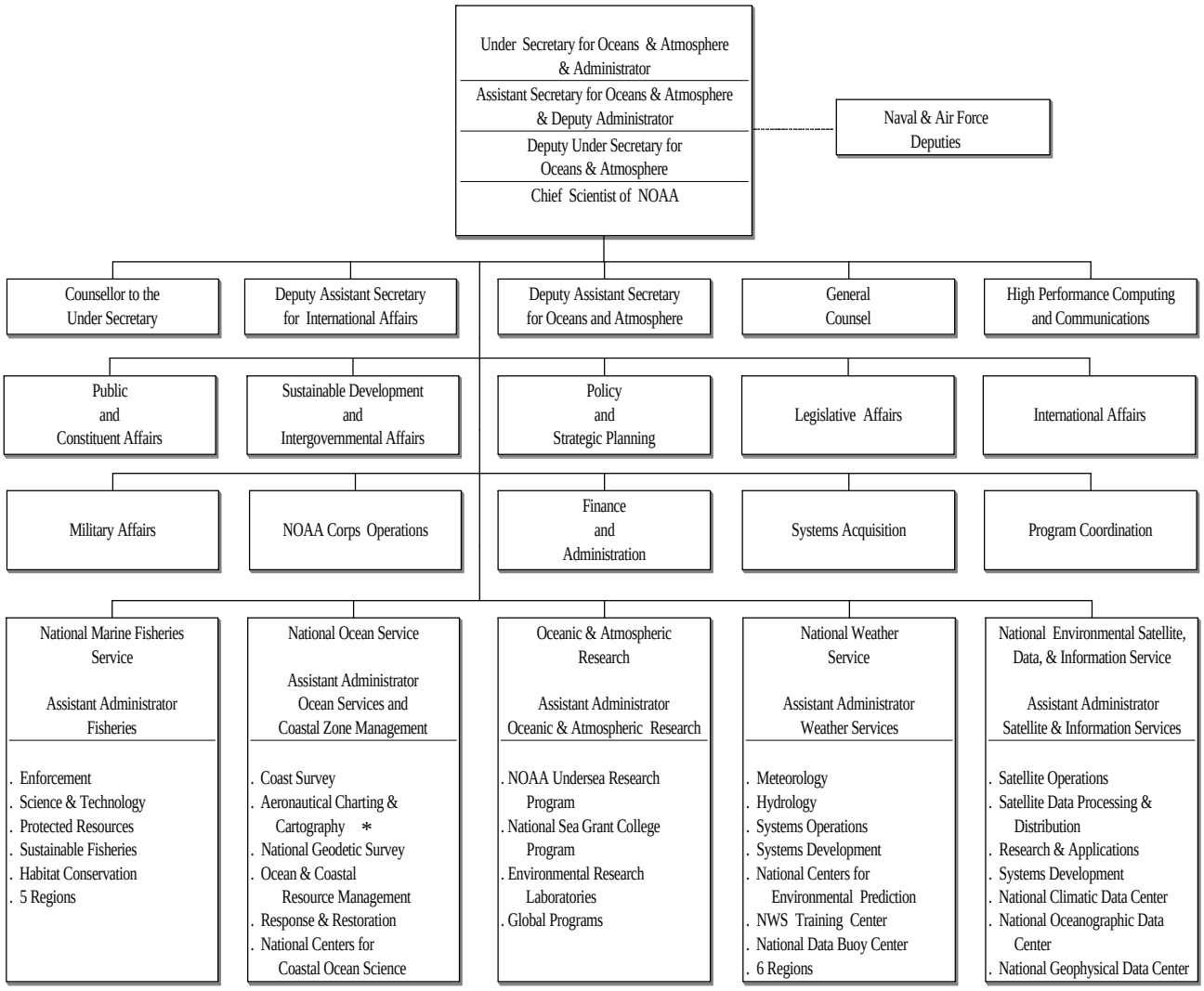
NOA-9901

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION



* Proposed transfer to the Department of Transportation (1/22/99)

DOC: The Digital Department
Additional information about NOAA's programs and structure can be found at http://www.noaa.gov/

NATIONAL OCEANIC

AND

ATMOSPHERIC ADMINISTRATION

Summary of the President's Budget

Fiscal Year 2000

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To the Reader:

I am pleased to provide the Budget Summary for the Department of Commerce's National Oceanic and Atmospheric Administration for Fiscal Year 2000. It contains information on NOAA's activities and strategic planning goals for members of Congress, congressional staff, media, NOAA constituents and individuals with an interest in NOAA programs and how they enhance the goals of the DOC.

More than a budget document, this submission is designed to clearly set forth the return on public investment in a mission that affects each citizen on a daily basis and ranges from the depths of the oceans to the heights of space.

D. James Baker
Administrator

Line drawings of fish are from the photo archives of the Northeast Fisheries Science Center,
an affiliate of Woods Hole Oceanographic Institute.
http://www.wh.whoi.edu/cgi-bin/photo.pl

All other photos and images are taken from NOAA web sites.

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What is the NOAA Budget Summary?

The National Oceanic and Atmospheric Administration (NOAA) Budget Summary accompanies the President's Annual Budget Request to Congress. It is designed to be a user-friendly source of information on NOAA's budget for members of Congress, congressional staff, the media, NOAA constituents, and anyone with an interest in NOAA programs.

The summary provides an overview of NOAA, including:

- agency-wide information;
- a detailed description of the President's FY 2000 Budget Submission to the Congress; and
- a discussion of the NOAA Strategic Plan.

Agency-wide information can be found in the Executive Summary, as well as in the Appendix.

This document is a summary of the NOAA portion of the full President's Congressional Budget Submission for the Department of Commerce. Selected program changes also are discussed in the text of the Budget Request section. The Strategic Plan section describes the goals and objectives NOAA has established to advance its vision until the year 2005 and provides the framework within which NOAA's programs and budget request have been developed.

The information in this section is provided in two formats. The traditional activity-based format is titled "Traditional Structure," and is followed by the goal-based format of the strategic plan titled the "Strategic Plan." The first format allows NOAA to present its budget request in the traditional appropriations structure. The Strategic Plan format shows how NOAA is addressing the Government Performance and Results Act. Resource charts and tables provide a convenient cross-walk between the two.

Most of the changes in the Budget Summary are characterized as the difference between the FY 2000 base and the FY 2000 request. The FY 2000 base is the amount included in the FY 1999 Appropriation plus any FY 1999 rescissions or adjustments, reprogrammings or realignments. The FY 2000 base also includes cost and inflationary

adjustments. The difference between the FY 2000 base and the FY 2000 request is a more accurate representation of what program changes are included in the FY 2000 request.

(NOTE: Questions regarding this document can be directed to Paul Roberts, Chief Financial Officer of NOAA, at 202-482-2378 or via e-mail at Paul.F.Roberts@noaa.gov, or Jolene Lauria Sullens, Director of Budget, at 202-482-0917 or via e-mail at jolene.lauriasullens@noaa.gov.)

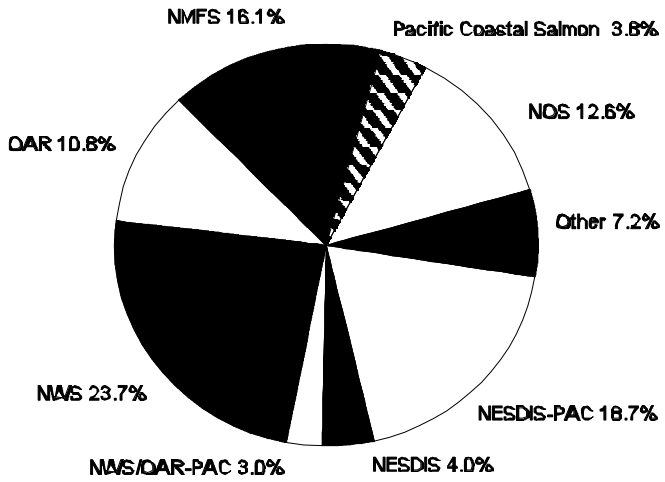
Summary of the FY 2000 NOAA
Budget Request
(Dollar amounts in thousands)

Traditional Budget Structure:	**FY 1999 Enacted**	**FY 2000 Base**	**FY 2000 Request**	**Increase/ (Decrease)**
Operations, Research and Facilities (ORF)				
National Ocean Service	$254,107	$260,503	$328,543	$68,040
National Marine Fisheries Service	382,550	386,784	420,432	33,648
Oceanic and Atmospheric Research	287,410	281,883	282,570	687
National Weather Service	560,705	579,095	617,897	38,802
National Environmental Satellite, Data & Information Servic	109,935	111,224	103,092	(8,132)
Program Support	69,250	73,537	73,887	350
Facilities	13,265	3,844	9,829	5,985
Fleet Maintenance and Planning	11,600	11,643	9,243	(2,400)
Subtotal ORF Programs	1,688,822	1,708,513	1,845,493	136,980
Recoveries from prior years/other	(37,097)	(19,100)	(23,756)	(4,656)
Total Budget Authority (ORF)	1,651,725	1,689,413	1,821,737	132,324
Transfers/Mandatory Funding	(71,881)	(81,281)	(82,826)	(1,545)
Appropriation (general fund - net) - ORF	1,579,844	1,608,132	1,738,911	130,779
Less Rescission of Unavailable Balance			(3,400)	(3,400)
Less Navigation & Fisheries Fees Offset (for later transmittal)			(34,000)	(34,000)
Appropriation (with fees/rescission) - ORF	1,579,844	1,608,132	1,701,511	93,379
Procurement, Acquisition and Construction (PAC)				
Weather & Research Systems	88,422	93,022	65,805	(27,217)
Satellites	465,059	465,059	487,694	22,635
Construction	34,196	34,196	32,912	(1,284)
Fleet Replacement	0	0	51,567	51,567
Other	1,000	1,000	0	(1,000)
Recoveries from prior years	(4,000)	(7,400)	(7,400)	0
Total Budget Authority (PAC)	584,677	585,877	630,578	44,701
Other Accounts - Budget Authority	31,025	28,525	107,714	79,189
Total NOAA Budget Authority	2,267,427	2,303,815	2,560,029	256,214
Mandatory Funds	(62,426)	(76,326)	(76,326)	0
Discretionary - Budget Authority	2,205,001	2,227,489	2,483,703	256,214
Discretionary - Budget Authority w\fees & rescission	2,205,001	2,227,489	2,449,703	222,214

Strategic Plan Goals - All Accounts	**FY 1999 Enacted**	**FY 2000 Base**	**FY 2000 Request**	**Increase/ (Decrease)**
Advance Short-term Warning and Forecast Services	$1,269,700	$1,293,157	$1,325,451	$32,294
Implement Seasonal to Interannual Climate Forecasts	111,975	112,816	112,626	(190)
Predict and Assess Decadal to Centennial Climate Change	89,492	91,137	103,766	12,629
Promote Safe Navigation	97,564	98,497	101,074	2,577
Build Sustainable Fisheries	404,662	398,433	426,345	27,912
Recover Protected Species	79,634	81,262	213,339	132,077
Sustain Healthy Coasts	260,997	261,697	315,268	53,571
Undistributed		13,900	9,244	(4,656)
Financing/Offsets	(46,597)	(47,084)	(47,084)	0
Total NOAA Budget Authority	2,267,427	2,303,815	2,560,029	256,214
Mandatory Funds	(62,426)	(76,326)	(76,326)	0
Discretionary - Budget Authority	2,205,001	2,227,489	2,483,703	256,214
Discretionary - Budget Authority w\fees & rescission	2,205,001	2,227,489	2,449,703	222,214

Traditional Budget Structure

FY 2000 President's Request



NOS	National Ocean Service
NMFS	National Marine Fisheries Service
OAR	Oceanic and Atmospheric Research (ORF & PAC)
NWS	National Weather Service (ORF & PAC)
NESDIS	National Environmental Satellite, Data and Information Service (ORF & PAC)
Other	PS/Facilities/Fleet/Other Accounts

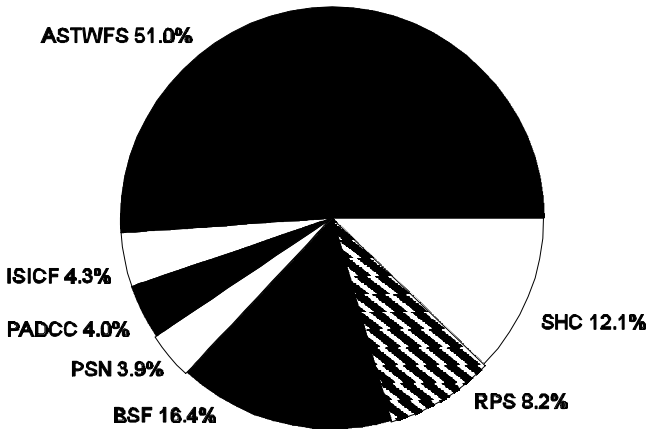
STRATEGIC MISSION

NOAA's strategic mission is to describe and predict changes in the Earth's environment, and conserve and manage the Nation's coastal and marine resources to ensure sustainable economic opportunities.

Environmental Stewardship Mission	Environmental Assessment & Prediction Mission
- Build Sustainable Fisheries - Recover Protected Species - Sustain Healthy Coasts	- Advance Short-Term Warning and Forecast Services - Implement Seasonal to Interannual Climate Forecasts - Predict and Assess Decadal to Centennial Change - Promote Safe Navigation

Strategic Plan Goals

FY 2000 President's Request



ASTWF	Advance Short Term Warning and Forecast Services
ISICF	Implement Seasonal to Interannual Climate Forecasts
PADCC	Predict and Assess Decadal to Centennial Change
PSN	Promote Safe Navigation
BSF	Build Sustainable Fisheries
RPS	Recover Protected Species
SHC	Sustain Healthy Coasts

Highlights of the FY 2000 Request

NOAA's Budget Request of $2.5 billion in total budget authority for FY 2000 is predicated on the need to ensure the continued delivery of essential science, technology and services to the Nation. This request is represented at the highest level on the previous two pages and at an overview level in Section I - Executive Summary.

The rest of this document summarizes the NOAA budget in the context of the Strategic Plan and the traditional budget structure, with an emphasis on the major operational units and programs contributing to the strategic goals. Section II - The Traditional Budget Structure, includes NOAA's request by budget activity and summarizes NOAA's budget down to the line item level. Section III - The Strategic Plan, establishes the seven major goals of the agency, and guides the most effective combined application of the entire suite of agency assets for attaining these goals which are grouped into two missions -- Environmental Stewardship, and Environmental Assessment and Prediction. Resources for program administration, acquisition of data, aircraft services, and supporting infrastructure are included in the total request for each strategic goal, and are described in greater detail in Section II of this Budget Summary.

Environmental Assessment and Prediction Mission

Advance Short-Term Warning and Forecast Services

Total Request: $1,325,451,000

NOAA requests $1,325.5 million to address this strategic goal, a net increase of $32.3 million over the FY 2000 Base. The objectives of this goal are to:

- Sustain modernized weather service operations;
- Maintain continuous operational satellite coverage critical for warnings and forecasts;
- Strengthen observing and prediction systems through scientific, technological and programmatic advances and international cooperation; and
- Improve customer service to the public, emergency managers, the media, and private forecast planners through effective communication and utilization of NOAA's products.

These objectives will be accomplished primarily through the efforts of the National Weather Service (NWS), the National Environmental Satellite, Data, and Information Service (NESDIS) and the Office of Oceanic and Atmospheric Research (OAR).

For the NWS, the request provides $603.5 million for operations and research, including a net increase of $55.7 million from 1999 to implement the budgets and associated program activities recommended in the 1997 study conducted by John J. Kelly, BGD/Gen (Ret), entitled An Assessment of the Fiscal Requirements to Operate the Modernized National Weather Service during Fiscal Years 1998 and 1999. The request also provides $55.8 million for major systems acquisition within the PAC account supporting the modernization of the weather service, a net decrease of $32.6 million from FY 1999.

Executive Summary

Within the total amount for NWS operations, an increase of $2.2 million is requested to initiate the national implementation of Advanced Hydrologic Prediction System, a real time modeling and data analysis system which will significantly improve flood forecasting and water management in the U.S.

Within the total amount for systems acquisition in the Procurement, Acquisition and Construction (PAC) account, the NWS requests $22.6 million for continued deployment of the Advanced Weather Interactive Processing System (AWIPS).

For NESDIS, $544.0 million is needed to ensure continuity and coverage of its Geostationary Operational Environmental Satellite (GOES) and Polar-orbiting Operational Environmental Satellite (POES). This represents an increase of $23.8 million from the FY 2000 base. Within this amount $80.1 million is requested to meet NOAA's commitment to share development costs with the Department of Defense for the National Polar-orbiting Operational Environmental Satellite System, an increase of $30.1 million over the FY 2000 base.

OAR requests a total of $55.8 million to advance the science of weather forecasting over land, sea and space, and to improve weather-related observing technologies. An increase of $1.5 million requested for the High Performance Computing and Communications (HPCC) program to lease or purchase a massively parallel processing computer to improve national and regional-scale weather prediction models. Within the PAC account, OAR requests an increase of $4.3 million to ensure the continuity of critical space weather observations by funding GEOSTORMS, a follow-on to the Advanced Composition Explorer satellite. Many of these activities are key components of the interagency Natural Disaster Reduction Initiative which will improve the Nation's resiliency to extreme natural events.

Improvements in the accuracy and timeliness of severe weather, flooding and other natural hazards are directly linked to modernized technologies. NWS modernization and restructuring efforts, in particular, have shown improvements in services combined with productivity and efficiency gains. Today the NWS is delivering more accurate and timely warning and forecast services thereby increasing the benefits from more timely, pertinent information.

NWS has completed its deployment of 123 Next Generation Weather Radars (NEXRAD). Deployment of the Advanced Weather Interactive Processing System (AWIPS) currently underway is expected to be completed by June, 1999. As of January 1999, approximately 88 of 152 units have been installed. Office closures facilitated by the modernization efforts are progressing on schedule as well.

These activities show that NOAA is aggressively implementing its weather services modernization program. These efforts have already been proven to enhance NWS'

warning and forecast services that daily enhance public safety and the economic productivity of the Nation. Maintaining this critical investment and capability is a key NOAA objective. With this enhanced infrastructure, the Nation can realize annual benefits in excess of $7 billion.

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

Executive Summary

Implement Seasonal to Interannual Climate Forecasts

Total Request: $112,626,000 million

NOAA requests $112.6 million to address this strategic goal, a net decrease of $0.2 million from the FY 2000 base. The objectives are to:

- implement climate prediction systems to deliver useful seasonal to interannual climate forecasts for the U.S. and collaborate in a multinational effort to generate and use similar forecasts;

- enhance global observing and data systems required to provide data for the initialization and validation of model predictions of seasonal to interannual climate variations;

- invest in process and modeling research that leads to improved predictability of temperature and rainfall distributions; and

- assess the impacts of climate variability on human activity and economic potential, and improve public education so that climate forecasts are understood and acted upon.

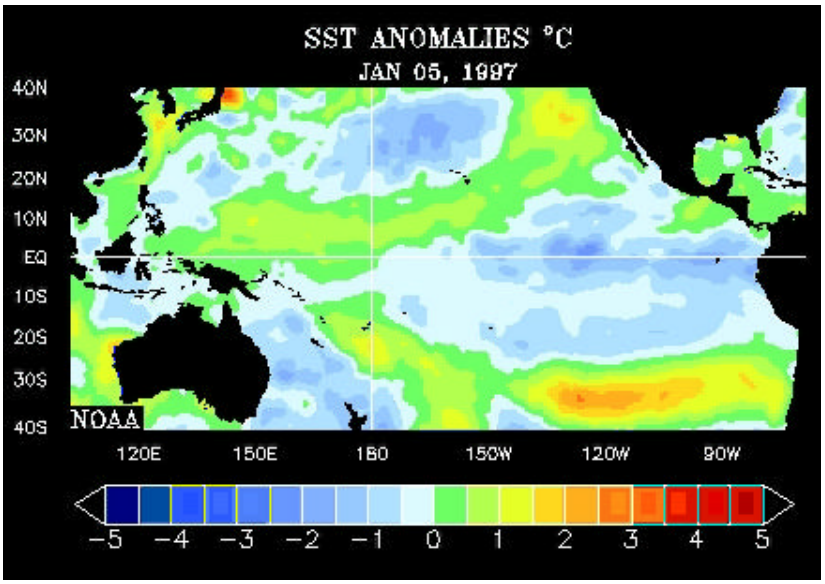
These objectives will be accomplished primarily through the efforts of the Office of Oceanic and Atmospheric Research (OAR), the National Environmental Satellite, Data, and Information Service (NESDIS), and the National Weather Service (NWS).

Emerging capabilities to forecast climate are the result of federal investments in basic research, development and deployment of global observing and data systems, and transition of research findings to operational uses. Climate services will be as important to 21st-century economies and societies as weather forecasting is today. The future capacity to deliver uniform climate information will continue to depend strongly on federal support for process and modeling research, and for the collection of global data needed to initialize and validate climate models. As was announced at the National Oceans Conference in June 1998, NOAA requests $4.0 million to deploy an array of floating buoys in the Atlantic and Pacific to measure temperature, salinity, and currents to improve our understanding of natural climate events.

Because El Niño affects global wind, temperature, and rainfall patterns, it also affects the supply and demand for commodities, thus impacting prices, interest rates, inflation, and even economic growth. Climate changes can, for example, reduce supply and increase prices, or can reduce demand and reduce prices. Better climate forecasting could save U.S. agriculture, and ultimately U.S. consumers, more than $300.0 million annually from improved agricultural decisions. For example, a perfect seasonal forecast made one year

in advance could allow U.S. corn inventories to decline eight percent, with annual savings of nearly $240.0 million. A cost-benefit analysis of one NOAA program to understand and model the El Niño – the Tropical Ocean Global Atmosphere (TOGA) program - has an economic return on investment of at least 13-26 percent for U.S. agriculture alone. NOAA is also working with federal, academic, and private sector partners to examine the interactions between climate and ecological systems and the subsequent implications for human health.

Many other U.S. sectors benefit from climate forecasts made months in advance, such as



Example of a temperature map of the Pacific Ocean.

construction, to plan schedules; energy, to determine production and distribution of gasoline and heating oil; natural resources, for example water management; federal, state, and local emergency managers; clothing manufacturers, to determine what type of clothing consumers will want to buy; ski resort and beach resort operators, for families planning vacations; and the insurance industry, which recently created a new financial instrument, called weather derivatives, to allow businesses to hedge against direct and indirect weather-related costs.

Executive Summary

Predict and Assess Decadal-to Centennial Change

Total Request: $103,766,000

NOAA requests $103.8 million to address this strategic goal, a net decrease of $12.6 million from FY 2000 base. The six research objectives of this goal are to:

- characterize the agents and processes that force decadal to centennial climate change;

- understand the role of the ocean as a reservoir of both heat and carbon dioxide to address a major source of uncertainty in climate models;

- ensure a long-term climate record by enhancing domestic ad international weather networks, observing procedures, and information management systems. Document present and past changes and variations in the climate system, including extreme events, and rapid climate changes, exploiting national and international observing networks, satellites, and paleoclimatic data;

- guide the rehabilitation of the ozone layer by providing the scientific basis for policy choices associate with ozone-depleting compounds and their replacements;

- provide the scientific basis for improved air quality by improving the understanding of high surface ozone episodes in rural areas and by strengthening the monitoring network to detect cleaner air quality and improving the characterization of airborne fine particles; and

- develop models for the prediction of long-term climate change (including extreme events and rapid climate changes), carry out scientific assessments, and provide human impacts information.

These objectives will be accomplished largely through the efforts of the NOAA Climate and Global Change Program (OGP), the Office of Oceanic and Atmospheric Research (OAR), the National Weather Service (NWS), and the National Environmental Satellite Data & Information Service (NESDIS).

Within the OAR line item, the total request is $78.4 million. Within the NESDIS line item, the total request is $4.7 million.

In FY 2000, requested augmentation to NOAA's research will largely be concentrated under the objective entitled Role of the Oceans. Recent research has highlighted the role of the oceans in climate change. NOAA and NOAA-sponsored university investigators have established strong partnerships in advancing our knowledge of these processes

toward the goal of climate prediction. NOAA is also investigating the role of the oceans in the global carbon budget, examining both the rate and variability of ocean uptake of carbon dioxide, and the exchange of carbon dioxide between the ocean and the atmosphere. NOAA is also requesting funding for a new, highly scalable computer for climate weather modeling.

In late 1995, the U.N. Intergovernmental Panel on Climate Change (IPCC) released findings that, due to global warming from greenhouse gases, average global surface temperature may increase 1 to 3.5 degrees Celsius (1.8 to 6.3 degrees Fahrenheit), and sea level may rise 50 to 95 centimeters (20 to 37 inches), by the year 2100. These global trends will significantly affect both natural processes and societal systems, including agriculture, energy, and the world-wide transmission of diseases.

NESDIS developed and implemented a global land and sea surface temperature monitoring system in 1997 to provide monthly climatic assessments of temperature and precipitation by the 10th of each month. The period of record of these perspectives is 1880 to the present. This system was instrumental in focusing U.S. and global attention on the unprecedented sequence of surface warming in the 1990s. Monitoring at this scale was made possible only by NOAA observations and data management, but more needs to be done. NESDIS still relies on data with uncertainties from the United Kingdom for its pre-satellite era sea surface temperature sampling – a condition that will be remedied with augmented FY 2000 funds. Data from the NESDIS Data Rescue program will be merged with currently available data to form the most complete data sets and analyses ever possible.

Decisions on actions to mitigate anticipated climate changes on the order of decades to centuries will not receive domestic and international backing unless they are supported by demonstrable, objective, credible and sound science. NOAA provides decision-makers with scientifically informed options for these types of decisions, focusing on climate change and greenhouse warming, ozone layer depletion, and air quality improvement.

Executive Summary

Promote Safe Navigation

Total Request: $101,074,000

NOAA requests $101.1 million to address this strategic goal, a net increase of $2.6 million from FY 2000 base funding. The objectives are to:

- build, maintain, and deliver a digital nautical charting database to underpin new electronic navigation systems which integrate satellite positioning, tidal heights and currents, radar and sonar, and navigational aids;

- update nautical surveys of the Nation's coastal areas using full-bottom coverage technologies;

- define the national shoreline in an accurate and consistent manner using state of the art technology to serve the Nation's navigational and coastal;

- Provide mariners with real-time observations and forecasts of water levels, tides, and currents, and weather conditions in ports; and

- transform the obsolete geodetic reference frame into a Global Positioning System (GPS)-based system of monumented marks and continuously-operating reference stations to support the digital revolution in mapping, charting, and surveying.

These objectives will be accomplished largely through National Ocean Service (NOS) mapping, charting, geodesy, and tide and currents sub-activities.

NOAA requests $X million to acquire hydrographic data, update nautical surveys and deliver digital nautical charting databases. NOAA also requests $X million to acquire oceanographic data and to make available marine predictions and advanced oceanographic observation systems, which include both the Physical Oceanographic Observation System (PORTS) and the National Water Level Observation Network (NWLON) stations, and $19.8 million to provide a National Spatial Reference System (NSRS) that utilizes the Global Positioning System (GPS) for navigation and positioning. The integration of these services and tools is required for safe and efficient navigation and is extremely important to pilots and port authorities.

Sea-going commerce has tripled in the last 50 years, and 98 percent of our international trade by weight moves through U.S. ports. Fifty percent of the total tonnage is oil or other hazardous material. Despite the risk that accompanies increasing traffic, and the competitive advantage of modern observations and systems, much of the Nation's charting and geodetic infrastructure is not up to world standards. Accurate charts and modern navigation systems are required for safe and efficient maritime transport.

NOAA collects, processes and distributes such information in support of national, commercial and individual needs. NOAA is working to revolutionize U.S. marine navigation, mapping and surveying, and to provide a precise satellite-derived reference system as the basis for the Nation's 21st-century positioning needs. During 1998, NOAA's NOS produced 368 new editions of nautical charts; established private sector partnerships to update nautical surveys; installed 160 Federal Base Network stations and 34 continuously operating reference stations that will form the basic positional framework for the Nation's future spatial data infrastructure; and entered into a cooperative agreement to research, develop and implement a commercially viable national PORTS project.

For later transmittal is a request for authorization to collect a navigation assistance fee in FY 2000-2004. Fees will be set at a level to recover approximately 29 percent of NOAA's nautical charting costs (total annual fee collection of $14 million).

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

Environmental Stewardship Mission

Build Sustainable Fisheries

Total Request: $426,345,000

NOAA requests $426.3 million to address this strategic goal, a net increase of $27.9 million from the FY 2000 base. The objectives are to:

- eliminate and prevent overfishing and overcapitalization - by assessing the status of fishery resources, advancing fishery predictions, managing for economic growth in the fishing industry and ensuring adequate and voluntary compliance with fishery regulations;

- attain economic sustainability in fishing communities - by providing research and services for fishery-dependent industries and maximizing benefits from marine resources; and

- develop environmentally and economically sound marine aquaculture - by supporting aquaculture research and development and ensuring responsible industry practices.

These objectives will be accomplished primarily through the efforts of the National Marine Fisheries Service (NMFS), Office of Oceanic and Atmospheric Research (OAR) and the National Ocean Service (NOS).

The NMFS portion of the request is $298.2 million which includes: $1.6 million in increases to expand the collection, evaluation, and dissemination of fisheries data including the development of strategies for bycatch reduction; $22.7 million for fishery habitat restoration to increase the scope and rate of restoration efforts at the regional and community level; a net increase of $3.9 million for fisheries management programs, including funding for Regional Councils, under the provision of the Magnuson-Stevens Fishery Conservation and Management Act and NMFS to develop and amend fishery management plans to end overfishing and rebuild stocks, implement the new national

standards, include essential fish habitat identifications, and meet other requirements; an increase of $1.0 million specifically for implementation of the Magnuson-Stevens Fishery Conservation and Management Act's National Standard 8 requirements for additional economic data; $1.0 million in additional funds to improve at-sea and shoreside compliance; and funds to provide grants and other assistance for fisheries development programs.

OAR requests a total of $31.4 million in the Sea Grant Program, National Undersea Research Program (NURP), and marine environmental research sub-activities to: improve technologies for tracking and estimating aquatic biomass; advance aquaculture and economic growth initiatives; apply new computing techniques; and provide for other research activities including in-situ undersea research.

NOS requests $11.8 million to strengthen abilities to assess and predict natural and human-induced changes and their impact on fisheries health, an increase of $2.6 million for NOAA's Ecology and Oceanography of Harmful Algal Blooms program.

Under Fleet Replacement, NOAA requests $51.6 million to acquire a new fisheries research vessel (FRV). These vessels are essential to conduct stock assessment surveys necessary to monitor species' abundance, recruitment, age composition and their responses to ecological changes and fisheries pressure. NOAA's nine current fisheries research vessels are reaching the end of their useful lives and are becoming technologically obsolete. Significant improvement is anticipated in the quality of the data collected because of the more capable dedicated FRVs. In addition, reduced error margins resulting from better quality data could allow for higher fishing quotas in many fisheries without jeopardizing the resources.

Under the Construction activity, NOAA requests a total of $1.0 million to continue the current scoping work for the eventual formal design and construction of a new NMFS state-of-the-art research facility near Juneau, Alaska. The facility would replace the current outdated Auke Bay lab and expand NMFS groundfish and ecosystem research capabilities significantly, as well as provide for a focal point for national and international conferences and meetings addressing the valuable marine resources of the North Pacific.

The FY 2000 proposed appropriation requests authority to collect fees to offset costs associated with providing fisheries management and enforcement. A proposal for the fees will be developed in consultation with fishing interests, taking into account current fees and potential new ones. The $20.0 million in estimated fees, if collected, would be used to offset the overall NOAA Budget Authority and Appropriation in FY 2000.

As evidenced by the Sustainable Fisheries Act's amendments, there is a strong consensus among lawmakers, fishery managers, the fishing industry and the public, that depleted fishery resources must be restored and healthy fisheries must be maintained and managed

for greater efficiency. Of the U.S. fishery resources for which population status is known, 36 percent are over utilized. Even fisheries that are producing a large catch are doing so with unnecessary cost and waste. Well-managed fisheries produce significant and continuous benefits, such as the $1.0 billion Alaskan groundfish fishery. Controlled access measures implemented in the $180.0 million Alaskan halibut/sablefish fishery have resulted in reduced accidents and property loss, increased economic value of the resource, and reduced bycatch. Since 1994, NOAA has increased the number of fishery management plans with access controls by over 30 percent. NOAA estimates that restoring fisheries will have a potential $25.0 billion total positive impact on the national economy.

NOAA is providing the federal leadership and support to restore fisheries. Accurate and timely resource assessments are being used to guide management decisions.

The NMFS, NOS, and other parts of NOAA are conducting research to advance fishery predictions, reduce costs of conventional stock assessments, improve fishery habitat and mitigate harmful algal blooms. Enforcement is carried out to ensure compliance with regulations, and NOAA is working with state and international partners to develop policies for managing fisheries that occupy multiple geo-political zones. In addition, NOAA continues to design and implement harvest capacity reduction programs, and programs to provide fishermen with economic and technical support during stock rebuilding efforts.

Executive Summary

Recover Protected Species

Total Request: $213,339,000

NOAA requests $213.3 million to address this strategic goal, a net increase of $132.1 million over the FY 2000 base. The objectives are to:

- reduce the probability of extinction for protected species; and
- maintain healthy species and ecosystems.

These objectives will be accomplished primarily through the efforts of NMFS. The request includes: $170.4 million, an increase of $131.6 million over the FY 2000 base, for activities to prevent the extinction of at-risk species; and $37.5 million, an increase of $5.5 million over the FY 2000 base, for maintaining healthy species and ecosystems. The requested increase of $28.1 million will implement programs to prevent the extinction of several highly endangered marine species and significantly expand efforts to recover Pacific salmonids. These programs will stem the decline of Pacific Leatherback and Northern Atlantic Loggerhead turtles, Right Whales, Hawaiian Monk seals, and Steller sea lions. In addition, $100.0 million is requested to support Pacific Coastal Salmon Recovery Account to help pay for the costs of state, tribal and local conservation activities. This new fund is NOAA's contribution to a broad interdepartmental initiative bolstering and deploying existing and new Federal capabilities to assist in the conservation of at-risk Pacific salmon runs in the western states of California, Oregon, Washington, and Alaska. The salmon recovery efforts will allow NOAA to actively partner with other Federal agencies and state, local, and tribal governments to implement recovery actions for listed West Coast salmon species. The increase of $5.5 million to maintain healthy species and ecosystems will move the Recover Protected Species program beyond species crisis management. New funding of $2.0 million (NMFS) will assist in maintaining healthy species within the Coral Reef Restoration Initiative. NOAA will identify and monitor many areas of high marine biodiversity and work on protection of coral reef ecosystems.

During 1998, NMFS implemented a take reduction plan for marine mammals in the mid-Atlantic and conducted hundreds of ESA Section 7 and Section 10 consultations. The population of Atlantic Right Whales was maintained through early warning systems and the implementation of take reduction strategies for fisheries. These and other accomplishments have improved the status of these species in a manner compatible with the sustainable use of other marine resources.

Hawaiian Monk seal and pup

Sustain Healthy Coasts

Total Request: $315,268,000

NOAA requests $315.3 million to address this strategic goal, a net increase of $53.6 million from FY 2000 base. The objectives are to:

- Protect, conserve and restore coastal habitats and their biodiversity;
- Promote clean coastal waters to sustain living marine resources and ensure safe recreation, healthy seafood, and economic vitality; and
- Foster well-planned and revitalized coastal communities that sustain coastal economies, are compatible with the natural environment, minimize the risks from nature's hazards, and provide access to coastal resources for the public's use and enjoyment.

These objectives will be accomplished primarily through the efforts of NOS, NMFS, OAR and NESDIS. For NOS, the request includes $218.2 million, an increase of $60.0 million. For NMFS, the request includes $18.7 million, an increase of $1.3 million. For OAR, the request includes $47.3 million and for NESDIS, the request includes $6.2 million.

Coastal ecosystems are powerful engines that fuel the nation's economy. One in every six U.S. jobs is marine related, and one-third of the nation's gross domestic product is produced in coastal areas. For example, over 180 million people visit the nation's coasts every year, beaches are the number one tourism destination in the country, and coastal states earn 85 percent of all U.S. tourism revenues. This economic activity depends on productive habitats, clean waters, rich biodiversity and healthy coastal ecosystems to support the coastal tourism, recreation, fishing and other industries. Communities also depend on coastal habitats for important services such as storage and filtration of water, and protection from storms and floods. NOAA provides the science, technology and management tools to ensure that the economic productivity of coastal areas can be sustainably realized.

More than one half the U.S. population now lives and works within 50 miles of the coast. The U.S. coastal population increases by 3,600 people every day. Rapid growth of coastal populations can degrade and destroy coastal resources and threaten the communities and economies that depend on them. Growing demands for access to coastal areas have resulted in habitat loss, water pollution and contamination in many coastal areas. Harmful algal blooms, polluted beaches, contaminated shell-fish beds and diseased coral reefs are signs that human activities are degrading valuable coastal resources.

Executive Summary

FY 2000 funding for this goal will help sustain coastal ecosystems and the communities that depend on them by contributing to several important interagency efforts and Administration priorities including: the Lands Legacy Initiative, Year of the Ocean Initiative, Natural Disaster Reduction Initiative (NDRI), the South Florida Ecosystem Restoration Initiative, the Clean Water Initiative, and the CENR Initiative on Integrated Science for Sustainable Communities.

For Objective 1 (Protect and Restore Coastal Habitats and Biodiversity), a request of $141.6 million will support essential tools for protecting restoring and understanding coastal habitats. New funding of $12.0 million (NOS) will increase the ability to address important coral reef restoration and research efforts ($10.0 million under SHC, $2.0 million under RPS); and $6.0 million will enable NOAA to work with state and other federal agencies to make environmental sound dredging decisions and use dredged material to restore important coastal habitat. An increase of $14.0 million (NOS) will enhance protection of nationally important marine areas by improving management, education and research ($11.0 million), and improving public access and facilities planning ($3.0 million) in the National Marine Sanctuaries. To increase protection of the nation's valuable estuaries, an increase of $14.7 million (NOS) will support acquisition of new sites and increased public access ($12.0 million), as well as provide key research, monitoring, and education ($2.7 million) efforts through the National Estuarine Research Reserves System. Improved knowledge, management and restoration of vital coastal habitat that support fisheries will be achieved with an increase of $1.7 million (NMFS). An increase of $0.8 million ($0.4 million for NOS and $0.4 million for OAR) will expand research and understanding of hypoxia and improve work on developing management strategies for addressing this problem. An increase of $0.6 million (NOS) will expand to new areas the ability to predict, prevent and respond to outbreaks of harmful algal blooms (HAB's) in coastal waters. A $1.6 million increase ($1.0 million NOS and, $0.6 million NMFS) for NOAA will provide monitoring and research critical to the interagency South Florida Ecosystem Restoration Initiative. An increase of $4.1 million (OAR and NOS) will support the commitments at the Nation Oceans Conference to improve our understanding of undersea habitats and National Marine Sanctuaries using new ocean observatories ($3.1 million) (OAR), and to assess the role of oceans in the U.S. economy and environment ($1.0 million) (NOS).

For Objective 2 (Promote Clean Coastal Waters), a request of $72.5 million includes a $4.0 million increase for NOS to support a number of activities for addressing degraded coastal waters as part of the Administration's Clean Water Initiative. By FY 2000, 29 coastal states will have approved Coastal Nonpoint Source Pollution Control Programs requiring funds for implementation. The new funds will allow NOAA to help these states monitor, maintain, and improve coastal water quality by attacking the major cause of coastal water pollution, hypoxia, and harmful algal blooms - runoff pollution from nonpoint sources. Four new states entered the Coastal Zone Management (CZM) Program between FY 1997 and FY 1999. Increased CZM funding will also allow these

states to begin developing and planning the implementation of their nonpoint source pollution control program. In addition, an increase of $1.0 million (OAR) will improve coastal monitoring and assessment of air-borne pollutants and atmospheric deposition on coastal water quality.

A request of $79.0 million for Objective 3 (Foster Well-Planned Coastal Communities) will help improve the economic and environmental vitality of the many coastal communities as well as reduce the vulnerability of these communities to impacts of natural disasters. An increase of $4.0 million (NOS) will enhance national, state, and local capacity for making sound economic decisions in determining dredging projects that will benefit local communities without causing damage to the environment. A $28 million increase (NOS) will assist states and localities in revitalizing coastal communities through grants and technical assistance to address impacts on coastal resources through increased development and urban sprawl. Better growth and wiser use of coastal land and resources will also benefit local coastal economies and the environment. To support the Natural Disaster Reduction Initiative, an increase of $1.0 million will initiate development of coastal risk atlases to help local, state, federal, and private groups assess the exposure and vulnerability of coastal communities to natural disasters, and better plan to reduce this vulnerability. The increase will also enable NOAA to apply satellite-derived data to track natural hazards in coastal areas, and reduce the impact of natural hazards on essential fish habitat and other natural resources.

Crosscutting Initiatives

I. Ocean 2000
   - A. Lands Legacy
   - B. Year of the Ocean
   - C. Resource Protection
   - D. South Florida
   - E. Clean Water Initiative

II. National Disaster Reduction Initiative

III. Climate in the 21st Century

IV. Historically Black Colleges and Universities

V. Committee on Environment and Natural Resources

I. Ocean 2000

Ocean and coastal resources are the foundation of the Nation's coastal and regional economies. One-third of the U.S. GNP and one-half of the Nation's jobs are produced in coastal zones through industries such as fishing, tourism, and marine transportation. The Ocean 2000 crosscut integrates the Administration's Lands Legacy programs, and initiatives supporting the Year Of The Ocean (YOTO), Resource Protection, South Florida ecosystems restoration and research, and implementation of the Clean Water Act.

A. Lands Legacy Initiative $105 million

NOAA's FY2000 budget requests $105 million of new funding to be derived from the Land and Water Conservation Fund to fulfill the environmental mandates outlined in the Administrations Lands Legacy Initiative. The Nation's wetlands, estuaries, rivers, and other coastal habitats are critically important for supporting wildlife, commercial fisheries, recreational opportunities, and livable communities. Federal efforts to protect America's valuable ocean and coastal resources will be significantly strengthened, and state and community efforts to implement "smart growth" strategies will be bolstered through the requested funding. America's ocean and coastal areas, the gateways to our nation, are increasingly threatened by a whole suite of activities, including coastal population growth, development, maritime commerce, commercial and recreational fishing, and tourism. The economic and environmental well-being we derive from the abundant essential natural resources and beauty provided by these areas is being undermined by the very critical economic and aesthetic uses that make these diverse areas valuable to the Nation. Escalating losses and degradation of coastal wetlands, fisheries habitat, and coral reef ecosystems must be reversed. NOAA, the Nation's leader in ocean and coastal stewardship, has the vision, expertise and partnerships with state and local governments to successfully confront this challenge. The request includes funding for targeted investments to: strengthen and expand protection of the nation's most significant ocean and coastal areas; restore critical coastal habitat and vibrant coral reef ecosystems; and provide states and coastal communities with the tools and resources for environmentally-sound and economically-sustainable smart growth.

Coastal Zone Management Act Program *$32.0 million*

The coastal zone is home to more than half the Nation's population and continues to serve as an important economic engine. Working with the 32 coastal states and territories, and hundreds of coastal communities, the Lands Legacy Initiative proposes an increase of $32.0 million to develop and implement community-based comprehensive strategies that support environmentally-sound economic development and reduce urban sprawl. $28.0 million of the proposed funding would be available through competitive, non-matching grants under section 310 of the CZMA to strengthen the support of community-based waterfront revitalization and habitat protection in states with approved Coastal Management Programs or plans and implement programs identified

by states' and localities' planning efforts as part of the National Estuary Program. The remaining $4.0 million in funding will be available to states and communities to address polluted run off problems. This initiative also would enable NOAA to provide the technical and scientific support needed to states and local governments to develop and implement these plans and improvements.

National Marine Sanctuaries *$15.0 million*

The National Marine Sanctuaries are home to diverse marine life and exquisite marine ecosystems such as coral reefs, kelp beds and sea mounts. Recognizing the importance of these special places, the Lands Legacy Initiative proposes an increase of $15.0 million to strengthen the nation's only system of marine protected areas. ($12.0 million in the ORF account, and $3.0 million in PAC.) The National Marine Sanctuary program is designed to conserve, protect and enhance the biodiversity, ecological integrity and cultural legacy of the nation's marine environment. Funds will be used to accomplish this in three ways. First to enhance programs at the twelve existing sites in Massachusetts, North Carolina, Georgia, Florida, Texas, California, Washington, Hawaii, and American Samoa, so that they are able to carry out their mission of marine resource protection and management. Second funds will be used to expand education and outreach opportunities at the Sanctuaries. Through public and private partnerships, NOAA will develop programs designed to better interpret the uniqueness of each sanctuary for the public. Lastly, the initiative will look to the future and begin the planning process necessary for the potential growth of the National Marine Sanctuary system by working with states and communities to identify possible new sites.

National Estuarine Research Reserve System *$14.7 million*

The initiative proposes an increase of $14.7 million to enhance the protection of critical estuaries by providing funds to states and communities for the acquisition of lands in and around the existing National Estuarine Research Reserves. Funds will also be used to improve management capabilities and upgrade facilities at these sites. There are currently 22 Reserves in 19 state and territories managing over 500,000 acres. The acreage in the System will more than double with the planned new addition of three Reserves and acquisition of additional properties at existing Reserves this year. The proposed funding would support the acquisition of forests and wetlands, buffer Reserve resources from the impacts of development, and provide opportunities for interpretation of estuary resources. This initiative also would strengthen Reserve management capabilities and enhance education and resource stewardship in surrounding communities.

Coastal Dredging and Restoration *$10.0 million*

More than 95 percent of U.S. overseas trade by tonnage (excluding Mexico and Canada) passes through U.S. ports and harbors. In 1996, U.S. ports handled approximately 2.3 billion tons of cargo and supported nearly 16 million jobs. As we head into the 21st century, international trade will continue to grow. Unless our ports are prepared--for instance, by deepening channels to

accommodate large cargo ships,--Americans will pay more for imported goods, and American businesses will pay higher export costs. Such efforts must be undertaken in a way that protects the environment. This includes a continued commitment to environmentally sound dredging and safe disposal or reuse of dredged materials. The Lands Legacy Initiative proposes an increase of $10.0 million dollars for NOAA to work with the Corps of Engineers, other federal and state agencies, and coastal communities to help them determine ways to use material dredged from ports and shipping channels to restore important coastal habitats. This initiative will reduce costs and avoid delays in important dredging projects as well as restore degraded habitats and water quality for natural resource and human use.

Coral Reef Restoration *$10.0 million*

The Lands Legacy Initiative proposes an increase of $10.0 million to restore fragile coral reefs injured by human impacts. These exquisite yet endangered ecosystems sustain tourism, recreation and fishing industries worth billions of dollars in economic activity. NOAA, by working with states and other agencies, will restore injured reefs in Puerto Rico, Florida, Hawaii, the U.S. territories and the Commonwealths. Funding will be provided for: development and implementation of emergency restoration activities; restoration of small to moderate-sized injured sites; development of coral nurseries to provide donor material for restoration projects; monitoring to evaluate restoration effectiveness; and the transfer of restoration technologies to other coastal stewards. This request complements and supports the $2 million Coral Reef Protection increase requested under the Year of the Oceans Initiative.

Fisheries Habitat Restoration *$22.7 million*

The Initiative proposes $22.7 million for NOAA to increase the number and geographical scope of community-based habitat restoration efforts that generate quality coastal or river habitat to improve survival of many salt water fish species nationwide. NOAA receives hundreds of restoration requests from state and local governments, universities, and private organizations seeking to partner in these efforts. Funding would go toward restoring areas that have been identified as important fish habitat and have an existing habitat restoration plan. In addition, funding would expand NOAA's existing community-based restoration program of public and private partnerships that address small-scale restoration projects, foster community natural resource stewardship and help leverage additional public and private funding.

Crosscuts

Ocean 2000 - Lands Legacy

Line Office	Activity	Strategic Plan	Program Changes ($ million)
	Coastal Zone Management (CZM)		
NOS	CZM Section 310	SHC	28.0
NOS	CZM 309 Enhancement Grants	SHC	2.0*
NOS	Polluted Run-off	SHC	2.0*
	National Marine Sanctuaries		
NOS	Sanctuaries Operations (ORF)	SHC	12.0
NOS	Sanctuaries Construction (PAC)	SHC	3.0
	National Estuarine Research Reserve System		
NOS	NERRS Operations (ORF)	SHC	2.7
NOS	NERRS Construction (PAC)	SHC	12.0
NOS	**Coastal Dredging and Restoration**	SHC	10.0
NOS	**Coral Reef Restoration**	SHC	10.0
NMFS	**Fisheries Habitat Restoration**	BSF/RPS	22.7
	TOTAL		**105.0****

* These amounts are also shown in the Clean Water Initiative, but are not included in the CWI total to avoid double-counting.
** Total effected by rounding.

B. Year of the Ocean $78.1 million

At the 1998 National Ocean Conference in Monterey, California, President Clinton launched a series of major initiatives to explore, protect and restore America's vital ocean resources. Highlighting the important role the ocean plays in the daily lives of all Americans, the Administration introduced measures to promote new scientific insight into the oceans, sustain use of fisheries and other marine resources, provide new opportunities for economic growth, and protect fragile coastal communities and ecosystems, such as coral reefs, from damage and environmental degradation. NOAA's FY 2000 budget request includes $78.1 million to support the Year of the Ocean (YOTO) Initiative.

Safe Navigation *$5.2 million*

NOAA requests an increase of $5.2 million to promote safe and efficient navigation. This balanced investment will improve the competitiveness of U.S. ports and exports while lowering the risk of marine accidents and resulting pollution. In partnership with the private sector and local authorities, NOAA will support the implementation of real-time oceanographic systems and continue to reduce a critical backlog of hydrographic surveying requirements. NOAA will continue to implement digital nautical charts and modernize the national spatial reference systems. This investment supports the administration's Year of the Ocean "Ports for the 21st Century initiative.

Aquaculture *$4.6 million*

Wild fish stocks in the U.S. and around the world are dwindling. At the same time world demand for protein continues to rise. In order to promote the development of an environmentally friendly and commercially viable domestic aquaculture industry, the budget proposes $4.6 million. Approximately $3.6 million will be used by OAR for research and development of environmentally and economically sound aquaculture technologies with a focus on peer reviewed competition to find projects that will lead to business use. NMFS will direct much of its $1.0 million toward developing aquaculture standards that protect the environment, which promote ecologically-sound farming technologies, and address site selection criteria to assist those who plan to invest in aquaculture within federal waters. These funds will further the administration's ocean stewardship mission by protecting the environment while developing sustainable aquaculture.

Ocean Climate Variability *$4.0 million*

To better understand the role of oceans in shaping our weather and climate, finer measurements of ocean data are needed to track climate shifts, understand the interaction of the oceans and atmosphere, and predict severe weather and the regional impacts of global climate change. In FY 2000, NOAA is requesting $4.0 million to construct, deploy and operate an array of 1000 profiling autonomous floats for data collection in the Pacific and Atlantic Oceans. The floats will make real-time, basin-wide measurements of temperature and salinity profiles, and will estimate current velocities at depth. These data will be used with existing satellite and *in situ* ocean observations and weather analyses to produce the first "weather maps" of the upper ocean and associated seasonal cycles. The seasonal patterns of ocean anomalies in these maps are key to understanding and predicting the climate phenomena that affect U.S. interests at home and abroad.

Crosscuts

Fisheries Stock Assessments and Conservation, and Management *$ 58.2 million*

A major step forward in improving fisheries stock assessment will begin this year as the National Marine Fisheries Service invests $58.2 million on the first of four new state-of-the-art research vessels to replace vessels that will be decommissioned. These new vessels will be constructed to conduct essential stock assessment surveys and monitor fish and marine mammal species, assess ecological changes and provide the best available data to rebuild sustainable fisheries. These ships must be available for fisheries research missions through the first decade of the twenty-first century to protect the integrity of long-term research analyses. These new ships will complement our increasing charters with research partners in industry and academia and will modernize NOAA's aging fleet of research vessels. The budget also includes an increase of $2.6 million for NOAA to carry out its requirements of the Magnuson Stevens Fisheries Conservation Management Act. Funds will be used to conserve and manage the fisheries resources of the U.S. to prevent overfishing, to rebuild overfished stocks, to ensure conservation, and to protect essential fish habitats in order to realize the full potential of our fisheries. There is $2.0 million for observer coverage to carry out mandates in the Act. NOAA will also provide $2.0 million to support work on fisheries oceanography to improve stock predictions by identifying and assessing critical environmental processes controlling long-term trends in the Nation's fishery production. A network of bio-physical moorings in the North Pacific Ocean will provide data on key oceanographic indicators and give greater insight into environmentally-induced shifts in the productivity of commercially important fish stocks.

Coral Reef Protection *$2.0 million*

Coral reefs are among the most exquisite and most endangered ecosystems on Earth. As a destination for tourism, recreation and fishing, coral reefs sustain billions of dollars in economic activities. Often described as the marine equivalent of the rainforests of the sea, coral reefs support a stunning diversity and abundance of undersea life. Yet around the world coral reefs are showing signs of degradation associated with pollution, development, overfishing and increasing ocean temperatures. NOAA requests $2.0 million in order to work with the states, U.S. Territories and Commonwealths, and local communities, to carry out important research, monitoring, management and mapping of the nation’s coral reef system. These funds will be used to better understand the state of this fragile ecosystem and help identify solutions to protect this vital resource.

Ocean Bottom Observatories/Exploring Our Last Frontier *$4.1 million*

As announced at the National Oceans Conference, NOAA is requesting an increase of $4.1 million to unravel deep-sea mysteries, discover new opportunities in the ocean, and better understand how to protect marine resources. These funds will launch a program to map and explore U.S. ocean waters with advanced underwater technology. It will expand activities at two existing shallow-water observatories, the Leo - off of the coast of New Jersey, and the Aquarius in the Florida Keys. And the increase will fund two new deep-sea observatories, one in the Pacific

Juan deFuca Ridge and the other in the Gulf of Mexico. It also will support a partnership with the National Geographic Society where high-tech submersible technologies will begin to map and explore the biodiversity of all of the National Marine Sanctuaries. Finally, to better understand the contribution that ocean resources provide to the Nation's economy, funds will also be used to assess the economic value of the domestic ocean and coastal resources.

OCEAN 2000 - Year of the Ocean

Line Office	Activity	Strategic Plan	Program Changes ($ millions)
	Safe Navigation		
NOS	Tide & Current Data (PORTS)	PSN	2.8
NOS	Mapping and Charting (Reduce Backlog)	PSN	0.9
NOS	Build Nautical Charting Database	PSN	1.0
NOS	National Spatial Reference System	PSN	0.5
NMFS/OAR	**Aquaculture**	BSF	4.6
OAR	**Ocean Climate Variability**	ISICF	4.0
NMFS	**Fisheries Stock Assessments and Conservation, and Management**		
NMFS	Fisheries Research Vessel (FRV)	BFS/RPS	51.6
NMFS	Magnuson-Stevens Act	BSF	2.6
NMFS	Observers	BSF/RPS	2.0
OAR/NMFS	Fisheries Oceanography	BSF/RPS	2.0
NOS	**Coral Reef Protection**	RPS	2.0
OAR/NOS	**Ocean Bottom Observatories/Exploring the Last Frontier**	SHC	4.1
	TOTAL		**78.1**

C. Resource Protection $131.3 million

Development is posing an increasing threat to marine life and their habitat. The number of species either listed by NOAA under the Endangered Species Act or under consideration for listing is growing. Stemming this crisis of extinction is one of NOAA's greatest challenges. NOAA is committed to preventing the extinction of at-risk marine species, and restoring their habitat and ecosystems. Our ongoing efforts to protect and conserve our natural resources include establishing greater public involvement in conservation planning, creating incentives for landowners and states to protect species and their habitat in order to prevent the need to list, and

entering into long term conservation plans with landowners.

Pacific Coastal Salmon Recovery Account *$100.0 million*

The fiscal year 2000 budget bolsters salmon recovery through a new partnership agreement establishing a Pacific Coastal Salmon Recovery Account to share salmon restoration costs that will double the President's $100.0 million in federal dollars with matching non-federal contributions. The Presidential initiative focuses on improving federal conservation activities and building crucial federal-state-tribal partnerships to share limited resources while improving scientific information to ensure a lasting recovery of salmon. Many salmon runs are at risk of extinction or endangerment in the Western states of California, Oregon, Washington, and Alaska.

Protected Species Management *$2.6 million*

Protecting biodiversity is essential to the successful protection and recovery of at-risk species. NOAA is requesting $2.6 million in FY 2000 to characterize and map biodiversity and protected species habitat. These efforts will permit the identification of crucial habitat for the conservation of at-risk species and will identify increased conservation efforts under the ESA. These funds will provide matching challenge grants to local entities for the conservation and restoration of significant biodiversity sites.

Endangered Species Act Recovery Planning *$27.5 million*

Protecting the most highly endangered species is a key piece of NOAA's effort to prevent the extinction of species. For FY 2000, NOAA is requesting a net increase of $27.5 million for Endangered Species Act (ESA) Recovery Planning to stem the decline of highly endangered species including Atlantic and Pacific Salmon ($24.6 million), leatherback and loggerhead turtles, Hawaiian monk seals, and North Atlantic right whales. The North Atlantic right whale is one of the most highly endangered mammals on earth. ESA planning efforts to protect the right whale, Pacific Salmon, and other species will include: protecting and restoring critical habitat; eliminating incidental take in commercial fisheries and conducting research and monitoring to determine species status and habitat requirements.

OCEAN 2000 - Resource Protection

Line Office	Activity	Strategic Plan	Program Changes ($ million)
NMFS	**Pacific Coastal Salmon Recovery Account**	BSF/RPS	100.0
NMFS	**Protected Species Management/Biodiversity**	BSF/RPS	2.6
	Endangered Species Act Recovery Planning		
NMFS	ESA Recovery Plans	BSF/RPS	27.5
NMFS	Enforcement & Surveillance	BSF/RPS	1.0
	TOTAL:		**131.3**

D. South Florida Everglades Restoration $5.1 million

NOAA's FY 2000 budget request includes $5.1 million to address issues related to the South Florida Everglades Restoration effort. (NOS/Coastal Ocean Science, $1.3 million; NMFS, $1.9 million - an increase of $0.6 million; and NOS, $1.9 million - an increase of $1.0 million) The South Florida Initiative is an integrated effort among federal, tribal, state and non-governmental partners to halt the degradation and restore the function of the South Florida ecosystem. NOAA supports the portion of the South Florida Everglades Initiative exclusively devoted to restoring and protecting the coastal and marine portions of the South Florida ecosystem such as the fisheries habitat and coral reefs. The Initiative has already produced significant accomplishments in this area. Continued investment is necessary to restore and maintain the marine ecosystem and the associated economies of South Florida Bay, and the Florida Keys.

Ocean 2000 - South Florida

Line Office	Activity	Strategic Plan	Program Changes ($ million)
NOS	South Florida Ecosystem (ORCA)	SHC	1.0
NMFS	Resource Information/Restoration and Research	SHC	0.6
	TOTAL		**1.6**

Crosscuts

E. Clean Water Initiative $22.0 million

NOAA's FY 2000 budget request includes $22.0 million to support the Administration's Clean Water Initiative. This Initiative will help protect coastal communities from toxics and reduce the flow of pollution into coastal waters from nonpoint sources (e.g., runoff from agricultural fields, city streets, and other areas). Polluted runoff is now a major source of coastal water pollution and one of the primary factors associated with outbreaks of harmful algal blooms (e.g., Pfiesteria) and the spread of hypoxic zones in U.S. coastal waters.

Communities, businesses and human health are increasingly threatened by polluted runoff and the symptoms of polluted coastal waters. For example, every year degraded water quality causes warnings or closures of thousands of beaches resulting in losses to tourism and recreation industries. Degraded water quality continues to close or restrict the use of nearly 30 percent of U.S. shellfish growing areas. This includes 4.5 million acres or 50 percent of the shellfish growing area in the Gulf of Mexico, the Nation's top shellfish-producing region. Over the past 20 years, harmful algal blooms have impacted nearly every coastal state and produced an estimated $1.0 billion in economic losses. The increasing frequency and magnitude of these problems suggests that significant action is required now to reduce the costs and symptoms of nonpoint source pollution, and improve the quality of U.S. coastal waters.

NOAA's FY 2000 request will strengthen and enhance critical research, monitoring and coastal management capabilities of the National Ocean Service required to address the sources of nonpoint source pollution and symptoms of degraded coastal waters (e.g., harmful algal blooms, hypoxia, beach closings, and shellfish advisories).

Harmful Algal Blooms *$1.3 million*

Harmful Algal Blooms (HABs) are an expanding problem in all of our Nation’s coastal areas. Over the past two decades, an estimated $1.0 billion in economic losses have occurred in coastal communities due to HABs such as Pfiesteria and brown tides, that are associated with polluted waters. A requested increase of $1.3 million will be used to work with states, universities, and communities to conduct rapid monitoring and assessment response activities in responding to HAB outbreaks. The funds will be used to develop HAB action plans, take necessary actions such as targeted research, monitoring and assessment during an episode, provide fiscal and technical support to those affected by HABs and to guide management measures aimed at recovery, prevention and control.

Coastal Nonpoint Source Pollution Control Programs *$2.0 million*

By FY 2000, 29 coastal states will have approved Coastal Nonpoint Source Pollution Control Programs that require funds for implementation. Working with other federal, state and local agencies, NOAA will use $6.0 million of the Coastal Zone Management (CZM) Act Section 309

Enhancement Grants to fund these programs and implement on-the-ground management measures to control polluted runoff in coastal areas. This increase of $2.0 million has been previously shown in the Lands Legacy Initiative.

Polluted Runoff Grants *$2.0 million*

Funding of $6.0 million, an increase of $2.0 million previously shown in the Land Legacy Initiative, will support the development of nonpoint control programs in these new CZM states through Polluted Runoff (Nonpoint Pollution Control Program -Section 6217) Grants. These grants will also be used to assist coastal states with conditionally approved nonpoint programs to address the conditions and manage and implement their ongoing programs.

Coastal Resource Coordination Program *$1.0 million*

$1.0 million in FY 2000 will enhance NOAA's capabilities to address the impacts of hazardous waste sites on coastal water quality and NOAA trust resources. Funds will allow NOAA's Coastal Resource Coordination Program to address these serious environmental threats sooner and more effectively, expedite restoration and cleanup of coastal natural resources without costly litigation, share NOAA's technical expertise, and create cost effective approaches for remediating waste site contamination as part of the Clean Water Initiative.

Clean Water Initiative

Line Office	Activity	Strategic Plan	FY 2000 Program Totals	Program Changes ($ million)
NOS	CZM 309 Enhancement Grants	SHC	6.0	[2.0]*
NOS	Polluted Run-off	SHC	6.0	[2.0]*
NOS	Pfiesteria Research & HAB Response	SHC	5.2	1.8
NOS	ECOHAB	BSF/RPS	2.8	0.0
NOS	Coastal Resource Coordination	SHC	1.0	0.0
NOS	Pfiesteria Research (Charleston Lab)	SHC	1.0	0.0
	Total		**22.0**	**1.8**

* Previously shown in Lands Legacy Initiative

Crosscuts

II. National Disaster Reduction Initiative $42.1 million

Natural hazards related to severe weather (hurricanes, tornadoes, winter storms, droughts and floods) or geophysical activity (volcanoes, geomagnetic storms, earthquakes, and tsunamis) threaten lives, property and the stability of local and regional economies throughout the United States. In FY 2000, NOAA requests an increase of $42.1 million for the Natural Disaster Reduction Initiative (NDRI) to implement a second phase of the DOC strategy to reduce and mitigate against the impacts of extreme natural events. The strategy calls for an end-to-end approach to natural disaster mitigation, from research to improve prediction and understanding of extreme events, to advances in developing response and recovery plans, to assessment of vulnerabilities of communities and infrastructure, and providing information, technology and training to reduce vulnerability before and after natural disasters. FY 2000 funding will support the highest priority efforts necessary to continue this end-to-end approach and significantly reduce U.S. costs and vulnerabilities to natural hazards.

Two critical areas must be addressed to reduce the costs and risks from natural disasters. They are (1) providing warnings and mechanisms for people and property to escape hazards when in their path, and (2) providing information and mechanisms so people and property are more resilient in the path of hazards in the first place. NOAA's FY 2000 request will provide more accurate and timely warnings and forecasts, provide information on the vulnerability of coastal communities to natural hazards and provide technology, training and other mitigation measures to reduce these vulnerabilities, save lives and reduce other costs from natural hazards.

To provide warnings and mechanisms for people and property to escape hazards when in their path, FY 2000 funding will be used to support continued advancement of El Niño prediction capabilities, the U.S. Weather Research Program, space weather warnings and forecasts in preparation for the upcoming solar maximum, and accelerated deployment of the flood forecasting system. NOAA will help reduce the direct vulnerability to disasters by supporting and upgrading operational systems critical to predicting, obtaining and communicating information before and during natural hazards events.

To provide information and mechanisms to reduce the vulnerability of coastal communities to natural hazards, NOAA will work with federal, state, and industry partners to identify areas of high hazard risk, develop techniques for mitigating hazard impacts, and provide disaster mitigation techniques.

These measures will:

- Improve lead times and accuracies of warnings and forecasts to enable individuals, emergency managers, businesses, and entire communities to better prepare and respond to extreme events.

- Improve hydrologic forecasts over time scales of hours to seasons to assist water resource managers in optimizing resource allocations and emergency managers in reducing impacts of floods.

- Provide risk assessments that indicate the exposure or vulnerability of communities to natural hazards for use in land use planning and building at local and state levels, to reduce the cost of public and private insurance for residences and businesses.

- Improve the abilities of local and state governments and federal agencies to prepare land use regulations, building codes and other pre-event mitigation actions that reduce the overall costs of natural disasters and promote sustainable communities.

- Increase the resiliency of the built environment to reduce human injuries and other damages as well as costs associated with clean-up and repairs.

The NDRI will allow NOAA to substantially improve forecasts of weather related natural disasters ranging from a few minutes to several months in advance. It will also allow NOAA to immediately provide local, state, federal and private-sector partners with better information on how to avoid and mitigate the impacts of natural hazards. This second phase of the Initiative focuses on areas needed to enhance the end-to-end natural disaster mitigation strategy begun in FY1999. The cross-NOAA Initiative draws from NOAA's strengths in environmental forecast and warning systems, data and information management, research and development, and federal-state partnerships for coastal resource management.

A large and diverse group of partners is depending on NOAA and DOC to maintain leadership in reducing costs and risks associated with natural disasters. The NDRI has been developed through the Committee on Environment and Natural Resources (CENR) Subcommittee on Natural Disaster Reduction (representing 16 federal agencies) and represents a coordinated effort by many Department of Commerce bureaus to address critical business and public sector needs for information, science and technical assistance in disaster reduction. It will fulfill NOAA's responsibility in the Federal Natural Disaster Mitigation Strategy.

Crosscuts

Natural Disaster Reduction Initiative

Line Office	Activity	Strategic Plan	Program Changes ($ million)
NWS & NESDIS	Local Warnings & Forecasts	ASTWFS	14.0
NWS	Satellite Observing Systems	ASTWFS	1.0
NWS	AWIPS Operations & Maintenance	ASTWFS	25.8
NWS	ASOS	ASTWFS	0.2
NWS	AHPS - Advanced Hydrologic Prediction System	ASTWFS	2.2
OAR	USWRP	ASTWFS	1.5
Program Suppt	Aircraft Services/G-IV	ASTWFS	0.4
NWS	Upper Air Evolution - ACARS	ASTWFS	0.6
NESDIS	GDIN - Global Disaster Information Network	ASTWFS	2.0
OAR	HPCC-FSL - High Performance Computing Center - FSL	ASTWFS	1.5
NOS	Coastal Vulnerability	SHC	1.0
OAR	Health of the Atmosphere	ASTWFS	0.4
PAC	Procurement, Acquisition & Construction		
	NPOESS	ASTWFS	30.1
	GOES N-Q	ASTWFS	20.2
	NEXRAD	ASTWFS	2.6
	ASOS	ASTWFS	0.3
	Secretary's Mitigation/AWIPS	ASTWFS	1.6
	Radiosonde Replacement Program	ASTWFS	6.4
	ACE Follow-on/GEOSTORM	ASTWFS	4.3
	WFO Construction	ASTWFS	2.7
	Secretary's Mitigation/Construction	ASTWFS	1.1
	SUBTOTAL		**119.9**

NDRI System Reductions

	Procurement, Acquisition & Construction		
PAC	GOES I-M	ASTWFS	-18.7
PAC	POLAR K-N'	ASTWFS	-8.9
PAC	AWIPS - System Acquisition	ASTWFS	-46.7
PAC	Central Computer Facility Upgrade	ASTWFS	-3.4
	SUBTOTAL		**-77.7**

NDRI TOTAL **42.1**

III. Climate in the 21st Century $19.1 million

In Winter 1997, climate emerged as one of the most compelling, long-term strategic environmental security issues facing the United States. The urgency and demand for climate science information by decision-makers and the public is accelerating. For this reason, as the Department prepares to enter the 21st century, NOAA requests an increase of $19.1 million to meet the Nation's climate service needs.

El Niño-Southern Oscillation Events *$3.6 million*

On the seasonal to interannual climate time scale, the 1997/1998 El Niño-Southern Oscillation (ENSO) event, forecasted by NOAA with a six month lead time, caused unusual and extreme weather events, including heavy rainfall on the West Coast, ice storms in the Northeast, and an unusually mild winter in the northern central tier of the United States. The success of that forecast, and the subsequent La Niña climate anomaly, were based on understanding what happens in the surface waters of the tropical Pacific, and the strong El Niño signal. Other climate signals that occur on seasonal and longer time scales influence ENSO and can be as important to weather and climate anomalies over North America as ENSO in non- or weak-ENSO periods. NOAA is requesting $3.6 million to improve our understanding of these other, key climate variability cycles; such as changes in the monsoonal circulation affecting North America, the North Atlantic Oscillation (changes in sea level pressure over the North Atlantic), and the Pacific Decadal Oscillation (changes in sea surface temperature of the North Pacific), which are also modes of seasonal to interannual climate variability. This knowledge is essential to allow us to forecast weather and climate at longer time scales and predict their impact at a regional level.

Autonomous Profiling Floats *$4.0 million*

Related to this research is NOAA's request for $4.0 million to launch an array of 1000 autonomous profiling floats in the Atlantic and Pacific Oceans that will provide real-time, basin-wide measurements to help produce for the first time "weather maps" of the upper ocean and the associated seasonal cycles. This initiative was announced at the recent National Oceans Conference and is being shown under the Year of the Ocean Crosscutting Initiative.

Kyoto Conference Projects *$5.9 million*

Representatives of many nations met in Kyoto, Japan in December 1997 to address the steps and implementation plans to forestall global warming, an event which promises to fundamentally challenge post-industrial civilization in the next 25-50 years. To understand these challenges and the nature of long-term climate change, it is increasingly necessary that the Department of Commerce accelerate its investments to unlock the scientific uncertainties of the carbon cycle and the relationship between human-induced and natural climate variability. NOAA is requesting

Crosscuts

$1.6 million to expand our understanding of the role of oceanic processes in climate and, in particular, the sources and sinks of atmospheric carbon dioxide. These resources will be used to make long term measurements of carbon dioxide in the surface ocean and overlying atmosphere, improve existing climate models, and develop new data assimilation methods. Complementing this effort, NOAA is requesting $3.1 million to study the role of vegetation type and land use changes in the uptake of atmospheric carbon dioxide. These resources will also be used to improve our understanding of the linkage between climate and the intensity and frequency of extreme weather events, such as floods, hurricanes, and tornadoes.

Three key components of this initiative will provide critical funding for NOAA's unique responsibility to obtain long-term observations of the atmosphere and maintain national data archives. NOAA is requesting $1.2 million to restore and maintain operations at its baseline atmospheric observatories in Alaska, Hawaii, Samoa, and Antarctica that provide the world's longest atmospheric time series.

Cooperative Reference Network and Raingauge Network *$3.0 million*

The NOAA request also includes $3.0 million to begin the modernization of the Cooperative Reference Network and Raingauge Network. Evidence for changes in extreme precipitation rates have been documented across the United States as global and regional temperatures and water vapor have changed. The aging Cooperative Reference Network and Raingauge Network have contributed significantly to our ability to observe and analyze these changes. Funds are requested in FY 2000 to ensure the future health and usefulness of these valuable national programs. The modernization program is required to avoid a number of imminent catastrophic failures, including the inability to read punched paper tapes from the raingauges, inadequate supply of replacement chips for thermistors used in the cooperative network, and the elimination of changes in observing times which effectively destroy our ability to evaluate changes in extremes for our longest and best observing stations. Fundamental climate statistics, such as extreme precipitation events are related to numerous economic and ecological impacts. Upgrading the Cooperative Reference Network and Raingauge Network will ensure a reliable long-term climate record, including extreme precipitation events, and support the economic and ecological impact studies related to climate change. NOAA is also requesting $0.9 million for Data and Information Services to meet the increased demand for near real-time products, data, and information related to unusual weather, climate, and environmental events.

Computer for Climate and Weather Research *$5.7 million*

Underlying NOAA's ability to improve climate and weather models is maintaining state-of-the-art computer capabilities for world-class research. Included in this request is $5.7 million to acquire a massively parallel computer to improve forecasts of El Nino events, model climate variability, and make better hurricane predictions. Procurement of this computer will help close the computing gap between the U.S. and European climate centers.

Specific deliverables of this initiative are discussed in detail within the budget requests for NOAA's two climate portfolios, Predict and Assess Decadal to Centennial Change and Implement Seasonal to Interannual Climate Forecasts.

Climate in the 21st Century

Line Office	Activity	Strategic Plan	Program Changes ($ million)
OAR	Research on Other Modes of Seasonal Climate Variability	ISICF	3.6
OAR	Ocean Climate Variability	ISICF	[4.0]*
OAR	Role of Oceans	PADCC	1.6
OAR	Climate Forcing Agents	PADCC	3.1
OAR	GFDL Supercomputer (PAC)	PADCC	5.7
OAR	Baseline Observatory Deficiency	PADCC	1.2
NWS	Cooperative Reference Network	PADCC	1.5
NESDIS	Cooperative Reference Network	PADCC	1.5
NESDIS	Data Center Base Restoration	ISICF	0.9
	TOTAL		**19.1**

* Previously shown under Year of the Ocean.

IV. Historically Black Colleges and Universities $1.0 million

As part of a Commerce-wide capacity building effort, NOAA requests $1.0 million to establish educational training relationships through a joint partnership with a consortium of Historically Black Colleges and Universities (HBCU). These efforts would not only result in the education of new marine, atmospheric and environmental scientists, but would also assist many coastal communities in the development of new business and environmental engineering alternatives to support sustainable economic development. In addition, the initiative would help to develop capacity at the consortium HBCUs and allow these institutions to train a greater number of resource scientists and managers. This effort would provide the Department with a broader and more diverse pool of potential employees from which to choose. Having additional, trained natural resource managers can also provide NOAA with additional scientific data that would allow the agency to more effectively carry out its mission.

V. Committee on Environment and Natural Resources $536.7 million

Through the National Science and Technology Council's (NSTC) Committee on Environment and Natural Resources (CENR), NOAA works with other federal agencies and non-governmental experts to design and prioritize the government's environment and natural resources research and development agenda. This interagency planning and coordination ensures the effective application of available resources.

For FY 2000, the NSTC identified interagency science and technology investment priorities, as well as special emphasis areas. NOAA will participate in the following special emphasis areas:

- The continuation of the U.S. Global Change Research Program, is a NSTC high priority area for interagency research; and

- Integrated Science for Ecosystems Challenges, an area of special emphasis developed to expand the knowledge base, information infrastructure, and modeling framework to help resource managers predict and assess environmental and economic impacts of stress on vulnerable ecosystems. Particular focus is placed on invasive species, water and air pollution, changes in weather and climate, and land and resource use.

The NSTC identified high priority areas for interagency research in FY 1999 in which NOAA will continue to participate through FY 2000. These include:

- National environmental monitoring and research initiatives, including production of a report card on the health of the Nation's ecosystems by 2001;

- Natural Disaster Reduction Initiative with enhanced international cooperation in science and technology to reduce the damage to communities caused by natural disasters through improved risk assessment, mitigation, and consolidation of warning systems;

- Endocrine disruption research to identify and reduce the impacts of chemical pollutants that interact with endocrine and reproductive systems of wildlife and humans; and

- The North American Research Strategy for Tropospheric Ozone, including technology development through public-private partnerships to reduce the impacts of ozone pollution.

Reducing Costs and Improving Effectiveness

In an environment of tightening dollars and increasingly complex challenges, NOAA is reducing costs and improving program effectiveness. NOAA is saving money through streamlining personnel and processes, outsourcing where appropriate, and leveraging external resources and talent. NOAA holds managers accountable for results, and for using performance measures to validate progress. The highest priority continues to be to ensure that critical services are provided well.

National Performance Review, Streamlining, and Reinvention

In an effort to create a government that works better and costs less, NOAA is reinventing itself and achieving the goals outlined in the National Performance Review (NPR). Weather service modernization is reinvention in the making. Owing to the range and effectiveness of new technologies, the NWS is realigning its field structure to reduce the number of offices from over 300 to 121. Due to this capital investment in technology, and the application of advanced scientific understanding -- much of which has been developed in NOAA -- the U.S. now commands the most modern and efficient weather service in the world.

In addition, NOAA is reinventing the National Undersea Research Program to focus research priorities on management needs and to provide for the competitive allocation of funds; and creating a NOAA National Virtual Data Center to handle the growing demand for environmental data through a centralized and physically distributed system to enable customers to locate, browse, and acquire data without human intervention. A brief status of formal NOAA NPR initiatives follows:

- Streamlining processes. NOAA has simplified administrative processes, delegated authorities downward, and made progress toward implementing the Commerce Administrative Management System, which will greatly improve financial management and accountability.

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- Converging satellites. NOAA continues to work with the Department of Defense (DOD) to merge civilian and defense weather satellites. Participating agencies have approved an Optimized Convergence proposal to make best use of production and on-orbit assets and to reduce risk on critical sensor payloads and algorithms. The NPOESS Integrated Program Office is proceeding with Phase 1 sensor development, a key acquisition milestone. On May 29, 1998, the initiation of joint civilian and military satellite operations, command and control marked an important pre-convergence effort. In FY 2000, key development activities will continue including initiation of Phase II production of five key sensors.

- Closing NWS field offices. NWS continues to make progress towards completing the Modernization and Associated Restructuring. Currently, NWS plans to consolidate its field office infrastructure and close a total of 164 Weather Service Offices in FY 2000. As of January 1999, the NWS completed closure certifications for 132 offices.

- Expanding private sector ship support. NOAA continues to utilize private contractors and cooperative arrangements with universities for ship support, and to assess private interest, capability, and costs. Future ship support planning is based upon the philosophy that the most cost effective means for acquiring data is a mix of chartering, contracting, leasing, and NOAA ships. One-third of the ship time that NOAA currently needs is being acquired through charters and lease services. Several of NOAA's older inefficient ships have been removed from service. The number of NOAA ships has been reduced from 19 to 15 active vessels. Outdated and expensive oceanographic research vessels have been replaced by a converted Navy ship and a newly constructed vessel. NOAA's ship operations office has been re-engineered and downsized. The remaining active NOAA ships are cost effective. All funding increases for hydrographic data acquisition to eliminate the critical survey backlog will be spent on contracting for data or leasing of ships.

- Transforming seafood inspection. NOAA expects to propose legislation to establish a seafood inspection Performance Based Organization and transfer the program to the Food and Drug Administration.

Strategic Planning and the Government Performance and Results Act

NOAA has institutionalized a strategic planning process that defines and validates its business activities, guides the development of implementation, operating and senior management performance plans, and forms the basis for management decisions. The Strategic Plan provides the framework for articulating and organizing the agency's goals and work objectives. NOAA's goals for the future will enhance opportunities for our

citizens, the health of the U.S. economy, the protection of our environment, and the sustainable use of our natural resources.

NOAA has made the Government Performance and Results Act (GPRA) operational following strong participation as a pilot agency. During the pilot period, NOAA was selected by the Office of Management and Budget (OMB) as one of ten exemplars and was commended by the National Academy of Public Administration's (NAPA's) GPRA review panel. Currently, NOAA is working with GAO to identify best practices for Federal agencies to follow, contributing to NPR performance measurement benchmarking studies, and is participating in the Department's strategic planning process. NOAA views the GPRA as a management tool to facilitate decision-making. NOAA has integrated performance measures into its planning, budgeting, and management review cycles, and is designing a program evaluation process to measure agency-wide progress toward meeting goals.

The GPRA extended requirements established under the Chief Financial Officer's Act (1990) for an independent audit of an agency's financial statements. These requirements were further addressed by the Government Management and Reform Act (1994) and the Federal Financial Manager's Integrity Act (1996). During FY 2000, NOAA anticipates receipt of an unqualified audit rating, reflecting the correction of all identified outstanding corrective actions. During this period, it is also anticipated that NOAA and the Department will have completed implementation of all requisite financial management modifications needed to satisfy requirements contained in the OMB Bulletin 97-01.

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Beneficial Partnerships

NOAA builds partnerships with universities; federal, state, local and international entities; industries and businesses; and groups and individuals to address common needs and leverage resources. For example, the Fishery Management Councils are innovative partnerships bringing resource managers and fishing interests to the same table to address concerns and make management decisions. International leadership and federal-state collaboration help ensure the conservation of living marine resources, especially straddling fish stocks, endangered species and other at-risk marine species. NOAA also helps advance the state of science and technology in atmospheric and oceanographic fields by coordinating related research and environmental monitoring efforts around the globe. NOAA continues to work with local communities to formulate and oversee policies and programs to address fishery resource disasters in Alaska, the Pacific Northwest, the Northeast, and the Gulf of Mexico. NOAA also has unique federal-state partnerships with coastal states to provide technical assistance and financial support for the development and implementation of state coastal zone management plans and estuarine research reserves.

NOAA depends strongly on universities to help accomplish science objectives in its mission areas. NOAA and university scientists collaborate on severe weather, climate, oceanography, atmospheric chemistry and fisheries research via a network of ten Joint and Cooperative Institutes at universities around the Nation. NOAA also funds academic researchers through competitive, peer-reviewed programs, including the Climate and Global Change Program, National Sea Grant College Program, the National Undersea Research Program, Coastal Ocean Science, and the National Estuarine Research Reserve System. The National Sea Grant College Program network includes 29 Sea Grant College Programs that provide critical research and community services for the Nation. NOAA has established a NOAA-University partnership to enhance collaboration with universities, and will host its third series of workshops in 1999 with a broad range of both academic and other constituents to provide for constituent input and feedback into NOAA's strategic planning and budget formulation process.

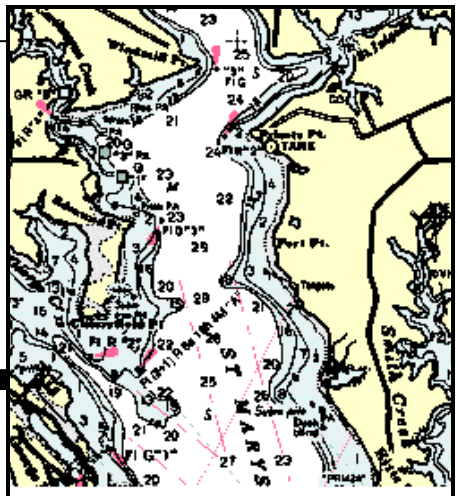
Weather and climate services are provided to the public and industry through a unique partnership between NOAA and the private meteorological sector. NOAA provides forecasts and warnings for public safety, and the private sector promotes dissemination of forecasts and the tailoring of basic information for business uses. NOAA generally is seeking to reduce the costs of environmental data collection and to improve access to space-based and other environmental monitoring technologies by utilizing existing Federal and international assets, and planning for the next generation of polar-orbiting satellites.

As part of NOAA's commitment to expanding its partnerships, and as part of a Commerce-wide capacity building effort, NOAA is proposing an expanded effort with a consortium of nine Historically Black Colleges and Universities in FY 2000. The goal of

this effort is to strengthen and develop new education, training and business opportunities at the consortium schools, to establish Centers of Excellence at three of the participating schools and offer internships at NOAA facilities throughout the Nation. These efforts would not only result in the education of new marine, environmental and atmospheric scientists, but would also assist in the development of new business and engineering alternatives to support sustainable economic development.

National Ocean Service

Total Request: $346,227,000
ORF: $328,543,000
PAC: $15,000,000
Other:$2,684,000

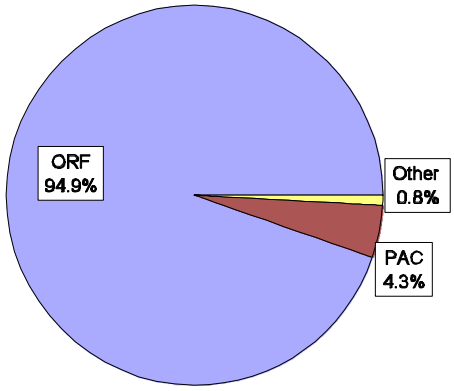


Portion of a modern Nautical Chart of St. Mary's River, Maryland

The National Ocean Service (NOS) is the primary Federal agency working for the coast through the observation, measurement, assessment, and management of the Nation's coastal and ocean areas, as well as conducting response and restoration activities to protect vital coastal resources. As a national leader for coastal stewardship, NOS promotes a wide range of research activities to build the strong science foundation required to advance the sustainable use of our coastal systems. NOS contributes significantly to achieving three of NOAA's seven Strategic Plan Goals; Sustain Healthy Coasts, Promote Safe Navigation, and Build Sustainable Fisheries. NOS provides improvements in the quality, quantity, geographic distribution, and timeliness of ocean and coastal observations. Mapping, charting, geodetic, and oceanographic activities produce marine and coastal data to increase the efficiency and safety of marine commerce and support engineering and scientific efforts. NOS protects and restores coastal resources injured by releases of oil and other hazardous materials. NOS also develops and manages marine sanctuaries and, in partnership with the coastal states, helps manage the Nation's valuable coastal zones and nationally significant estuarine reserves. Understanding of the coastal environment is enhanced through coastal ocean

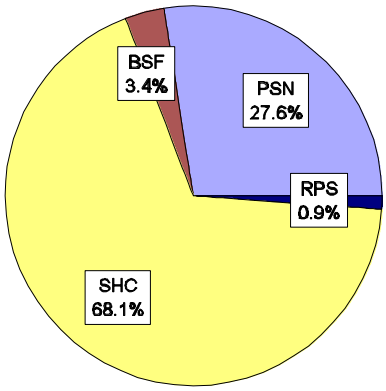
Activity Based

(Appropriations Structure)



Goal Based

(Strategic Plan Structure)



activities which support science and resource management programs.

NOS continues to make organizational changes to strengthen coastal stewardship, enhance research support for NOAA coastal management, and build better linkages among NOAA's coastal programs. A cornerstone of this effort is building a strong science foundation and improving the links between NOAA's coastal science efforts and coastal management responsibilities. The proposed transfer of the Great Lakes Environmental Research Laboratory (GLERL) from the Office of Oceanic and Atmospheric Research (OAR) into NOS is a key step that will help provide NOS with the regional presence necessary to conduct important coastal research and form strong partnerships with governmental and non-governmental stewards.

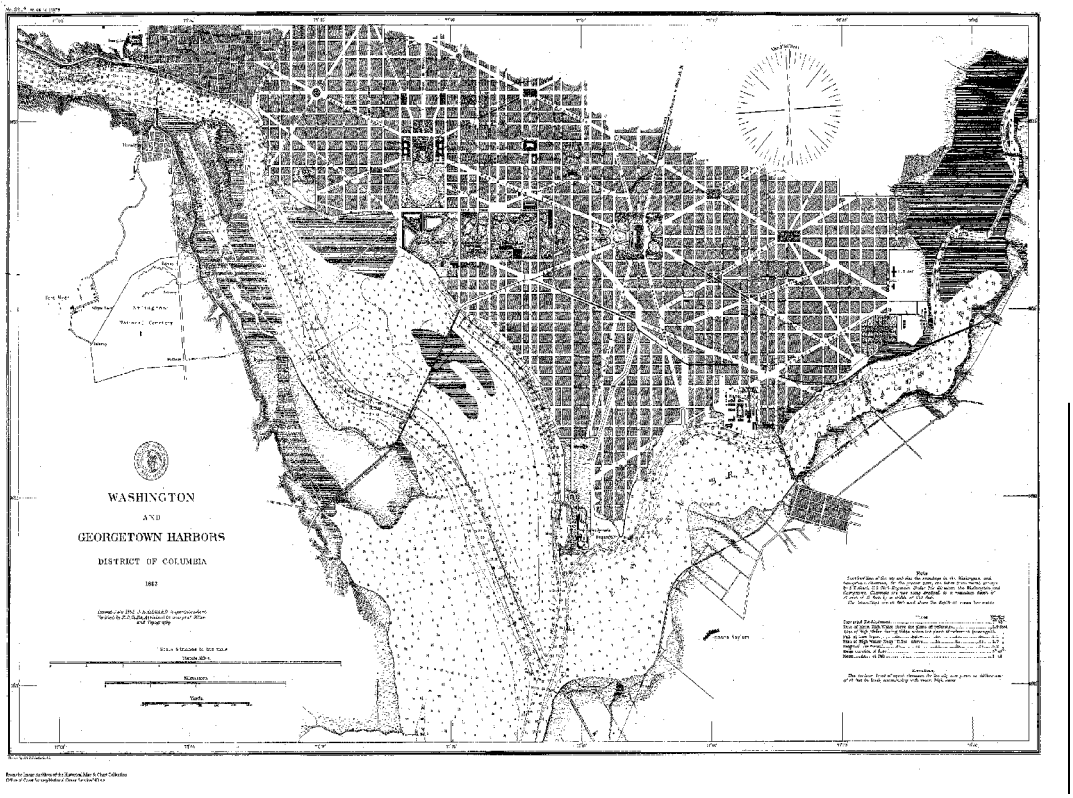
NOS seeks to support its suite of coastal science and management programs with targeted increases, much of which will be expended in the form of private sector contracts or grants to states, communities, and academic institutions. The increases will strengthen and enhance the critical capabilities of selected programs that promote safe and efficient navigation through accurate nautical charts and quality controlled real-time oceanographic data. The increases will also provide comprehensive research, monitoring and assessment, planning, response, and scientific and technical support to states and communities addressing nonpoint pollution and growing outbreaks of harmful algal blooms (e.g., pfiesteria) and other symptoms of degraded coastal ecosystems. Particular emphasis has been placed on addressing the continued degradation of the Nation's coral reef ecosystems, on strengthening our ability to effectively manage our marine protected resources, on working with state and local managers to improve their capacity for making effective dredging decisions that are beneficial to the environment and economy, and on increasing Federal and state support of local, community-based, environmentally protective solutions to the impacts and pressures on coastal resources resulting from increased development and urban sprawl. These activities are an integral part of the Administration's Lands Legacy Initiative to increase protection of the Nation's ocean and coastal areas and help promote "smart growth" strategies along America's coasts.

A separate organizational change is completion of the two-step transfer of NOS's Office of Aeronautical Charting and Cartography (AC&C) to the Department of Transportation (DOT). A two-step process was proposed in order to provide DOT with adequate time to ensure the orderly transition of the program. Appropriations were transferred to DOT in FY 1998 as a first step, with NOAA retaining responsibility for operating the program on a fully reimbursable basis. Step two is the transfer of AC&C operating program responsibility in FY 2000 to DOT.

For FY 2000, NOAA requests a total of $346.2 million for the National Ocean Service. This is a net increase of $68.0 million over the FY 2000 base in ORF, consisting of program increases of $84.1 million and program decreases of $16.1 million in ORF. Within the PAC Account, NOAA requests a net $4.7 million increase for the National

Estuarine Research Reserves (NERRS) and a $3.0 million increase for the National Marine Sanctuary (NMS) Program.

The FY 2000 proposed appropriation establishes authority to collect fees to begin to offset costs associated with providing navigation services. A proposal for the fees is being developed in conjunction with the U.S. Coast Guard. The $14.0 million in estimated fees collected will be used to offset the overall NOAA Budget Authority and Appropriation in FY 2000.



Historical navigation chart for Washington and Georgetown Harbors, 1882, from the NOS Archives.

Detailed Program Increases

Navigation Services - This subactivity funds a suite of navigation products and services that help ensure the safety of marine transportation, while improving the economic efficiency and competitiveness of U.S. commerce. This suite includes traditional products and services, such as paper charts and tide predictions, as well as powerful new electronic nautical charts and real-time oceanographic systems. This subactivity also supports the National Spatial Reference System (NSRS), a highly accurate and accessible geographic positioning framework which underpins a wide array of defense, transportation, public works, earth science, mapping and charting, and other activities critical to the Nation's

economic infrastructure. NOS requests $83.0 million, a net increase of $2.5 million, in this subactivity for FY 2000.

NOAA requests an increase of $1.0 million to maintain and enhance the modernization of its Nautical Charting Database production processes. NOAA is transitioning from traditional production techniques to fully digital processes primarily through private sector contracts and off-the-shelf technology. Maintaining successful modernization efforts and achievements are essential to ensure that accurate and timely navigation products and services are delivered from the accelerated effort to reduce the critical survey backlog. One of the most significant advances to date in the modernization effort is the dramatic reduction in the time between chart data acquisition and chart edition publication from 20 months down to only four months. NOAA also requests an increase of $0.9 million to accelerate reduction of the critical nautical survey backlog through expanded use of private sector contracts for critical survey areas primarily in Alaska, the Gulf, and along the west coast.

Included in the above amounts is an increase of $0.5 million is proposed to accelerate modernization of the vertical component of the National Spatial Reference System (NSRS) under the Geodesy Program by completing connection of the Federal Base Network (FBN) stations, and continued improvements to the geoid model. The horizontal component of the FBN was recently completed, and improved access to a fully modernized NSRS will provide the many user communities with significant safety and economic benefits through both traditional and innovative applications, particularly those utilizing the Global Positioning System.

NOAA requests an increase of $2.8 million for real-time oceanographic data under the Tide and Current Data line item to fully develop and implement the comprehensive capabilities and modernization efforts necessary to support the design, establishment and quality assurance of additional Physical Oceanographic Real-Time Systems (PORTS) through local partnerships. PORTS provides real-time oceanographic data critical to safe and efficient navigation, hazardous material spill response efforts, coastal flood warnings, and other applications. New PORTS will be established through cost sharing partnerships that require installation and on-going local operation and maintenance costs be paid for by local partners and other sources. The funds will enable NOAA to modernize the foundation of National Water Level Observation Network stations to ensure real-time capabilities; rigorously quality control PORTS data; and develop, test and integrate quality assurance processes for new technology sensors, information systems and communications. This request supports the President's "Ports for the 21st Century" Year of the Ocean Initiative.

Ocean Resources Conservation and Assessment - This subactivity supports monitoring, assessment, responses to oil and hazardous materials spills, and directed research programs to provide comprehensive scientific information for decisions about the

protection and sustainable use of coastal and ocean resources. These activities also help minimize damages to natural resources in the Nation's coastal areas, estuaries, and oceans, including the Great Lakes. These programs allow NOAA to monitor the status and trends of environmental quality in U.S. coastal areas, assess the biological consequences of pollutants in coastal ecosystems, synthesize environmental data to identify and evaluate strategies for managing coastal and ocean resources, conduct natural resource damage assessments to support recovery of funds for restoration, and coordinate response activities and planning efforts to minimize the environmental effects of hazardous materials spills and hazardous waste sites in coastal areas. NOS requests a net increase of $15.2 million from the FY 2000 base of $84.5 million for this subactivity for FY 2000.

NOAA requests funding for the GLERL in FY 2000 of $6.1 million.

NOAA proposes an increase of $0.5 million for the cooperative Marine Environmental Health Research Laboratory in Charleston under the Oceanic and Coastal Research line item to meet increased operational costs. This will enable the laboratory to work with the state of South Carolina, local universities, and the National Institute of Standards and Technology to improve understanding of coastal environmental health issues, marine toxicology and coastal fisheries habitat issues.

The Ocean Assessment program includes a net increase of $4.5 million which is made up of 7 increases and 5 decreases.

As part of the President's pledge at the National Oceans Conference in 1998, NOAA proposes to expand activities by $3.0 million to protect the Nation's fragile coral reef ecosystems and to explore the ocean, our last frontier. Within that amount, NOAA requests an increase of $2.0 million to strengthen the protection of U.S. coral reefs by expanding research on the major causes and consequences of coral reef damage, develop new techniques to reduce impacts, protect vulnerable reef species, and work with state, territorial, commonwealth and other partners to improve sustainable management of the Nation's valuable coral reef ecosystems. An increase of $1.0 million is requested to enable NOAA to more fully explore our Nation's last frontier, the ocean, as a way to discover new opportunities in the ocean. NOAA will explore undersea life in America's marine sanctuaries and conduct an economic evaluation to better understand the ocean and the contribution that its valuable resources provide to the Nation's economy and environment. These findings will be used to improve ways to effectively manage all ocean resources. NOAA will work with other federal agencies as well as local governments, academia, and private groups.

As part of the Lands Legacy Initiative, NOAA proposes an increase of $10 million and 15 FTEs to expedite dredging projects by working with state and local managers to improve their capacity for making effective dredging decisions that are beneficial to the environment and the economy. This funding will expedite dredging projects by providing

decision-makers with tools for: accurately assessing the magnitude of sediment contamination; evaluating the threat of contamination; and making informed and innovative decisions about disposal actions. NOAA, through close coordination with other federal agencies, will also work toward beneficially reusing dredged materials to aid in restoring important coastal habitat. The establishment of NOAA regional dredging coordinators would enhance technical assistance to state and local managers for determining potential restoration projects, recommending ways to address contaminated sediments, and understanding biological effects of actions.

An increase of $1.3 million is requested for NOAA to assist states, universities, and communities to rapidly expand their development of detection and assay technologies that will be used for pfiesteria and other types of harmful algal bloom (HAB) outbreaks. Laboratory testing of many of these techniques are nearing completion through other programs such as the longer term Ecology and Oceanography of Harmful Algal Blooms (ECOHAB) program. Rapid incorporation of these laboratory assays and techniques into routine state monitoring and event response programs is critical to promoting the timely publication of health advisories needed to ensure effective protection of local citizens using rivers and coastal areas and harvesting seafood. This increase supports the Administration's Clean Water Initiative. An increase of $0.5 million is also requested for NOAA to expand its role in national pfiesteria research and monitoring. This will allow NOAA to continue critical monitoring, rapid response, and assessment of pfiesteria outbreaks.

An increase of $1.0 million is requested to fund additional contributions to the Administration's South Florida Interagency Ecosystem Restoration Initiative. The funds will allow NOS to fully implement an integrated ecosystem monitoring program in South Florida, particularly in the coastal areas encompassing Florida Bay and the Florida Keys National Marine Sanctuary. These additional monitoring and research activities are critical to determine the downstream impacts of Everglades ecosystem restoration efforts on sensitive coastal resources such as the Florida Bay ecosystems and the Florida Keys coral reefs. NOAA’s contributions to the South Florida Restoration Initiative also involve NMFS and Coastal Ocean Science activities.

An increase of $1.0 million is requested to support activities proposed under the Natural Disaster Reduction Initiative to expand work with coastal states to develop coastal risk atlases and provide new remote sensing data in a more timely and effective manner. This will allow coastal communities to better prepare for and recover from natural disasters, and assess the impacts of natural hazards on coastal habitats. Hazards risk tables will be developed for various habitat types important to fisheries management. These activities will be conducted in close cooperation with NMFS and NESDIS.

NOAA requests an increase of $10 million and 11 FTEs for coral reef restoration under the Response and Restoration program to strengthen the Nation's coral reef restoration

capabilities to enhance our coastal resources through the Lands Legacy Initiative. The funding will enable NOAA to undertake a number of coral reef restoration projects in Florida, Puerto Rico and other states and territories to prevent the continuing loss and degradation from relatively minor but cumulatively destructive incidents. A coral nursery will be established to help restore injured sites, emergency restoration activities will be undertaken to reduce the magnitude of damage, monitoring will be conducted to determine optimal reef restoration techniques, and techniques will be transferred to other interested partners. These activities will build on the increased coral reef research requested under the Ocean Assessment Program as part of the President's pledge at the National Oceans Conference in 1998 to protect our fragile coral reef ecosystems.

Within Coastal Ocean Science, NOAA requests a net increase of $1.0 million to support the Administration's Clean Water Initiative and the Harmful Algal Bloom and Hypoxia Research and Control Act (HABARCA) of 1998. Within this amount, an increase of $0.4 million is proposed to support research on hypoxia in the northern Gulf of Mexico. A persistent "dead zone" in the northern Gulf of Mexico develops seasonally and significantly threatens nationally important fisheries. The increase will support critical process research and diagnostic modeling to quantify the causes and effects of this condition and to develop efficient and cost effective land-based management strategies to control nutrient runoff and other sources of this problem in the Mississippi River drainage area. Also within the $1.0 million increase, NOAA requests $0.6 million to expand the ECOHAB program on research to understand and predict the occurrence and impacts of HABs in coastal waters. The need for additional efforts on HABs in new regions has been called for in the HABARCA of 1998. These efforts, based on the competitive, peer review process bring together academic, state, and federal researchers to tackle these inherently multi-disciplinary environmental problems.

Ocean and Coastal Management - This subactivity supports the coastal states and territories in implementing Federal partnership programs that promote rational use of the Nation's coastal zone, and designating and managing unique and nationally significant marine and estuarine areas. NOS requests a net increase of $47.4 million in this subactivity for FY 2000.

NOAA requests an increase of $1.0 million and 8 FTEs to support national programs under the Coastal Zone Management Administration line item due to the planned expansion of the National Estuarine Research Reserve System (NERRS) to 27 sites, the continued additions to the state Coastal Zone Management programs (34 of 35 eligible states and territories will be participating by FY 2000), and the Administration's Clean Water Action Plan to address coastal non-point pollution. The increase will support augmented technical assistance to program participants, particularly for coastal community revitalization efforts; better synthesis and dissemination of NERRS research and monitoring information; support land acquisition and construction activities at Reserves; and a greater emphasis on resource conservation issues. Adequate technical and

administrative support to manage and protect vital coastal habitat through the national estuarine and coastal management programs is essential to NOAA's ability to act as a coastal steward.

NOAA is requesting an increase of $2.0 million for the Coastal Nonpoint Pollution Control Program (CNPCP). Twenty-nine coastal states have received approval of their CNPCPs with some conditions. Four additional states (Georgia, Texas, Ohio, and Minnesota) are beginning development of their CNPCP. These funds will assist Coastal Zone Management states in completing development of state programs, including specific actions necessary to address approval conditions and in carrying out CNPCP development in the four other states. This increase supports the Administration's Clean Water and Lands Legacy Initiatives.

NOAA requests an increase of $2.0 million to be provided to states through Coastal Zone Management Act (CZMA) Enhancement Grants to improve and implement the approved CNPCP control elements of state management programs to address polluted runoff. This increase supports the Administration's Clean Water and Lands Legacy Initiatives and is critical to solving problems associated with polluted runoff in coastal areas.

In FY 1999, NOAA will be working with Congress on the CZMA reauthorization. During this process, NOAA may seek authority to combine funding for Coastal Nonpoint Pollution grants into the comprehensive CZM grants to develop a complete program in support of the Administration's Clean Water Action Plan.

NOAA proposes an increase of $28.0 million and 2 FTEs to provide Federal and state support, through Section 310 of the CZM Act, of community-based, environmentally protective solutions to the impacts and pressures on coastal resources resulting from increased development and urban sprawl. Through this key part of the Lands Legacy Initiative, NOAA and its coastal state partners will work with communities to create and implement strategies tailored to meet their unique needs. These efforts will enhance the capacity of coastal communities to address resource protection and community revitalization. Funding proposed under section 310 would be available as grants and technical assistance to local governments through NOAA and state coastal management programs. Examples of eligible activities include local efforts to address the environmental impacts of development, improve the urban coastal environment, promote "smart growth" approaches, and revitalize and reuse urban waterfronts, including such considerations as public access to the coast, brownfields reuse, and improved port, harbor, and marina management within the community. The intent is to revitalize previously developed areas, to discourage development in undeveloped and environmentally sensitive areas, to restore or enhance coastal resources impacted by coastal development, and to emphasize water dependent uses. The result will be significant improvements to the health and vitality of coastal communities nationally, decreased pressure on adjacent natural

areas, improved environmental quality within coastal communities, and an improved coastal economy.

Aerial photograph of Biscayne Bay in Florida showing a red tide.
http://mapindex.nos.noaa.gov/

NOAA requests an increase of $2.7 million for the NERRS to also support the Lands Legacy Initiative by providing funds for operational needs required by the doubling of the system's protected areas from the nearly 500,000 acres in the current system of 22 reserves to approximately 1 million acres by FY 2000 with the anticipated addition of five new reserves (Kachemak Bay, AK, Guana-Tolomato-Matanzas, Fl, Grand Bay, MS, St. Lawrence River, NY, and San Francisco Bay, CA). The funds will assist NOAA's State partners in maintaining a full-time core field Reserves staff to manage each site, as well as to conduct mandated education, monitoring, research and training activities. The increase will also enable Reserve staff to plan and complete critical land acquisition and construction projects, funding for which is requested in the Procurement, Acquisition and Construction account. Reserves increasingly promote improved water quality through site watershed management, conduct site habitat restoration, and are used as hubs for conducting long-term scientific studies of estuaries to help reach sustainable coastal management solutions at the local, regional, and national levels, as well as increasing

public awareness of stewardship for the estuarine environment. In addition, a request of $12.0 million in the PAC account will fund operational needs for the NERRS and provide additional protection of key estuarine habitats through land acquisition and construction of facilities for existing and new reserves. The System will expand from its current 22 reserves to an anticipated total of 27 reserves by the end of FY 2000. Over 540,000 acres of estuarine habitat are currently protected by the NERRS, which will increase to over 1,000,000 acres with the addition of five new reserves and ongoing acquisition efforts. However, a majority of reserves have identified additional, near-by critical habitat in need of protection and to serve as places for conducting long-term science, education, and demonstration programs.

NOAA is requesting an increase of $3.0 million and 15 FTEs for the National Marine Sanctuary (NMS) Program to improve the management of existing marine sanctuaries, and to enhance the Nation's marine resource protection through a growing network of sanctuaries in support of the Lands Legacy Initiative. NOAA will significantly strengthen its management of the existing system of 12 sanctuaries (with a 13th, Thunder Bay MI anticipated by FY 2000), by fully funding base operations and implementing a series of key activities to support sound management decisions such as: socioeconomic studies to improve sanctuary management plans; inventories of existing resources through site characterization studies; comprehensive Geographic Information System (GIS) capability; a system-wide monitoring program to assess management effectiveness and identify emerging problems; and activities to protect important species. The increase would also enable NOAA to initiate expansion of the system by undertaking a comprehensive effort to update the site selection criteria and to identify additional, potential candidate sites, with one new site to be identified in FY 2000. The result will be a sanctuary system that provides adequate resource protection for some of the Nation's most unique ecosystems such as coral reefs, important cultural resources such as historic shipwrecks, and America's most significant habitats for Humpback, Right, and Blue whales, and other important marine mammal colonies in the Pacific. In addition, an increase of $3.0 million in the PAC account will fund development of a comprehensive facilities plan for the NMS Program that prioritizes needs and opportunities at individual sites and to construct sanctuary visitor centers and collaborative education projects. Crucial to appreciating Sanctuary resources and their importance is the direct link between the resources and the people. Projects in FY 2000 would result in will be the development of public visitor centers that support an expanded marine education and outreach effort for the Nation's most significant marine protected areas.

NOS Data Acquisition - This subactivity supports the collection of hydrographic and coastal assessment data through days-at-sea for programs of significant national interest.

NOAA requests an increase of $3.0 million to fund approximately 245 days-at-sea of University-National Oceanographic Laboratory System (UNOLS) ship time needed to support ongoing and new Global Ocean Ecosystem Dynamics (GLOBEC) and ECOHAB

Program projects. GLOBEC projects seek to improve knowledge through large, multi-disciplinary, multi-year oceanographic research studies in the NW Atlantic and NE Pacific looking at how changing ocean conditions affect changes in fish populations. Through ECOHAB, NOAA seeks to better understand and predict the impacts of multiple stressors, such as hypoxia and HABs (including pfiesteria) on coastal estuarine habitats.

Coastal Zone Management Fund (CZMF) - Total Request: [$4,000,000] [Offset to ORF]

The Coastal Zone Management Fund was established by the Coastal Zone Reauthorization Amendments of 1990 (CZARA). The fund consists of loan repayments from the former Coastal Energy Impact Program. The proceeds are to be used to offset the ORF account for the costs implementing the Coastal Zone Management Act of 1972, as amended.

Damage Assessment and Restoration Revolving Fund (DARRF) - Total Request: ($1,500,000)

The Damage Assessment and Restoration Revolving Fund was established under Section 1012(a) of the Oil Pollution Act of 1990, to facilitate oil and hazardous material release response, damage assessment, and natural resource restoration activities of NOAA. The DARRF provides for the deposit of sums transferred by any party or governmental entity and, to retain for future use, funds that are recovered through settlement or awarded by court or recovered by NOAA through negotiated settlement or reimbursement. In FY 1999, receipts from settlements are expected to be $1.5 million.

Adjustments-to-base, program reductions and terminations are shown in Section 4: Supplementary Information.

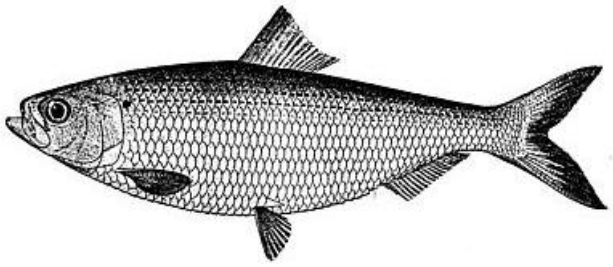
NOS

NATIONAL OCEAN SERVICE
($ IN THOUSANDS)

	FY 1999 ENACTED		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Operations, Research and Facilities								
Navigation Services								
Mapping and Charting	238	34,260	238	34,495	238	33,335		(1,160)
Address Survey Backlog/Contracts		14,000		14,000		14,900		900
Geodesy	197	19,659	197	19,849	197	19,849		0
Tide and Current Data	141	12,000	141	12,133	141	14,883		2,750
Total, Navigation Services	576	79,919	576	80,477	576	82,967	0	2,490
Ocean Resources Conservation and Assessment								
Estuarine and Coastal Assessment								
Oceanic and Coastal Research	61	7,410	61	7,470	61	7,970		500
GLERL			60	6,885	60	6,085		(800)
Ocean Assessment Program (OAP)	175	42,611	175	41,781	190	46,281	15	4,500
Transfer from Damage Assessment Fund		5,597		0		0		0
Response and Restoration	108	8,774	108	9,884	119	19,884	11	10,000
Subtotal	344	64,392	404	66,020	430	80,220	26	14,200
Coastal Ocean Science								
Coastal Ocean Program	21	18,400	21	18,430	21	19,430	0	1,000
Subtotal	21	18,400	21	18,430	21	19,430	0	1,000
Total, Ocean Resources Conserv. & Assess.	365	82,792	425	84,450	451	99,650	26	15,200
Ocean and Coastal Management								
Coastal Management								
CZM Administration	49	4,500	49	4,500	57	5,500	8	1,000
CZM grants		53,700	0	53,700		55,700	0	2,000
CZM Section 310 Grants		0	0	0	2	28,000	2	28,000
National Estuarine Research Reserve		4,300	0	4,300		7,000	0	2,700
Nonpoint Pollution Control - CWI		4,000	0	4,000		6,000	0	2,000
Funded in Coastal Zone Management Fund	(49)	(4,000)	0	0	0	0	0	0
Subtotal	0	62,500	49	66,500	59	102,200	10	35,700
Ocean Management								
Marine Sanctuary Program	97	14,350	97	14,350	112	26,000	15	11,650
Subtotal	97	14,350	97	14,350	112	26,000	15	11,650
Total, Ocean and Coastal Management.	97	76,850	146	80,850	171	128,200	25	47,350
Acquisition of Data	231	14,546	231	14,726	231	17,726	0	3,000
SUBTOTAL NOS - ORF	**1,269**	**254,107**	**1,378**	**260,503**	**1,429**	**328,543**	**51**	**68,040**
Procurement, Acquisition and Construction								
Construction								
National Estuarine Research Reserve Const.		7,300		7,300		12,000		4,700
Marine Sanctuaries				0		3,000		3,000
Outer Banks Community Foundation		750		750				(750)
SUBTOTAL NOS - PAC	0	8,050	0	8,050	0	15,000	0	6,950
Damage Assessment & Restoration Revolving Fund				2,684		2,684		0
Coastal Zone Management Fund	49	4,000		0		0		0
SUBTOTAL - OTHER ACCOUNTS	49	4,000	0	2,684	0	2,684	0	0
TOTAL NOS - ALL ACCOUNTS	1,318	266,157	1,378	271,237	1,429	346,227	51	74,990

National Marine Fisheries Service

Total Request: $584,713,000
ORF: $420,432,000
PAC: $52,567,000
Other: $111,714,000

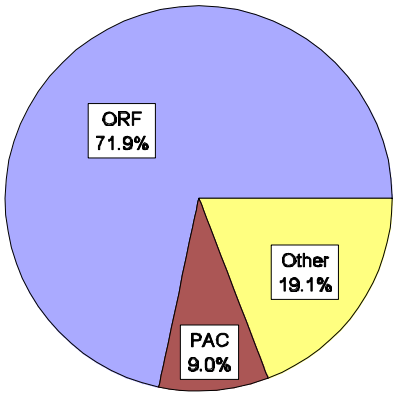


Blueback Herring

The National Marine Fisheries Service (NMFS) is responsible for the management, conservation, and protection of living marine resources within the United States Exclusive Economic Zone. The Agency also plays a support and advisory role in the management of living marine resources in coastal areas under state jurisdiction, provides scientific and policy leadership in the international arena and implements internationally agreed-upon conservation and management measures. Through science-based conservation and management and promotion of the health of coastal and marine ecosystems, benefits to the Nation from the sustainable use of living marine resources are maximized. Authorities are derived primarily from the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), the Sustainable Fisheries Act (SFA) amendments to the MSFCMA, the Marine Mammal Protection Act (MMPA), the Endangered Species Act (ESA), and various other statutes that confer a mandate to reduce and mitigate degradation and loss of living marine resources habitat. Other legislative acts

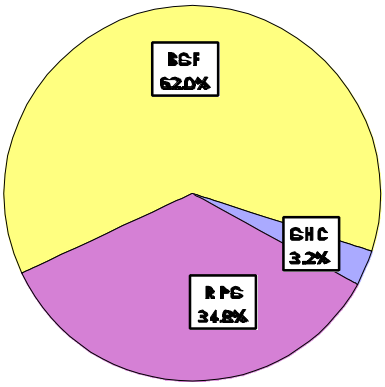
Activity Based

(Appropriations Structure)



Goal Based

(Strategic Plan Structure)

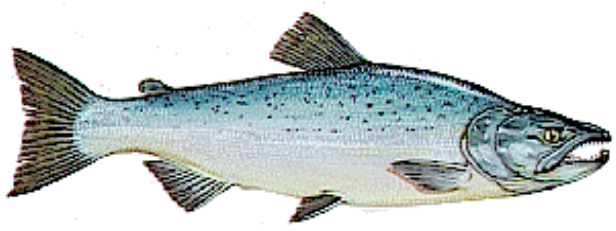


provide authorities for enforcement, seafood safety, habitat restoration and cooperative efforts with states, interstate commissions, and other countries.

The FY 2000 Budget Request includes increases required to achieve NOAA's strategic plan goals to Build Sustainable Fisheries, Recover Protected Species, and Sustain Healthy Coasts. Consistent with the 1996 SFA amendments to the MSFCMA, NOAA will focus on managing and rebuilding our Nation's fishery resources by improving stock assessment and prediction, reducing bycatch, conserving essential fisheries habitat, and reducing fishing pressure and overcapitalization. Improved and expanded economic data collection is needed to support fisheries management decisions and the new SFA national standards. In total, fully implementing the SFA's mandates will entail significant costs for new management programs and additional data and analyses.

NOAA will work under the ESA and MMPA to prevent the extinction of endangered and threatened marine species. The workload associated with the management of West Coast salmon to meet the objectives of the ESA continues to escalate. NOAA will continue using the flexibility provided by the ESA to further develop innovative partnerships with the states of Washington, Oregon, California, and Maine to promote the recovery of listed and at-risk salmon and steelhead species.

For FY 2000, the National Marine Fisheries Service requests a total of $584.7 million, $420.4 in the ORF account, $52.6 million in the PAC account, and $111.7 million in other fisheries related accounts. The ORF total reflects a net increase of 179 FTE and $33.6 million from the FY 2000 base and consists of $71.0 million in program increases and $37.4 million in program decreases. Within the requested funding, NOAA will work to eliminate and prevent overfishing and overcapitalization; attain economic sustainability in fishing communities; and develop environmentally and economically sound marine aquaculture. The FY 2000 request will also support initiatives to apply ecosystem approaches to species conservation and reduce the need to list species as threatened or endangered; implement marine mammal take reduction plans; and respond to the extinction crisis faced by several highly endangered marine species.



Chinook Salmon

A new account, the Pacific Coastal Salmon Recovery Account, is proposed for FY 2000 ($100 million), to help share the costs of state, tribal, and local conservation initiatives. This fund is NOAA's contribution to a broad, interdepartmental initiative to assist in the conservation of at-risk Pacific Salmon runs.

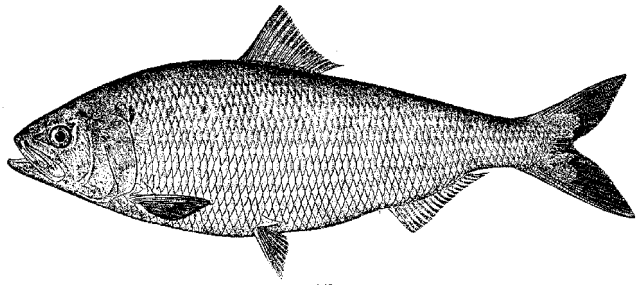
The FY 2000 proposed appropriation provides the authority to offset costs associated with providing fisheries management and enforcement services through the collection of currently authorized fees and potential new fees. The $20.0 million in estimated fees, if

authorized, will be used to offset the overall NOAA budget authority and appropriation in FY 2000. NOAA will work closely with all fishing interests in the development of these new fees.

The Conservation and Management Operations FY 2000 base reflects the transfer from the Facilities activity of $2.0 million for the payment of lease costs for the joint federal and state James J. Howard Laboratory at Sandy Hook in Highlands, New Jersey; and $4.5 million for the Columbia River hatcheries.

Detailed Program Increases

Fleet Replacement [funded in PAC] - This activity provides funding for the construction of the first of four new Fisheries Research Vessels (FRVs). These new acoustically quiet FRVs are essential for conducting the stock assessment surveys necessary to monitor species' abundance, recruitment, age composition, and responses to ecological changes and fisheries pressure to build sustainable fisheries. The collection of fisheries and marine mammal information at-sea is essential to the mission and to the development of sensible regulation governing commercial and recreational fishing activities.



Gizzard Shad

In FY 2000, NOAA requests $51.6 million to conduct a source selection leading to an award of a contract initiating construction of the first of the four new FRVs. The construction of these new vessels will provide essential support to the Build Sustainable Fisheries goals by providing state-of-the-art platforms for the conduct of stock assessment surveys including acoustic surveys, operationalize other advanced and emerging technologies, and replace the existing aging fisheries fleet. The acquisition team will also clarify regionally specific design requirements for the second FRV, and complete a requirements package for the third and fourth FRVs.

Construction [funded in PAC] - Included in the Construction activity of the PAC account is a request for $1.0 million to continue the current scoping work for the eventual formal design and construction of a new state-of-the-art NMFS research facility near Juneau, Alaska. The FY 2000 request includes funding of $15.0 million in FY 2001 and $20.0 million in FY 2002 to design and construct this facility for a total project cost of $50.0 million.

Information Collection and Analysis - The goal of this budget subactivity is to provide accurate and timely analyses on the biological, ecological, economic, and social aspects of

the Nation's use of its living marine resources in support of Administration strategic planning goals to Build Sustainable Fisheries, Recover Protected Species, and Sustain Healthy Coasts. Also included are activities to determine the impacts of the incidental taking of marine mammals and endangered species; to develop forecast models for marine resource populations, ecosystems, and fishery systems; to improve the quality and timeliness of information on living marine resources, their habitats and their use; and to provide $1.9 million for information and services critical to the Administration's South Florida Ecosystem Restoration Initiative. In FY 2000, NMFS requests a net decrease of $21.7 million for this subactivity which consists of $3.6 million increases and $25.3 million of program decreases for items not requested in FY 1999.

NOAA requests an enhancement for Resource Information of $2.6 million, of which 8 FTE and $1.0 million will be used to promote environmentally sound marine aquaculture by developing and implementing efficient regulatory and permit procedures including siting in the Exclusive Economic Zone and to support technical studies to refine and develop sustainable aquaculture. The remaining 2 FTE and $1.6 million increase is for fisheries oceanography. Fisheries oceanography will improve stock predictions by identifying and assessing critical environmental processes controlling long-term trends in the Nation's fishery production, developing an observational program of sufficient scope to anticipate impending regime shifts, and developing coupled bio-physical models to predict the effects of regime shifts on fisheries.

NOAA requests a net decrease of $4.8 million for the Fishery Industry Information line item. Included in the Fishery Industry Information request is an increase of 2 FTE and $1.0 million for the collection of fisheries statistics and performance of economic analyses required by the new National Standard 8 of the SFA. This mandates that conservation and management measures consider the economic impacts on fishing communities. The increase will initiate a comprehensive plan in all NMFS regions for fisheries data collection on the socioeconomic characteristics of commercial and recreational fishermen, economic values within fisheries, and vessel data within fisheries, all of which will improve the analytical capability to predict and monitor the economic and social consequences of management decisions.

Conservation and Management Operations - This budget subactivity provides for the development and implementation of Fishery Management Plans (FMPs) under the MSFCMA and SFA, and for the management of protected species under the ESA and MMPA. It also provides for the enforcement of laws and regulations under these and other statutes as well as for the protection of habitats. Funding for the eight Regional Fishery Management Councils is included in this subactivity, as is funding for Mitchell Act hatcheries along the Columbia River in the Pacific Northwest. A net increase of 191 FTE and $61.6 million is requested for the subactivity Conservation and Management Operations; this consists of $67.4 million of program increases, offset by $5.8 million of program decreases.

NOAA Ship JOHN N. COBB

NOAA requests a net increase of $27.7 million for the Fisheries Management Programs line item. An increase of 21 FTE and $2.6 million is requested to implement the MSFCMA provisions for the following: improving the use of fisheries statistics and economic data, meeting the requirements of the SFA, and implementing essential fish habitat amendments to the Fishery Management Plans. Improving and expanding the use of fisheries statistics and economic data is necessary to understand the impacts of regulations on fishing communities; predict the responses of commercial fisheries to a range of policy instruments; understand market relationships in order to track the impacts of management actions on producers, wholesalers, and consumers; understand and eliminate distortions in markets; and model and evaluate economic impact effects. Funding for the essential fish habitat provisions of the MSFCMA will enable NOAA to work with other federal agencies, the states, and private industry to develop agreements and processes to safeguard essential fish habitat, to reduce adverse impacts to essential fish habitat from fishing gear, and to enhance habitat for increased fish abundance. An increase of $0.3 million is requested for Regional Councils to address increased workload of implementing the Magnuson-Stevens provisions.

NOAA requests an increase of $0.3 million for the operation of the Santa Cruz facility, and $1.5 million for the lease costs and operation of the Kodiak facility. NMFS expects to occupy Santa Cruz in FY 2000. Funds for Santa Cruz will be used for operation costs including a sea water system. Funds for Kodiak will be used for lease costs and operations that will enable the research lab to continue and expand shellfish and start a new groundfish research program.

NMFS

An increase of $22.7 million for Fishery Habitat Restoration, as part of the Lands Legacy Initiative, will enable NOAA to dramatically increase the geographic scope and the rate at which restoration efforts are undertaken on both regional and community levels in partnership with public and private interests. These funds will allow NOAA to address the full range of habitats vital to NOAA's trust resources including wetlands, salt marshes, seagrass beds, mangroves, anadromous fish spawning areas, and coral reefs.

NOAA requests an increase of $5.2 million to help rebuild overfished and overcaptilized Northeast fisheries including groundfish and scallops. The additional funding will be used to implement rebuilding plans developed for such fisheries as required by the MSFCMA and carry out programs to address the social and economic effects of these plans on fishing communities including the administration of vessel buy back programs.

NOAA requests a net increase of 141 FTE and $31.1 million for Protected Species Management. This includes increases for recovery of protected and endangered species and biodiversity research.

Included in the requested $31.6 million net increase is 9 FTE and $2.6 million in the Protected Species base line item to characterize and map biodiversity and protected species habitat in order to identify areas for conservation. This program will also identify and map threats to species and biodiversity habitats, increase conservation efforts for ESA listing candidates and at-risk species, and provide matching challenge grants to local entities for conservation and restoration of biodiversity sites.

Under Endangered Species Act Recovery Planning, NOAA requests an increase of $29.7 million including 8 FTE and $5.1 million to stem the decline of highly endangered species including, leatherback and loggerhead turtles, Pacific and Atlantic right whales, and Hawaiian monk seals. Activities include: eliminating incidental take in commercial fisheries and collisions with ships; protection and restoration of critical habitat; and conducting necessary research and monitoring to determine species status and trends, habitat requirements, and influences of disease and debris on survival. This also includes an increase of 124 FTE and $24.6 million is requested for salmon recovery to provide support for core science and management competency and scientific research through expert consultations and advice by NOAA to other federal entities, state agencies, private landowners and resource users so that their actions promote the recovery of salmonids. Activities include: meeting the increasing demands for consultations and habitat conservation plans as a result of increased listings; engaging states, Tribes, and private entities to carry out conservation planning; effectively implementing the 1999 Biological Opinion for the Columbia River system; and preparing recovery plans for up to 25 Evolutionary Significant Units (ESUs) in a timely manner.

A net increase of $1.6 million is requested for the Observers and Training programs which includes an increase of $2.0 million to enhance observer coverage for vessels working in overfished fisheries on the West Coast, including groundfish.

An increase of 16 FTE and $1.7 million for the Habitat Conservation line item to provide programmatic support for restoring fish habitat and other NOAA trust resources injured by human activities under the Damage Assessment and Restoration Program and the Community-based Restoration Program, advancing the science and technology of restoration and transferring restoration technology development to the public and private sectors.

NOAA requests an increase of 13 FTE and $1.0 million for Enforcement and Surveillance activities. This increase will support investigations targeting egregious or blatant offenders and enforcement efforts in support of salmon and loggerhead turtle recovery.

State and Industry Assistance Programs - This budget subactivity provides for product quality and safety research, grants to states under the Anadromous and Interjurisdictional Fisheries Acts, and funding for the three Interstate Fisheries Commissions and the Atlantic Coastal Fisheries Act. NMFS requests a net decrease of $6.2 million for this subactivity. New budget authority of 24 FTE and $1.7 million is requested in the Fisheries Finance, Program account to cover Federal Ship Financing Fund administrative expenses.

Acquisition of Data - This subactivity provides vessel support to conduct sustained fisheries and marine mammal scientific and survey operations in various marine environments. NOAA is requesting continued support for this subactivity at the FY 1999 base level of $25.5 million.

Fisheries Finance Program Account - Total Request: $10,258,000

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

The FY 2000 President's Budget requests a net decrease of $18.1 million for the Fisheries Finance Program account. Included in this amount is a $1.7 million increase to cover the administrative expenses of the Federal Ship Financing Fund. The amount also includes an

increase of $8.0 million to reduce harvesting capacity in the Northeast scallop fishery. This increase along with private sector financing will be used to buy out vessels and permits in this overcapitlized fishery. Also included is an increase of $0.3 million to provide a 1 percent subsidy rate for industry funded capacity reduction loans.

Promote and Develop Fishery Products & Research Pertaining to American Fisheries (P&D) - Total Request: $1,500,000

The American Fisheries Promotion Act (AFPA) of 1980 authorized a grants program for fisheries research and development projects and a National Fisheries Research and Development Program to be carried out with Saltonstall-Kennedy (S-K) funds. S-K funds are derived from duties on imported fisheries products. An amount equal to 30 percent of these duties is being transferred to the Department of Commerce from the Department of Agriculture. The FY 2000 Budget estimates this transfer at $66.4 million. Of this $66.4 million, $1.5 million will be used for the S-K grants program to develop a healthy fishery based industry (including costs of program administration). The remainder of the transfer ($64.9 million) will be used to offset the Operations, Research, and Facilities (ORF) account. The duties transferred to this account are calculated on a calendar year basis and, if necessary, will be revised after the submission of the President's request.

Pacific Coastal Salmon Recovery Account - Total Request: $100,000,000


Coho Salmon

This account was established to support a new Pacific Coastal Salmon Recovery Account for the purpose of helping share the costs of state, tribal and local conservation initiatives. This fund is NOAA's contribution to a broad interdepartmental initiative bolstering and deploying existing and new Federal capabilities to assist in the conservation of at-risk Pacific salmon runs in the western states of California, Oregon, Washington, and Alaska. The fund would be capitalized with $100 million of Federal dollars in FY 2000. These Federal dollars would be matched dollar for dollar with non-Federal contributions. The Fund would be established under existing authorities by the Secretary of Commerce and made available through agreements with the Governors of each of the four states for distribution to assist state, tribal and local conservation efforts. The Secretary will establish terms and conditions for the effective use of the funds and specific reporting requirements appropriate for ensuring full accountability of the available funds to meet the purpose of the Fund.

Fishing Vessel and Gear Damage Compensation Fund - Total Request: $0

This program was authorized by the Fisherman's Protective Act of 1967, as amended by P.L. 95-376, Section 10 (f) (1), of September 18, 1978, and P.L. 96-561 of 1980. This Fund provides compensation to fishing vessel owners who sustain losses or damage to

their gear or vessels attributed to other fishing vessels. The Fund is supported by a surcharge imposed upon foreign fishing permit fees and is operated through the appropriation of existing balances from previous year surcharges and interest earned. No appropriation is requested for this fund.

Fishermen's Contingency Fund (FCF) - Total Request: $953,000

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

The Fund is supported by assessments on holders of leases, explorations, permits, easements, and rights of way in areas of the Outer Continental Shelf. For FY 2000, an appropriation of $0.95 million is requested for claims and administrative expenses. This amount is equal to the FY 1999 appropriation.

Foreign Fishing Observer Fund (FFOF) - Total Request: $189,000

The Foreign Fishing Observer Fund provides observer coverage of foreign fishing activities within the 200-mile Exclusive Economic Zone (EEZ). The Fund is supported by fees charged to foreign fishermen for the cost of placing an observer aboard their vessel while operating within the EEZ. Beginning in FY 1985, foreign fishermen were also permitted to contract directly with NMFS approved observer contractors to obtain observers (the Supplemental Observer Program). The FY 2000 budget requests $0.19 million, equal to the FY 1999 level. Appropriated funds plus direct contracting under the Supplemental Observer Program will provide 100 percent observer coverage.

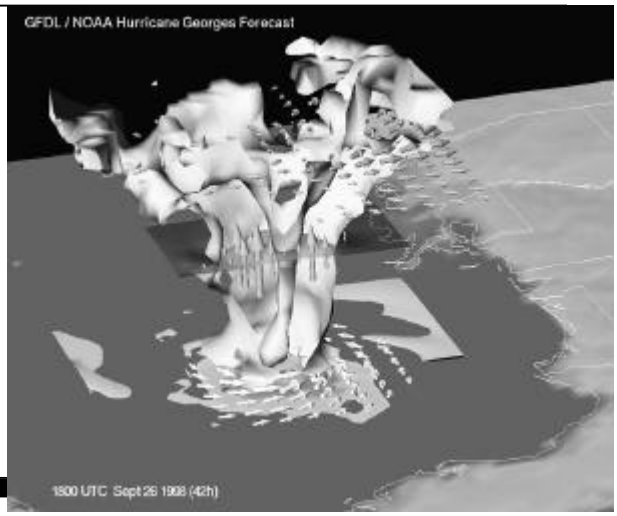
Adjustments-to-base, program reductions and terminations are shown in Section 4: Supplementary Information.

NATIONAL MARINE FISHERIES SERVICE
($ IN THOUSANDS)

GOAL BASED - All Accounts	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC/DEC (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Build Sustainable Fisheries	2,083	337,763	2,083	334,424	2,124	362,433	41	28,009
Recover Protected Species	530	74,073	530	74,921	676	203,606	146	128,685
Sustain Healthy Coasts	170	20,104	170	20,364	186	18,674	16	(1,690)
TOTAL NMFS	2,783	431,940	2,783	429,709	2,986	584,713	203	155,004

Oceanic and Atmospheric Research

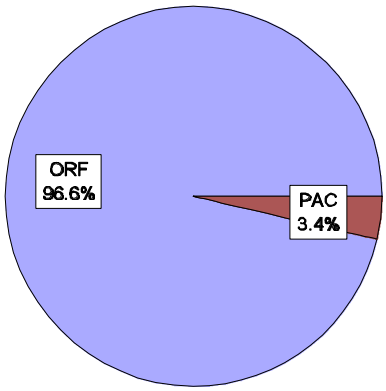
Total Request: $292,610,000
ORF: $282,570,000
PAC: $10,040,000



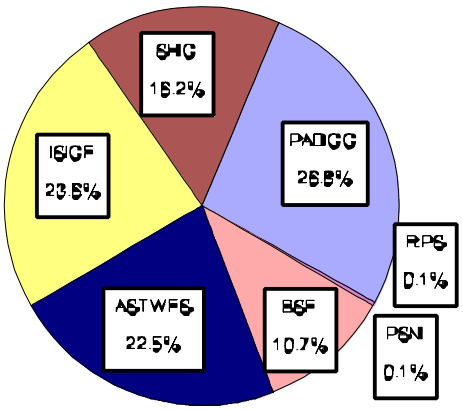
The Office of Oceanic and Atmospheric Research (OAR) conducts the scientific research, environmental studies, and technology development critical to improve NOAA services. These activities directly contribute to the achievement of all of NOAA's seven Strategic Plan goals: Advance Short-Term Warning and Forecast Services, Implement Seasonal to Interannual Climate Forecasts, Predict and Assess Decadal to Centennial Change, Promote Safe Navigation, Build Sustainable Fisheries, Sustain Healthy Coasts and Recover Protected Species. These goals constitute NOAA's contribution to the Nation's on-going effort to maintain economic growth in an environmentally sound manner.

OAR budget activity supports a number of NOAA and government-wide initiatives, including the U.S. Weather Research Program (USWRP), NOAA's components of the U.S. Global Change Research Program (USGCRP) and Natural Disaster Reduction Initiative (NDRI), the Health of

Activity Based
(Appropriations Structure)



Goal Based
(Strategic Plan Structure)



the Atmosphere program, the Climate and Global Change program, High Performance Computing and Communications (HPCC), and Global Learning and Observations to Benefit the Environment (GLOBE).

To advance its mission, OAR supports a network of internationally recognized federal scientists, laboratories, university partnerships, and private-sector researchers through the Environmental Research Laboratories, Office of Global Programs, National Sea Grant College Program, National Undersea Research Program, and Joint and Cooperative Institutes. Through these scientific entities, OAR continually improves NOAA's ability to make weather and climate predictions, solar-terrestrial forecasts, manage fisheries and conserve coastal resources. OAR scientists compile the scientific evidence upon which sound regulations in key environmental areas are based. OAR promotes economic growth through the development of marine-derived biotechnology, sustainable aquaculture, and environmental prediction technologies. OAR contributes to the next generation of scientists through outreach and education programs from K-12 to university and beyond. In conjunction with NOAA operations and other federal agencies, OAR is dedicated to promoting the quality of life and economic competitiveness of the Nation.

For FY 2000, NOAA requests $292.6 million for OAR. This is a net increase of $0.7 million above the FY 2000 base funding and consists of program increases of $28.1 million and program decreases of $27.4 million.

Detailed Program Increases

Climate and Air-Quality Research - NOAA requests $139.7 million for this subactivity, an increase of $16.9 million over the FY 2000 base. OAR's climate and air-quality research focuses on the physical process of the ocean and atmosphere, to develop NOAA's predictive capabilities through increased knowledge and modeling accuracy.

Ocean Climate Variability - NOAA requests a $4.0 million increase to construct, deploy and operate an array of 1000 profiling autonomous floats in the Pacific and Atlantic Oceans. These floats will make real-time, basin-wide measurements of temperature and salinity profiles, as well as estimates of current velocities at depth. These data will be used with existing satellite and in situ ocean observations, along with weather analyses, to produce, for the first time, “weather maps” of the upper ocean and associated seasonal cycles. The seasonal patterns of ocean anomalies in these maps are key to understanding and predicting the climate phenomena that affect U.S. interests both home and abroad. This program will be carried out through the National Oceanographic Partnership Program.

The Role of Oceanic Processes in Climate - NOAA requests an increase of $1.6 million within its Long-Term Climate and Air Quality Research line item to implement a systemic long-term ocean carbon observing program, and upgrade existing Voluntary Observing

Ship (VOS) programs to include new sensors for carbon dioxide and other climate variables. The resulting data streams will be used with the data from the ocean climate variability to improve existing climate models, develop new data assimilation methods and ocean models, and develop a record of the evolution of the carbon dioxide signal into the world's oceans.

Ozone and Particulate Matter - Health of the Atmosphere (HOA) - NOAA requests an increase of $0.4 million to improve the understanding of the atmospheric processes controlling the formation and distribution of ground-level ozone and fine particles (aerosols). Research efforts will focus on: (1) studying the chemistry forming these pollutants to identify how changes in emission reductions associated with one could positively or negatively influence the other; and (2) determining the chemical composition of aerosols, their sources, and the aerosol-forming atmospheric processes, to provide a better predictive understanding.

Atmospheric Deposition in Coastal Waters - NOAA requests an increase of $1.0 million within the long-term climate and air quality line item to improve coastal monitoring and assessment capabilities. The purpose of this work is to quantify the influence of atmospherically-derived anthropogenic nitrogen and other hazardous pollutants on U.S. coastal waters. These have been shown to seriously degrade water quality and damage ecosystems.

Baseline Observational Continuity - NOAA requests an increase of $1.2 million within the Long-Term Climate and Air Quality Research line item to restore and maintain operations at its base-line observatories in Alaska, Hawaii, Samoa, and Antarctica. These observations are critical to the collection and continuity of the world's longest atmospheric time series, supplying the scientific community with invaluable information on the state and recovery of the ozone layer, global carbon dioxide, and other trace gases impacting the global climate.

High Performance Computing and Communication (HPCC) - Forecast Systems Laboratory (FSL) - NOAA is requesting an increase of $1.5 million for the FSL massively parallel computer to build and evaluate mesoscale weather prediction models and to improve the national weather observing system. Procurement of this computer was initiated in FY 1999.

Global Learning and Observations to Benefit the Environment (GLOBE) - NOAA proposes a $2.5 million increase for the GLOBE Program to increase the existing number of participating U.S. schools, teachers, and students, and expand the breadth of science data being collected for the science community. GLOBE is an increasingly valuable aspect of science education for many K-12 students in the U.S., improving the quality of science education for the next generation of American scientists.

OAR

Climate and Global Change - NOAA requests a $6.7 million increase for the Climate and Global Change Program to improve NOAA's prediction and assessment capabilities through a competitive grants program. The improvements will result from a better understanding of the recurrent patterns of variability of the climate system and its forcings across all time scales. Specific goals will include: (1) improved determination of the influence of the North American Monsoon, North Atlantic Oscillation, and Pacific Decadal Oscillation on climate variability; (2) improved information on the trends and probabilities of occurrence of extreme events such as floods, storms, hurricanes, and tornadoes; (3) improved quantification of the oceanic and terrestrial sources and sinks of carbon dioxide with an emphasis on North America; and, (4) improved estimation of the spatial distribution of atmospheric carbon dioxide and tropospheric ozone and its role in the patterns of climate variability.

Atmospheric Programs - NOAA requests $47.1 million for this subactivity which promotes NOAA's progress in making advanced warnings of geomagnetic storms and severe weather. Geomagnetic storms and severe weather cause hundreds of deaths and billions of dollars worth of damage annually. The critical research in this subactivity provides increased lead times and improved forecast accuracy. It is focused on developing better observing tools, understanding the processes that cause violent weather and solar-terrestrial phenomenon, and applying that information to improve warnings and forecasts. Through this research, OAR builds the knowledge base that enables vulnerable geographic areas and economic sectors to prepare for and respond to natural disasters and disruptive weather.

U.S. Weather Research Program (USWRP) - NOAA requests an increase of $1.5 million for the USWRP to improve the forecast accuracy and lead-time for hurricane landfall location using state-of-the-art instruments deployed from NOAA aircraft during coordinated hurricane surveillance missions. This will improve the accuracy of predictions for emergency preparedness, ultimately saving lives and property. Enhancing the economic and social benefits of improved hurricane tracking and landfall predictions fulfills an important part of NOAA's mission goal to Advance Short-Term Warning and Forecast Services.

Oceans and Great Lakes Programs - These programs constitute OAR's efforts to enhance our predictive ability and knowledge of ocean and Great Lakes environments, ensure their sustainable management, and promote economic growth in marine industries. A total of $82.8 million is requested for this subactivity in FY 2000.

Marine Aquaculture - NOAA requests an increase of $3.6 million to launch new projects to begin the sustainable production of native commercial ocean species. It will also support research on the impacts of aquaculture on the marine environment to ensure continued responsible development. This effort promises to strengthen the U.S. fisheries industries by increasing domestic fish production, reducing the fisheries trade deficit, and

building a sophisticated, profitable, environmentally-friendly industry. This technology will also be useful for enhancing stocks of over-exploited wild fishes, and will relieve pressures on wild stocks.

Hypoxia - NOAA requests an increase of $0.4 million to research and model the hypoxic (low oxygen content) conditions that have developed in the northern Gulf of Mexico. Hypoxia seriously threatens the region's marine ecosystems and dependent economies. The assessments would help Mississippi basin managers choose cost-effective means to reduce the nutrient loading in waters flowing into the Gulf and the resulting hypoxic conditions.

Fisheries Oceanography - NOAA requests an increase of $0.4 million to develop, deploy and maintain a network of bio-physical moorings in the Pacific Ocean. This system will provide data on key oceanographic indicators and give NOAA managers greater insight on environmentally-induced decadal-scale shifts in the productivity of commercially important fish stocks. This cooperative efforts, between OAR and NMFS is part of the Fisheries and the Environment (FATE 2000) Initiative, and is critical to mission-related NMFS and OAR goals of Building Sustainable Fisheries.

Aquatic Nuisance Species/Non-Indigenous Species Act - Non-indigenous species pose significant threats to local economies by disrupting natural ecosystems and displacing indigenous commercial species. NOAA requests an increase of $0.2 million to support efforts in new technology, research, outreach, and the development of control programs by the Aquatic Nuisance Species Task Force to curb the spread of invasive species in U.S. waters.

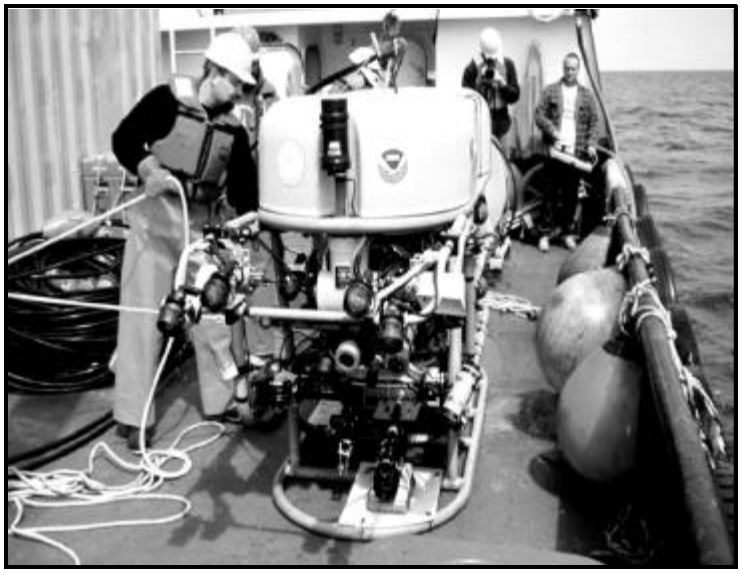
Ocean Floor Observatories - As announced at the National Oceans Conference, OAR is requesting an increase of $3.1 million to expand shallow water observatories, develop new deep-sea observatories, and enhance vehicles through the use of advanced technologies to explore and understand the undersea environment. The vast unknown resources of the undersea environment, earth's last frontier, await our exploration.

Sea Grant College Program - NOAA supports the operation of the Sea Grant College program at the $51.5 million level.

National Undersea Research Program - The administration supports the NURP program at the $9.0 million level. This request will continue important undersea research in fisheries habitats, coral reef ecosystems, and fisheries management issues. The program expects to encourage new research related to understanding deep ocean environments and obtaining new products from the sea. This new direction, "bio-prospecting," will catalyze new partnerships to pursue aggressively an integrated program of basic and applied research into the biotechnological benefits that lurk beneath the ocean's surface.

OAR

Acquisition of Data - NOAA is requesting $13.0 million for ship operations in support of oceanographic data collections. This maintains funding at the FY 1999 level.



A NURP Remotely Operated Vehicle (ROV)

HPCC - Geophysical Fluid Dynamics Lab (GFDL) - NOAA requests an increase of $5.7 million to acquire a very large, scalable computer to be located at OAR's Geophysical Fluid Dynamics Lab (GFDL), in Princeton New Jersey. This computer will be used to improve forecasts of El Nino events, model climate variability, and make better hurricane tracking and intensity predictions. This item is listed in the Procurement and Acquisition and Construction (PAC) Account of the budget request.

GEOSTORMS (ACE follow-on) - In the Procurement, Acquisition, and Construction Account, NOAA requests an increase of $4.3 million to fund the GEOSTORMS program. GEOSTORMS is the follow-on to the Advanced Composition Explorer satellite (ACE) and maintains operational satellite continuity for our Real-Time Solar Wind (RTSW) data requirement. These observations are the only way to tell whether a solar storm will hit Earth and if so, its intensity. Power companies and other vulnerable industries now count on solar wind warning products to trigger preventive measures that help avert massive utility blackouts and satellite failures. Without GEOSTORMS, the lead time for solar storm warnings drops from 60 minutes to 0, and the accuracy drops from nearly 100% to less than 30%. With GEOSTORMS we will use solar sail propulsion to move twice as far from the Earth and improve the lead-time to 120 minutes while maintaining almost the same accuracy. Furthermore, GEOSTORMS will allow us to keep running, improving, and developing forecast models that predict storm dynamics. Industry has told NOAA to

make this our number one priority. The program is so integral to USAF and NASA requirements and plans that they are contributing 25% and 50% of the costs, respectively.

Boulder Building Facilities Operations - NOAA is requesting $3.8 million in FY 2000 to fund recurring Boulder facilities operations, including the higher lease, utility, custodial, and security costs association with the 24-hour operations at the new Boulder Laboratory. Negotiations on the final costs are still continuing with GSA.

Adjustments-to-base, program reductions and terminations are shown in Section 4: Supplementary Information.

DOC: The Digital Department
http://www.oar.noaa.gov/

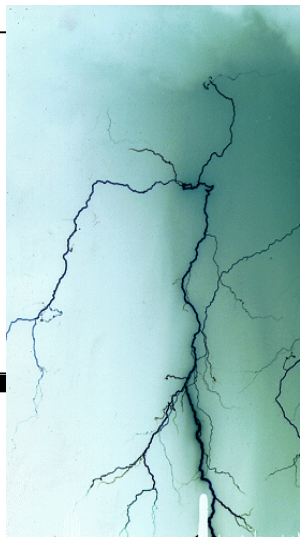
OCEANIC AND ATMOSPHERIC RESEARCH

($ IN THOUSANDS)

GOAL BASED - All Accounts	***FY 1999 ENACTED***		***FY 2000 BASE***		***FY 2000 PRES. REQUEST***		***INC./DEC. (REQUEST - BASE)***	
	FTE	***AMT.***	***FTE***	***AMT.***	***FTE***	***AMT.***	***FTE***	***AMT.***
Advance Short-Term Warning and Forecast Services	296	56,813	296	56,613	296	65,853		9,240
Implement Seasonal to Interannual Climate Forecast	174	63,599	187	63,317	187	68,917		5,600
Predict and Assess Decadal-to-Centennial Change	374	67,936	374	69,553	374	78,440		8,887
Promote Safe Navigation		389		389		389		
Build Sustainable Fisheries	24	35,145	24	32,095	24	31,386		(709)
Recover Protected Species		340		340		340		
Sustain Healthy Coasts	115	63,188	42	59,576	42	47,285		(12,291)
TOTAL OAR	983	287,410	923	281,883	923	292,610		10,727

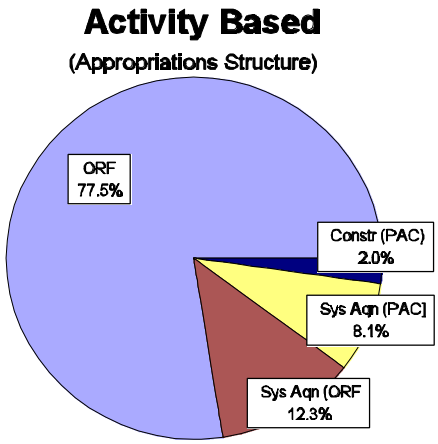
National Weather Service

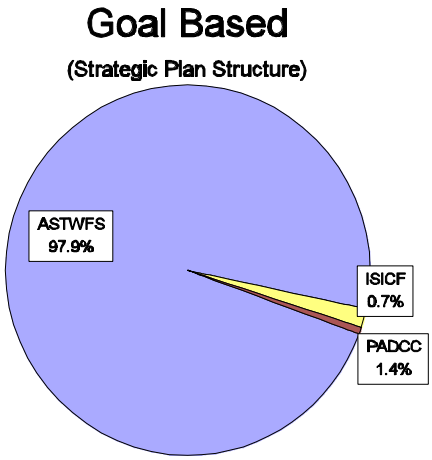
Total Request: $687,529,000
ORF: $617,897,000
PAC: $69,632,000



The following narrative describes the total activities of the National Weather Service (NWS) and provides a detailed narrative divided to show the Operations, Research and Facilities (ORF) and Procurement, Acquisition, and Construction (PAC) accounts. Narratives describing changes involving NWS Facilities Construction and Maintenance are contained in the separate Facilities section.

The National Weather Service provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies and the private sector, and the global community. Weather services are provided by a nationwide network of offices that collect data, utilize guidance products centrally prepared through the National Centers for Environmental Prediction (NCEP), prepare warnings and forecasts, and disseminate the information to the public. NWS modernization activities continue to apply the latest advances in science and technology to operational forecasting. The NWS contributes to the achievement of three of NOAA's Strategic Plan goals; Advance Short-Term Warning and Forecast Services, Implement Seasonal to Interannual Climate Forecasts, and Predict and Assess Decadal to Centennial Change.





NWS

This request supports the modernized operations of the NWS and investments in the Natural Disaster Reduction Initiative (NDRI). In FY 2000, the NWS will provide weather and flood warnings and forecasts to the public and will continue to improve the overall warning lead time for tornadoes, severe thunderstorms, and flash floods as well as improve the accuracy of hurricane landfall predictions.

For FY 2000, the National Weather Service (NWS) requests a total $687.5 million, a net increase of $3.0 million from the FY 2000 base level. This includes a total of $617.9 million for Operations, Research, and Facilities (ORF) and $69.6 million for PAC. The request supports the funding and programmatic recommendations contained in the NOAA Review and a study conducted by John J. Kelly, BGD/Gen (Ret), entitled An Assessment of the Fiscal Requirements to Operate the Modernized National Weather Service during Fiscal Years 1998 and 1999.

The FY 2000 base reflects the transfer of $3.0 million for NEXRAD WFO Maintenance from Facilities (ORF) to NWS Local Warnings and Forecasts. This account is transferred from the NOAA Facilities budget to more accurately reflect the role of WFO facilities maintenance in NWS base operations.

Also included in the FY 2000 base is the transfer of $4.6 million for the Central Computer Upgrade from Systems Acquisition (ORF) to the Procurement, Acquisition and Construction (PAC) account to present the procurement of the Class VIII computer as a long-term capital lease.

Detailed Program Increases

ORF - The FY 2000 net increase of $38.8 million in ORF is divided in three major sections: Maintain Warning and Forecast Services, Major Initiatives, and Systems Acquisition.

Maintain Warning and Forecast Services

Mandatory Pay and Inflationary Costs - NOAA requests an increase of $19.8 million to fund Adjustments to Base for within NWS base operations. Funding will primarily be utilized to support the FY 1999 and 2000 payraise ($13.8 million) and increases within the GS grade structure, scheduled benefits, and for inflationary increases in non-labor categories such as maintenance and service contracts ($6.0 million).

Secretary's Mitigation Actions - A total of $4.8 million, an increase of $1.0 million, is included in the request FY 2000 to continue mitigation actions per the Secretary's Report Team recommendations on the adequacy of NEXRAD Coverage and Degradation of

Weather Services under National Weather Service Modernization for: Caribou, Maine; Key West, Florida; and continue current operations at Erie, Pennsylvania; and Williston, North Dakota.

Ice Storm, Jan. 7-9, 1998, Mooers, New York
http://www.nws.noaa.gov/er/btv/html/ice98.html

Staffing and Associated Costs - NOAA requests an increase of $9.6 million to support a total staffing level of 4,412 FTEs for the NWS as recommended in the NOAA Review. After the NWS submitted the FY 2000 budget to NOAA, a special task team was appointed by the NOAA Under Secretary to review the proposed increases in NWS labor costs. As a result of the team's findings, the NOAA request incorporates the revised cost estimates for NWS labor. The increase also supports staffing in conjunction with the delay of AWIPS system deployment, continuing Automated Surface Observation Systems (ASOS) augmentation responsibilities, maintaining the six Regional Headquarters Office structure, and providing the necessary operational staffing levels at the Jackson, Kentucky and Guam Weather Forecast Offices (WFO).

Non-labor Requirements for Field Operations - NOAA requests of $1.7 million to maintain and replace critical field office equipment, provide the necessary level of training to field forecasters, and maintain centralized communication and dissemination services.

Major Initiatives

Radiosonde Replacement Network - The FY 2000 base of $2.0 million is transferred from ORF to PAC to reflect the capital nature of the project.

Advanced Hydrologic Prediction System (AHPS) - NOAA requests an increase of $2.2 million to initiate the national implementation of AHPS, a component of the President's National Disaster Reduction Initiative. AHPS is an integrated real-time modeling and data management/analysis system that is ready for implementation and will provide new forecasts containing more information on river levels and river flow volume. During FY 2000, the national implementation of AHPS will begin in the Upper Midwest (which includes Wisconsin, Minnesota, Michigan, Illinois, and portions of Iowa, Missouri, and North Dakota) and tributaries within the Ohio River basin (which includes Kentucky, West Virginia, Ohio, and western Pennsylvania). The system will significantly improve flood forecasting and water management in the United States by providing forecasts of river levels and river flow volumes for periods of days to several months in advance of the event. AHPS will also provide new river forecast information which can be used by water

resource and emergency managers for risk based decision making. This information will greatly improve the Nation's capability to take timely and effective actions to mitigate the economic losses from major floods and droughts. National implementation of AHPS will save lives and at least $200 million per year in flood losses and an additional $400 million per year in economic benefits to water resource users.

Aerial view of tornado damage to an RV park in Kissimee, Florida in February, 1998.
Photo taken by the staff of the NWS office in Melbourne, Florida.
http://sunmlb.nws.fit.edu/radarpage.html

WFO Facilities Maintenance - NOAA requests a total of $4.0 million for WFO Maintenance in ORF, a $1.0 million increase over FY 2000 base pursuant to the recommendations in the NOAA Review. The WFOs provide forecasters with modernized

facilities, supporting the new advanced technology systems and the provision of weather services to the public. As WFOs continue to age, the facilities require an investment in recurring and cyclic maintenance activities to support modernized field operations. The increase will provide for basic facility service contracts, as well as the implementation of corrective and preventive maintenance actions at selected sites across the country. This request includes a transfer of $3.0 million from the NOAA Facilities budget to NWS base operation to more accurately reflect the role of WFO facilities maintenance in NWS base operations.

Cooperative Observer Network Modernization - Within the local warnings and forecasts line item, NOAA requests an increase of $1.5 million to ensure the continuity of observations in support of the Nation's climate record and local forecasting. During FY 2000, the NWS will begin replacing obsolete rain gage recording devices, minimum/maximum temperature sensors. Currently, many critical spare parts for those recording devices are no longer commercially available. Once implemented, this modernization will prevent equipment failures, greatly reduce lost observations, and improve access time to observational data, and protect the Nation's climate record.

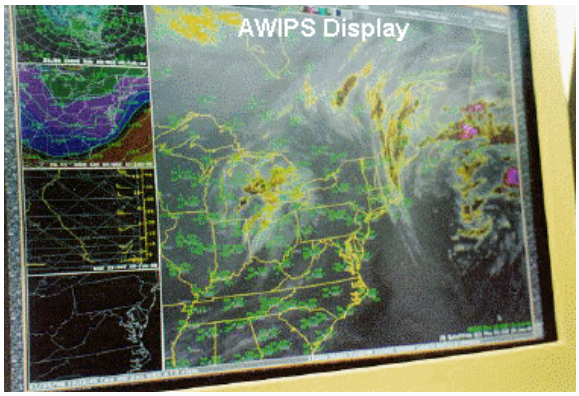
Aircraft Observations - NOAA requests a total of $0.6 million to provide commercial aircraft observations (ACARS) for operational use in numerical weather prediction models within the local warnings and forecasts line item. Aircraft temperature and wind profiles already have yielded demonstrated improvements in NWS forecasts. During a recent evaluation, the National Weather Service estimated ACARS data improved certain upper air wind forecasts by over 40 percent. Funds will also go toward maintaining FAA-sponsored water vapor sensing systems to evaluate their potential for improving precipitation forecasts.

Systems Acquisition [funded in the ORF Account] - In FY 2000, this subactivity provides for the continued operation and maintenance of the following systems: Next Generation Weather Radar (NEXRAD), Automated Surface Observing System (ASOS), and Advanced Weather Interactive Processing System (AWIPS). Acquisition costs for these systems are requested in the PAC Account.

NEXRAD - NOAA requests a total of $39.3 million to operate and maintain the NWS network of 123 NEXRAD units. The NEXRAD network provides nationwide Doppler radar coverage, improving detection of severe weather and floods and increasing the warning lead time for tornadoes. The funding will provide for logistics, utilities, and system maintenance to ensure the operational availability of the NEXRAD network.

For more information on ASOS:
http://www.nws.noaa.gov/
modernize/asostech.htm

NWS



http://www.nws.noaa.gov/msm/awips/awipsmsm.htm

ASOS - NOAA requests a total of $7.6 million to operate and maintain the NWS network of 314 ASOS units. This represents a net increase of $0.2 million over the FY 2000 base for pay-related and inflationary cost increases. Also, the increase will provide additional corrective and preventive equipment maintenance for the ASOS system based on actual maintenance experience, and expand service levels at six (6) NWS sites per an agreement with the Federal Aviation Administration (FAA). ASOS provides weather forecasters with critical surface observations to improve weather warning and forecast services. ASOS also provides critical data to support the aviation community and climate information users.

AWIPS - NOAA requests a total of $38.0 million to continue the operation and maintenance phase of the AWIPS program. This represents an increase of $25.8 million over the FY 2000 base level. The FY 2000 request will expand operation and maintenance support for the entire NWS AWIPS network and fund systems evolution activities. AWIPS integrates satellite and radar data and provide the local forecaster with a capability that will significantly improve forecasts and warnings. AWIPS will also provide the communications capability needed to allow internal and external users access to much of NOAA real-time environmental data.

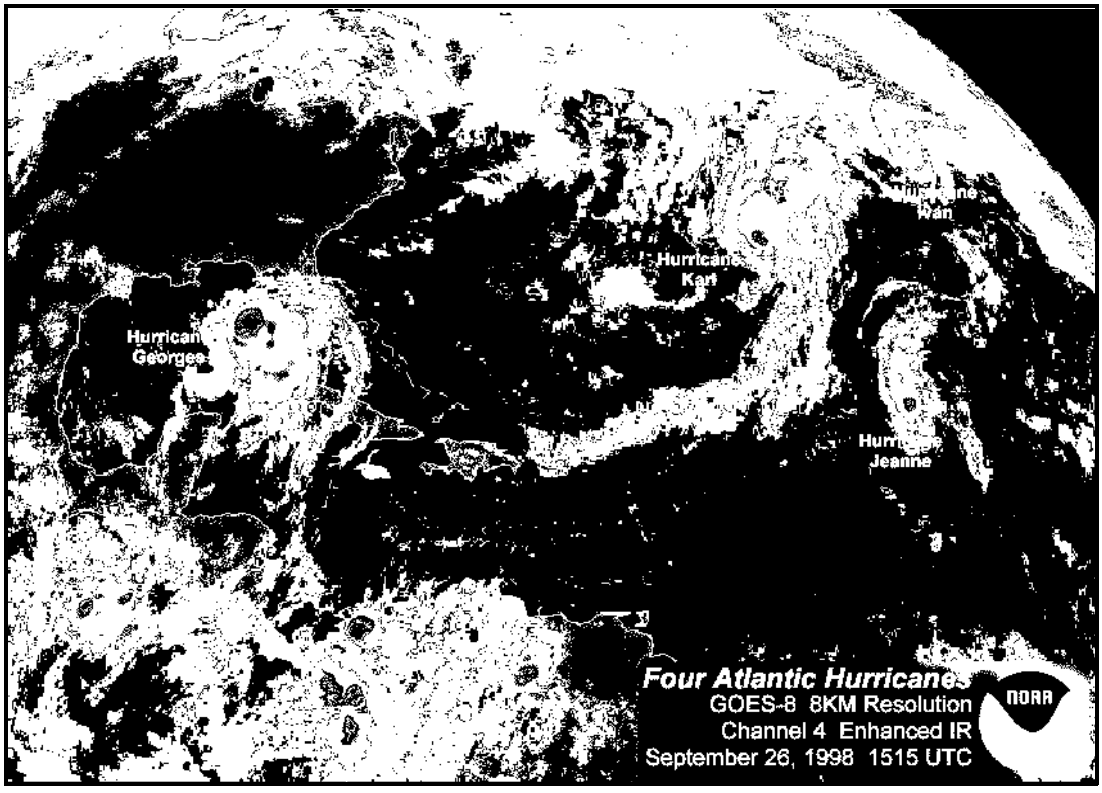
Systems Acquisition [funded in the PAC Account] - This account provides funding for the activities associated with multi-year procurement of the major systems supporting the NWS. Currently these systems are NEXRAD, ASOS, the Advanced Weather Interactive Processing System (AWIPS), and the Upgrade of the Central Computer Facility. In addition, for FY 2000 the Radiosonde Replacement Network will be placed in this account since NOAA will begin major procurement activities in conjunction with replacement of the network.

The non-capital assets acquisition costs, maintenance, and operations, for these systems are contained in the ORF account under the NWS Systems Acquisition subactivity.

NEXRAD - NOAA requests a total of $9.6 million for NEXRAD acquisition in the PAC account, an increase of $2.6 million over the FY 2000 base. The NEXRAD network provides nation-wide Doppler radar coverage, improving detection of severe weather and floods and increasing the warning lead time for tornadoes. The funding request will support the NEXRAD product improvement initiative and continue acquisition closeout activities. The request for product improvement will support the migration to the open systems architecture platform, improving the maintainability and overall cost efficiency of the NEXRAD system.

ASOS - NOAA requests a total of $4.2 million for ASOS acquisition in the PAC account. This represents a $0.3 million increase from the FY 2000 base. ASOS provides weather forecasters with critical surface observations to improve weather warning and forecast services. ASOS also provides critical data to support the aviation and climate information users. The funding request will continue to support product improvement efforts for developing and testing new sensor capabilities.

AWIPS - NOAA requests a total of $22.6 million in FY 2000 for AWIPS acquisition in the PAC account. For the first time, AWIPS will integrate satellite and radar data and provide the local forecaster a capability that will significantly improve forecasts and warnings. AWIPS will also provide the communications capability needed to allow internal and external users access to much of NOAA real-time environmental data. These funds will allow for continued program management software development, and deployment activities for nationwide implementation of the AWIPS system.



GOES-8 satellite image showing 4 active hurricanes, Sept. 26, 1998.

Central Computer Facility Upgrade - NOAA requests a total of $11.1 million for the Central Computer Facility Upgrade, a decrease from the FY 2000 base of $3.4 million

including a transfer, for accounting purposes, of $4.6 million from the ORF account to the PAC account. The funds will provide for the second of four lease payments on the Class VIII supercomputer, scheduled for delivery during FY 1999 and allow for the planned procurement of interactive computer workstations necessary for NCEP model developers and forecasters to effectively utilize and implement Class VIII system capabilities in operational forecasting and will provide for necessary operations and maintenance associated with the supercomputer. Phased upgrades of the NWS Central Computer Facility will continue to apply the latest in supercomputing technology to improve weather prediction modeling, and increase the accuracy of centralized forecast and guidance products, especially for severe storms.

Radiosonde Replacement Network - NOAA requests an increase of $6.4 million over the FY 2000 base to continue the replacement and modernization of the upper air radiosonde network. The total FY 2000 planned investment of $8.4 million includes the transfer of $2.0 million from ORF to PAC to reflect the capital nature of the project. The radiosonde network provides critical upper air observations which are the principal data source for all weather forecasts. Presently, the radiosonde network is technologically obsolete and increasingly difficult to operate and maintain. Over the past five years, repair actions for certain radiosonde network components have increased by over 90%. In addition, the Federal Communication Commission (FCC) plans to reallocate a portion of the radiosonde network's operation frequency in early 1999, increasing the possibility for lost upper air observations and interference with private sector operating frequencies. Modern radiosondes and ground receiving equipment will permit more efficient use of radio frequency spectrum and ensure reliable and consistent upper air data acquisition. In FY 2000, NOAA will exercise the 1st option year of the replacement system contract to begin full deployment of the ground receiving stations, replace the remaining IBM XT microcomputers with modern PCs, continue software development, and begin procurement of the surface instruments that will provide ground based measurements at the point of balloon release.

PAC [Funded in the Construction Account] - A total of $3.5 million is requested for the NOAA Operations Center Rehabilitation (NORC) at Federal Building #4, Suitland Federal Center, Maryland. Of this total, $0.5 million is requested for backup power generators for the Class VIII supercomputer in Federal Building # 4, Suitland Federal Center, Maryland. This is a NWS/NCEP requirement to prevent disruption of service to the Class VIII.

Weather Forecast Office (WFO) Construction - NOAA requests a total of $13.3 million for WFO Construction in the PAC Construction Account. This represents an increase of $3.8 million from the FY 2000 base. The WFOs provide forecasters with modernized facilities supporting the new advanced technology systems and the provision of weather services to the public. The request will provide funding for existing WFO leases and continue facility retrofit projects. The retrofits are necessary to meet current

usage requirements as well as safety and fire code regulations. The request will also provide funding for the NWS/FAA Alaska Employee Housing Project at remote sites in Alaska.

Adjustments-to-base, program reductions and terminations are shown in Section 4: Supplementary Information.

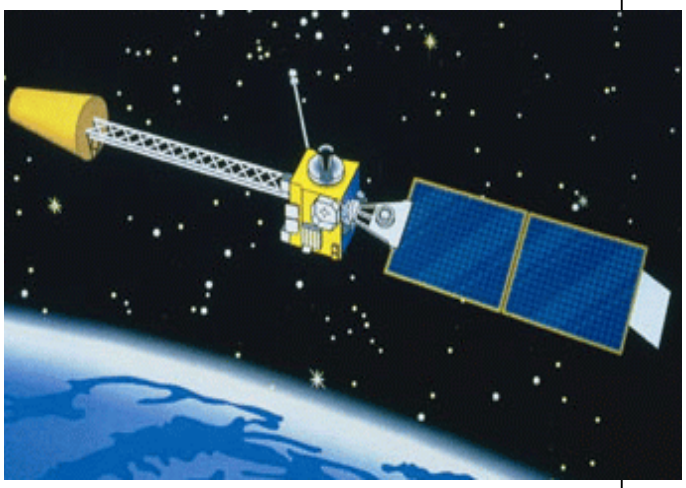
NATIONAL WEATHER SERVICE

($ IN THOUSANDS)

GOAL BASED - All Accounts	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Advance Short-Term Warning and Forecast Services	4,774	649,626	4,774	671,616	4,572	673,152	(202)	1,536
Implement Seasonal to Interannual Climate Forecast	54	4,688	54	4,688	54	4,688		
Predict and Assess Decadal-to-Centennial Change	55	8,189	55	8,189	55	9,689		1,500
TOTAL NWS	4,883	662,503	4,883	684,493	4,681	687,529	(202)	3,036

National Environmental Satellite, Data, and Information Service

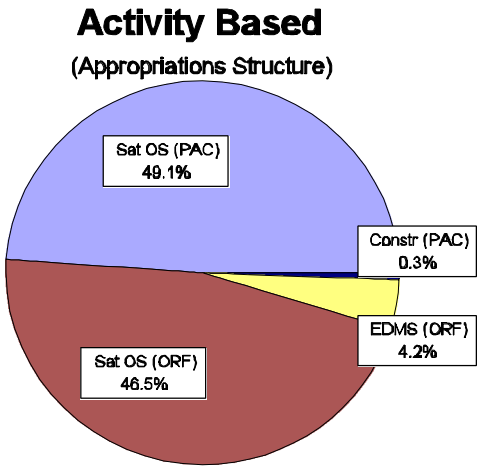
Total Request: $593,831,000
ORF: $103,092,000
PAC: $490,739,000

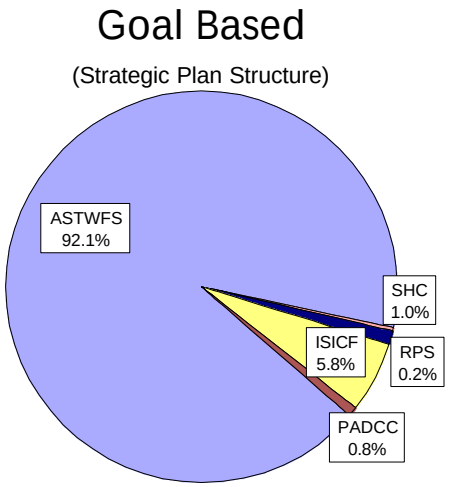


GOES (I-M) Spacecraft

The following narrative describes the total activities of the National Environmental Satellite, Data, and Information Service (NESDIS) and provides a detailed narrative divided to show the Operations, Research and Facilities (ORF) and Procurement, Acquisition and Construction (PAC) accounts.

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





NESDIS

GOES-8

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

For FY 2000, the National Environmental Satellite, Data, and Information Service requests a total of $593.8 million, of which $103.1 million is requested in the ORF account and $490.7 million is requested in the PAC account.

Detailed Program Increases

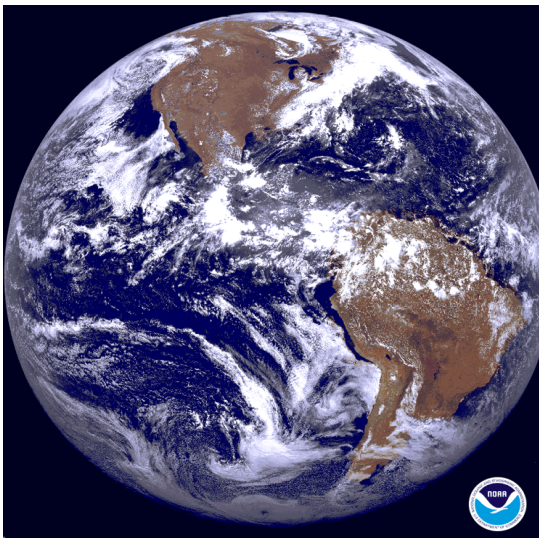
Satellite Observing Systems [funded in Operations, Research and Facilities Account] - This subactivity provides for the operation of current polar-orbiting and geostationary satellites; and production and distribution of satellite products. Also included in this subactivity is the planning for the follow-on satellite systems and the development of new and improved applications and products for a wide range of Federal agencies, state and local governments, and private users.

An increase of $2.0 million is requested to establish an integrated Global Disaster Information Network (GDIN) to improve all phases of disaster management. This will be a public/private partnership to develop an information system for those who manage and those who are affected by disasters.

$53.2 million is requested to maintain on-going satellite operations and data processing and distribution. This increase will fund Satellite Operational Control Center (SOCC) non-discretionary labor and non-labor costs increases in order to avoid serious risk to the health and safety of the current operational satellites. This increase will also maintain adequate operational data processing capacity and engineering support for Geostationary Operational Environmental Satellites (GOES) and Polar Operational Environmental Satellite (POES) data streams.

Satellite Observing Systems [Funded in the PAC Account] - This activity provides funding for the multi-year procurement of spacecraft, launches and associated ground system changes for the current series NOAA K-N' of polar-orbiting operational satellites, the GOES and the National Polar Orbiting Environmental Satellite System (NPOESS).

Polar Convergence - The FY 2000 request for the Polar Orbiting Systems includes an increase of $30.1 million for NOAA's share of the NPOESS program. In FY 2000, the NPOESS program will complete Phase I design and development of five key sensors and initiate Phase II production of these sensors. This program will be jointly and equally funded by NOAA and DOD.



The FY 2000 request for the Geostationary System includes an increase of $6.8 million due primarily to the GOES N-Q spacecraft acquisition portion of the program, inclusion of development funds for advanced instruments to be ready for the GOES-Q satellite, and the upgrading and replacements of aging ground systems that will remain operational through the life of GOES-Q.

Environmental Data Management Systems [funded in the ORF Account] - NOAA requests a total of $43.8 million in this subactivity for environmental data and information products; services and assessments in the atmospheric, marine, solid earth, and solar-terrestrial sciences for all of NOAA's programs. The FY 2000 request continues to provide global data and information to commerce, industry, agriculture, science and engineering, the general public and Federal, state and local governments. Also included in this subactivity is NOAA's ongoing effort to rescue aging data and improve user access to all NOAA-maintained environmental data. The FY 2000 request continues to reflect savings anticipated from the implementation of the NOAA Virtual Data System (NVDS) that has modernized existing data and storage systems and vastly increased, streamlined, and simplified customer access to environmental data. For customers and data users, NVDS permits ease of access through a single gateway to data stored at the three Data Centers located at different geographical locations.

For FY 2000, an increase of $1.5 million is requested to initiate the modernization of NOAA's Cooperative Reference Observer Network and Rain Gauge Network. This program will ensure the future health and usefulness of the cooperative observer network for years to come. It will prevent a number of imminent catastrophic failures in networking including the inability to read punched papers tapes from the raingauges, inadequate supply of replacement chips for the thermistors used in the cooperative network, and the elimination of changes in observing time which effectively destroy our ability to evaluate changes in extremes for our longest and best observing stations.

PAC [Funded in the Construction Account] - A total of $3.5 million is requested for the NOAA Operations Center Rehabilitation (NORC) at Federal Building #4, Suitland Federal Center, Maryland. Of this total, $3.0 million is requested in NESDIS and $0.5 million is requested in NWS. NOAA requires these funds for the launch and command of GOES N-Q satellites. NESDIS must have this capability in order to continue support of its GOES satellite data mission. The $3.0 million is required in FY 2000 for a minimum level of repair and renovation to existing space to accommodate the 7,000 sf

expansion needs for command and control and support activities for the GOES N-Q satellites. The renovation work includes HVAC replacement, rehabilitation of raised flooring, replacement of ceilings/lighting, rehabilitation of windows, and asbestos abatement. The GOES N-Q ground system equipment is being acquired through a fixed price contract with delivery scheduled for March 2000. NESDIS must have its facility prepared for the delivery and installation at that time, or it will incur significant delay costs under the contract.

Adjustments-to-base, program reductions and terminations are shown in Section 4: Supplementary Information.

NATIONAL ENVIRONMENTAL, SATELLITE, DATA AND INFORMATION SERVICES

($ IN THOUSANDS)

GOAL BASED - All Accounts	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Advance Short-Term Warning and Forecast Services	587	519,444	587	520,194	587	547,060		26,866
Implement Seasonal to Interannual Climate Forecast	266	39,958	266	40,443	266	34,625		(5,818)
Predict and Assess Decadal-to-Centennial Chnage		8,219		8,219		4,719		(3,500)
Recover Protected Species		1,202		1,202		1,202		
Sustain Healthy Coasts	9	6,171	9	6,225	9	6,225		
TOTAL NESDIS	862	574,994	862	576,283	862	593,831		17,548

Program Support

Total Request: $73,887,000
ORF: $73,887,000

NOAA's G-VI Gulfstream Jet

The purpose of NOAA's program support activities is to provide to the programs and people within NOAA the administrative and infrastructure support necessary for the programs to meet their missions and for the agency to meet its broader goals. These functions include management of personnel, procurement and systems acquisition, facilities, administrative services, ADP services, and aircraft support.

For FY 2000, Program Support requests $73.9 million. This reflects a program increase of $0.4 million. The Administration intends to restructure and maintain the NOAA Corps. Payments for Retired Pay for Commissioned Officers are mandated as an entitlement under 33 U.S.C. 8530, 33 U.S.C. 853p, and 33 U.S.C. 857-2. No further funding for this line item will be included in Program Support.

Detailed Program Increases

Aircraft Services - This line item supports all of NOAA's aircraft support services. NOAA operates uniquely configured aircraft to perform NOAA's mission including hurricane research, reconnaissance and surveillance; snow surveys to support water conservation and flood control; photogrammetry for charting; marine mammal surveys; and airborne lidar hydrographic surveys. These aircraft directly support timely and accurate storm and weather warnings and forecasts, accurate charts for safe navigation, effective stewardship of living marine resources and studies which increase our understanding of ocean and atmospheric processes and the effects of pollution on habitats, air and ocean quality, and climate change.

The Aircraft Services request includes an increase of $0.4 million for a second flight crew for NOAA's G-IV high altitude jet to meet the operational requirement of 24-hour storm surveillance . This funding will allow the jet to be flown on high priority back-to-back missions (12-hour intervals) during land-falling hurricanes. It will also permit storm tracking for long duration hurricanes when crew rest limitations may ground the aircraft.

Adjustments-to-base, program reductions and terminations are shown in Section 4: Supplementary Information.

PROGRAM SUPPORT
($ IN THOUSANDS)

GOAL BASED	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Advance Short-Term Warning & Forecast Services	694	43,817	694	46,734	698	45,086	4	(1,648)
Implement Seasonal to Interannual Climate Forecast	55	3,730	55	4,368	55	4,396		28
Predict and Assess Decadal-to-Centennial Change	56	5,148	56	5,176	56	5,218		42
Promote Safe Navigation	71	4,927	71	5,122	71	5,209		87
Build Sustainable Fisheries	209	22,554	209	22,694	209	20,706		(1,988)
Recover Protected Species	45	4,019	45	4,799	45	5,191		392
Sustain Healthy Coasts	99	6,825	99	6,501	99	7,153		652
Undistributed				13,900		13,900		
TOTAL PS	1,229	91,020	1,229	109,294	1,233	106,859	4	(2,435)

Facilities and Construction

Total Request: $42,741,000
ORF: $9,829,000
PAC: $ 32,912,000

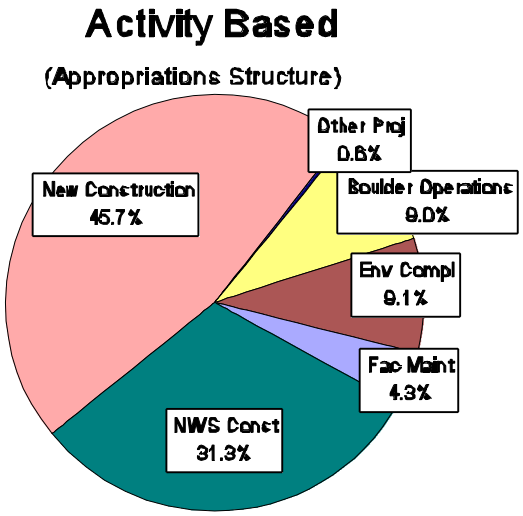
The NWS Office in Green Bay, Wisconsin.
http://www.crh.noaa.gov/grb/photogal.html

The following narrative describes the total NOAA program activities relating to land acquisition; the construction of new facilities; repairs, preventive actions, modifications and additions to existing facilities; facilities maintenance, environmental compliance, safety and health; and for facilities consolidation, in the most economical, efficient and effective manner. The detailed narrative has been divided to show the Operations, Research and Facilities (ORF) and Procurement, Acquisition, and Construction (PAC) accounts.

The Facilities FY 2000 base reflects the transfer of the Sandy Hook Lease and Columbia River Facilities to NMFS and the NEXRAD WFO Maintenance to NWS.

FACILITIES (ORF) Total Request: $9,829,000

NOAA Facilities Maintenance - As the NOAA-owned facilities have an average age of 30 years, investment in significant, major repairs and upgrades becomes increasingly critical. Major systems in many facilities are well past their design life and require maintenance, repair or replacement to ensure that the facilities remain available to support NOAA's programs. NOAA requests $1.8 million in FY 2000 for facilities maintenance activities.



Environmental Compliance and Cleanup - This program provides for activities necessary to: (1) comply with existing laws and safety regulations; (2) identify environmental problems and

engage in required cleanup; and (3) provide guidance to NOAA program managers engaged in the receipt, handling, use and disposal of hazardous materials. In accordance with Federal law, NOAA will also establish the environmental status and correct deficiencies discovered at NOAA facilities prior to their transfer to other Federal agencies or to the private sector. NOAA requests $3.9 million in FY 2000, an increase of $1.9 million over the FY 2000 level.

Boulder Facilities Operations - NOAA requests $3.8 million to fund recurring Boulder facilities operations, including the higher lease, utility, custodial, and security costs associated with the 24-hour operations at the new Boulder laboratory.

Other Requests in ORF - NOAA requests $0.3 million for National Archives and Records Administration Records Management to meet record storage costs.

CONSTRUCTION (PAC) Total Request: $ 32,912,000

Weather Forecast Office (WFO) Construction - NOAA requests a total of $13.4 million for WFO Construction in the PAC Construction Account. This represents an increase of $3.8 million from the FY 2000 base. The WFOs provide forecasters with modernized facilities supporting the new advanced technology systems and the provision of weather services to the public. The request will provide funding for existing WFO leases and continue facility retrofit projects. The retrofits are necessary to meet current usage requirements as well as safety and fire code regulations. The request will also provide funding for the NWS/FAA Alaska Employee Housing Project at remote sites in Alaska.

National Estuarine Research Reserves (NERRS) - NOAA requests a total of $12.0 million to meet operational needs for NERRS and provide additional protection of key estuarine habitats through land acquisition and construction of facilities for existing and new reserves. The System will expand from its current 22 reserves to an anticipated total of 27 reserves by the end of FY 2000. Over 540,000 acres of estuarine habitat are currently protected by NERRS, which will increase to over 1,000,000 acres with the addition of five new reserves and ongoing acquisition efforts. However, a majority of reserves have identified additional, near-by critical habitat in need of protection and to serve as places for conducting long-term science, education, and demonstration programs.

Examples of acquisitions that would be accomplished include: wetlands and other habitat slated for development; threatened and endangered species habitat; areas for habitat restoration; additional areas for conducting long-term research on water quality, land uses, and estuarine functions; and sites for construction of NERRS public facilities. Additional funding is also needed for facility construction at each of 5 new reserves (in Alaska, Mississippi, Florida, California, and New York), and for supplementing or updating facilities at the existing 22 reserves. This increase would provide funds to develop

construction plans and initiate construction of core facilities at the new reserves. Additions or renovations at existing reserves would be funded based on current needs for implementing core NERRS programs and external opportunities.

Alaska Facilities, Juneau - NOAA requests a total of $1.0 million to continue the current scoping work for the eventual formal design and construction of a new NMFS research facility near Juneau, Alaska. The facility would replace the current outdated Auke Bay lab and expand NMFS groundfish and ecosystem research capabilities significantly, as well as provide for a focal point for national and international conferences and meetings addressing the valuable marine resources of the North Pacific.

Marine Sanctuaries - NOAA is requesting an increase of $3.0 million to develop a comprehensive facilities plan for the National Marine Sanctuary (NMS) Program that prioritizes needs and opportunities at individual sites and to construct sanctuary visitor centers and collaborative education projects. One of the most significant hurdles to interpreting and understanding the value of the unique and significant resources of the Sanctuaries is their location off-shore, limiting direct access for most of the public. Crucial to appreciating these resources and their importance is a direct link between the resources and the people. Currently, the program has no means to provide this visitor experience. Projects in FY 2000 would include development of a visitor center for NOAA's Florida Keys NMS that takes advantage of a current opportunity for an interagency partnership (with the National Park Service and U.S. Fish and Wildlife Service) on surplus Navy property in Key West; and development of outreach/education facilities with aquaria for the Monterey Bay and Stellwagen Bank NMSs. The result will be the development of public visitor centers that support an expanded marine education and outreach effort for the Nation's most significant marine protected areas.

NOAA NESDIS and NWS Operations Centers Rehabilitation - NOAA requests an increase of $3.5 million for the NOAA Operations Center Rehabilitation at Federal Building #4 (FB4), Suitland Federal Center, Maryland. NOAA requires these funds for the launch and command of GOES N-Q satellites. NESDIS must have this capability in order to continue support of its GOES satellite data mission. In FY 2000, $3.0 million is required for NESDIS for a minimum level of repair and renovation to existing space to accommodate the 7,000 square foot expansion needs for command and control and support activities for the GOES N-Q satellites. The renovation work includes HVAC replacement, rehabilitation of raised flooring, replacement of ceilings/lighting, rehabilitation of windows and asbestos abatement. The GOES N-Q ground system equipment is being acquired through a fixed price contract with delivery scheduled for March 2000. NESDIS must have its facility prepared for the delivery and installation at that time, or it will incur significant delay costs under the contract. In FY 2000, $0.5 million is required for backup power generators for the Class VIII Supercomputer in FB4.

Facilities

This is a NWS/NCEP requirement to prevent disruption of service to the Class VIII Supercomputer.

Adjustments-to-base, program reductions and terminations are shown in Section 4: Supplementary Information.

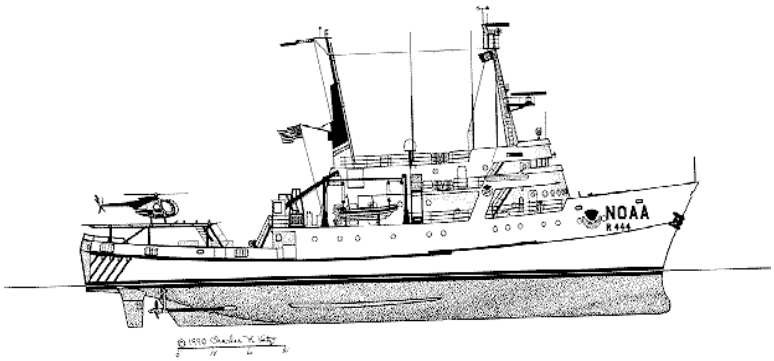
FACILITIES AND CONSTRUCTION

($ IN THOUSANDS)

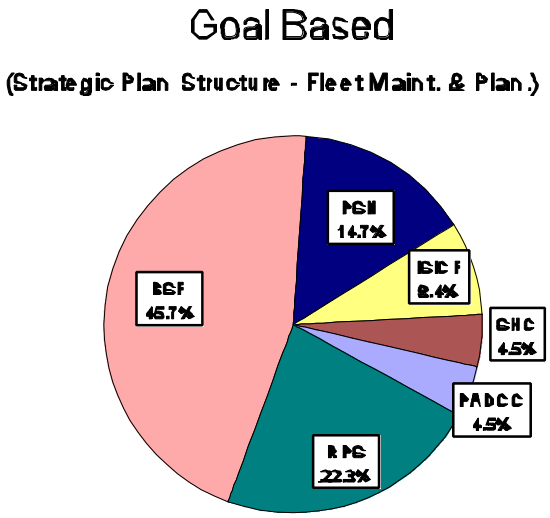
GOAL BASED ORF and PAC	*FY 1999 ENACTED* FTE	AMT.	*FY 2000 BASE* FTE	AMT.	*FY 2000 PRES. REQUEST* FTE	AMT.	*INC./DEC. (REQUEST - BASE)* FTE	AMT.
Advance Short-Term Warning and Forecast Services	9	19,017	9	16,023	9	18,390		2,367
Implement Seasonal to Interannual Climate Forecast	1	185		186		165		(21)
Predict and Assess Decadal-to-Centennial Change		196		197		190		(7)
Promote Safe Navigation		68		69		156		87
Build Sustainable Fisheries	8	14,980	8	8,538	8	6,300		(2,238)
Recover Protected Species	2	1,736	2	1,743	2	1,705		(38)
Sustain Healthy Coasts	1	11,279	1	11,284	1	15,835		4,551
TOTAL Facilities and Construction	21	47,461	20	38,040	20	42,741	0	4,701

Fleet Maintenance and Planning

Total Request: $60,810,000
ORF: $9,243,000
PAC: $51,567,000



The NOAA Ship DAVID STARR JORDAN, commissioned in 1966 is scheduled for repairs in FY 2000.
http://www.pmc.noaa.gov/ds/



The following narrative describes the total NOAA program activities relating to the repair, maintenance and replacement of the NOAA fleet of vessels. It has been divided to show the Operations, Research and Facilities (ORF) and Procurement, Acquisition, and Construction (PAC) accounts.

Fleet Maintenance and Planning (ORF)
Total Request: $9,243,000

Within ORF, funding is requested to maintain platforms necessary for continued collection of data essential to meet NOAA's statutory research, surveying, and living marine resource management responsibilities.

NOAA requests $9.2 million for Fleet Maintenance and Planning in FY 2000. These funds will provide for the maintenance of existing ships and complete repairs to the Fisheries Research Vessel (FRV) DAVID STARR JORDAN.

Fleet Replacement (PAC) Total Request: $51,567,000

Funds for new construction or conversion or repair to extend the life of a NOAA vessel is requested in this section of the PAC account. In FY 2000, NOAA requests $51.6 million to acquire a new fisheries research vessel (FRV). These vessels are essential to conduct

FLEET MAINTENANCE, PLANNING AND REPLACEMENT

($ IN THOUSANDS)

	FY 1999 ENACTED		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Operations, Research and Facilities								
Fleet Maintenance and Planning	12	11,600	12	11,643	12	9,243		(2,400)
SUBTOTAL FLEET MAINT. & PLANNING	12	11,600	12	11,643	12	9,243		(2,400)
Procurement, Acquisition and Construction								
Fleet Replacement						51,567		51,567
SUBTOTAL FLEET REPLACEMENT - PAC	12	11,600	12	11,643	12	60,810	0	49,167
TOTAL FLEET MIANTENANCE, PLANNING & REPLACEMENT	12	11,600	12	11,643	12	60,810		49,167

FLEET MAINTENANCE, PLANNING AND REPLACEMENT

($ IN THOUSANDS)

GOAL BASED	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Implement Seasonal to Interannual Climate Forecasts	1	542	1	774	1	774		0
Predict & Assess Decadal-to-Centennial Change	1	542	1	414	1	414		0
Promote Safe Navigation	2	1,327	2	1,357	2	1,357		0
Build Sustainable Fisheries	5	7,315	5	6,627	5	55,794		49,167
Recover Protected Species	2	1,379	2	2,057	2	2,057		0
Sustain Healthy Coasts	1	495	1	414	1	414		0
TOTAL FLEET MAINT. & PLANNING	12	11,600	12	11,643	12	60,810		49,167

Procurement, Acquisition, and Construction

Total Request: $637,978,000

This appropriation was created in FY 1998 in response to requirements of the Federal Acquisition Streamlining Act of 1994 and the Information Technology Management Reform Act of 1996. This appropriation captures funding for multi-year capital projects and seeks advance appropriations for projects that are in the acquisition stage.

NOAA requests a total of $638.0 million for the Procurement, Acquisition, and Construction (PAC) account. Requested funding for the PAC account is detailed in the preceding line office sections that are programmatically tied to the funding request. PAC funding requests for Weather and Research Systems are discussed in OAR and NWS and total $65.8 million for FY 2000. PAC funding requests for Satellites are discussed in the NESDIS section and total $487.7 million for FY 2000. PAC funding requests for Construction projects are discussed in the Facilities section and total $32.9 million in FY 2000. Also included in this request is $51.6 million for Fleet Replacement in FY 2000. Funds to acquire replacement fisheries research vessels are planned for future budget requests to replace existing obsolete and deteriorating research vessels with the first ship identified for FY 2000.

Detailed Program Increases

Weather And Research Systems - Total Request: $65,805,000

This account provides funding for the activities associated with multi-year procurement of the major systems supporting the OAR and NWS. Currently these systems are GEOSTORMS, NEXRAD, ASOS, the Advanced Weather Interactive Processing System (AWIPS), and the Upgrade of the Central Computer Facility. In addition, for FY 2000 the Radiosonde Replacement Network will be placed in this account since NOAA will begin major procurement activities in conjunction with replacement of the network.

The non-capital assets acquisition costs, maintenance, and operations, for these systems are contained in the ORF account under the NWS Systems Acquisition subactivity.

PAC

Geophysical Fluid Dynamics Lab (GFDL)- HPCC - NOAA requests an increase of $5.7 million to acquire a massively parallel processing (MPP) computer to be located at OAR's Geophysical Fluid Dynamics Lab (GFDL), in Princeton New Jersey. This computer will be used to improve forecasts of El Niño events, model climate variability, and make better hurricane tracking and intensity predictions. This item is listed in the Procurement and Acquisition and Construction (PAC) Account of the budget request.

GEOSTORMS (ACE follow-on) - In the PAC account, NOAA requests an increase of $4.3 million within the to fund the GEOSTORMS program. GEOSTORMS is the follow-on to the Advanced Composition Explorer satellite (ACE) and maintains operational satellite continuity for our Real-Time Solar Wind (RTSW) data requirement. These observations are the only way to tell whether a solar storm will hit Earth and if so, its intensity. Power companies and other vulnerable industries now count on solar wind warning products to trigger preventive measures that help avert massive utility blackouts and satellite failures. Without GEOSTORMS, the lead time for solar storm warnings drops from 60 minutes to 0, and the accuracy drops from nearly 100 percent to less than 30 percent. With GEOSTORMS we will use solar sail propulsion to move twice as far from the Earth and improve the lead-time to 120 minutes while maintaining almost the same accuracy. Furthermore, GEOSTORMS will allow us to keep running, improving, and developing forecast models that predict storm dynamics. Industry has told NOAA to make this our number one priority. The program is so integral to USAF and NASA requirements and plans that they are contributing 25 percent and 50 percent of the costs, respectively.

NEXRAD - NOAA requests a total of $9.6 million for NEXRAD acquisition in the PAC account, an increase of $2.6 million over the FY 1999 base. The NEXRAD network provides nationwide Doppler radar coverage, improving detection of severe weather and floods and increasing the warning lead time for tornadoes. The funding request will support the NEXRAD product improvement initiative and continue acquisition closeout activities. The request for product improvement will support the migration to the open systems architecture platform, improving the maintainability and overall cost efficiency of the NEXRAD system.

ASOS - NOAA requests a total of $4.2 million for ASOS acquisition in the PAC account. This represents a $0.3 million increase from the FY 1999 base. ASOS provides weather forecasters with critical surface observations to improve weather warning and forecast services. ASOS also provides critical data to support aviation and climate users. The funding request will continue to support product improvement efforts for developing and testing new sensor capabilities.

AWIPS - NOAA requests a total of $22.6 million in FY 2000 for AWIPS acquisition in the PAC account. For the first time, AWIPS will integrate satellite and radar data and provide the local forecaster a capability that will significantly improve forecasts and

warnings. AWIPS will also provide the communications capability needed to allow internal and external users access to much of NOAA real-time environmental data. These funds will allow for continued program management software development, and deployment activities for nationwide implementation of the AWIPS system.

Central Computer Facility Upgrade - NOAA requests a total of $11.1 million for the Central Computer Facility Upgrade. The funds will provide for the 2nd of four lease payments on the Class VIII supercomputer, scheduled for delivery during FY 1999 and allow for the planned procurement of interactive computer workstations necessary for NCEP model developers and forecasters to effectively utilize and implement Class VIII system capabilities in operational forecasting and will provide for necessary operations and maintenance associated with the supercomputer. Phased upgrades of the NWS Central Computer Facility will continue to apply the latest in supercomputing technology to improve weather prediction modeling, and increase the accuracy of centralized forecast and guidance products, especially for severe storms.

Radiosonde Replacement Network - NOAA requests an increase of $6.4 million to continue the replacement of the upper air radiosonde network. The total FY 2000 planned investment of $8.4 million will permit implementation of the program according to a five year system replacement schedule. The FY 1999 base of $2.0 million is transferred from ORF to PAC to reflect the capital nature of the project. The radiosonde network provides critical upper air observations which are the principal data source for all weather forecasts. Presently, the radiosonde network is outdated and because of its advancing age, maintenance costs are increasing. For example, 90 percent of the system components are obsolete and no longer commercially available. Another critical factor is the planned reallocation of a portion of the current operating radio frequency used by the network in January 1999. Modern radiosondes and ground receiving equipment will permit more efficient use of radio frequency spectrum and ensure reliable and consistent upper air data acquisition. In FY 2000, NOAA will exercise the first option year of the replacement system contract to begin full deployment of the ground receiving stations, replace the remaining IBM XT microcomputers with modern PCs, continue software development, and begin procurement of the surface instruments that will provide ground based measurements at the point of balloon release.

Satellites - Total Request: $487,694,000

Satellite Observing Systems - This activity provides funding for the multi-year procurement of spacecraft, launches and associated ground system changes for the current series NOAA K-N' of polar-orbiting operational satellites, the Geostationary Operational Environmental Satellites (GOES) and the National Polar Orbiting Environmental Satellite System (NPOESS).

PAC

Also included in this account is an increase of $30.1 million for NOAA's share of the NPOESS program. This program will be jointly and equally funded by NOAA and DOD.

The FY 2000 request for the Geostationary System includes an increase of $10.6 million due primarily to the GOES N-Q spacecraft acquisition portion of the program, inclusion of development funds for advanced instruments to be ready for the GOES-Q satellite, and the upgrading and replacements of aging ground systems that will remain operational through the life of GOES-Q.

Construction - Total Request: $32,912,000

This account provides funding for activities relating to land acquisition; the construction of new facilities; modifications and additions to existing facilities; and for facilities consolidation, in the most economical, efficient and effective manner.

The requested funding for this account is itemized below. See the relevant Activity for more details.

Program	Activity	Request (in millions)
NWS WFO Construction	NWS	$13.4
National Estuarine Research Reserve Construction	NOS	$12.0
Alaska Facilities Fisheries Center Juneau	NMFS	$1.0
Marine Sanctuaries	NOS	$3.0
NOAA Operations Center Rehabilitation	NWS/NESDIS	$3.5

Fleet Replacement - Total Request: $51,567,000

Funds for new construction or conversion or repair to extend the life of a NOAA vessel is requested in this section of the PAC account. In FY 2000, NOAA requests $51.6 million to acquire a new fisheries research vessel (FRV). These vessels are essential to conduct stock assessment surveys necessary to monitor species' abundance, recruitment, age composition and their responses to ecological changes and fisheries pressure.

NOAA's nine current fisheries research vessels are reaching the end of their useful lives and are becoming technologically obsolete. Replacement of the existing vessels, combined with chartering university and private commercial sources will enable NOAA to carry out

its responsibilities under the Magnuson-Stevens Fishery Conservation and Management Act, Marine Mammal Protection Act, and the Endangered Species Act. Ship resources will be devoted to the sea time needed to assess the status of fisheries stock and populations of marine mammals. Significant improvement is anticipated in the quality of the data collected because of a more capable and dedicated FRVs. Reduced error margins resulting from better quality data could allow for higher fishing quotas in many fisheries without jeopardizing the resources.

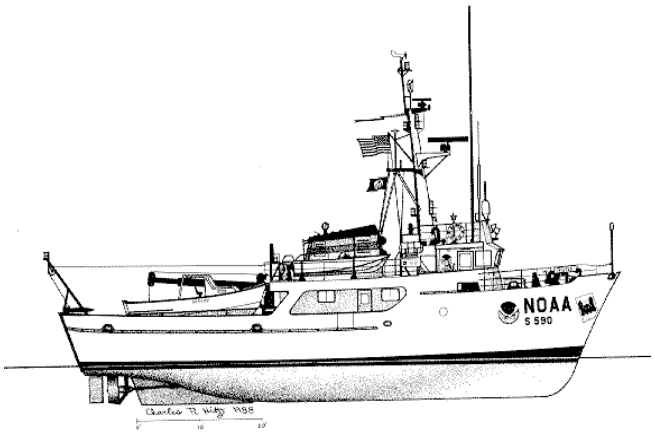
Vessels needed to support the Build Sustainable Fisheries and Recover Protected Species elements of the NOAA Strategic Plan must be highly capable platforms. They must also have the ability to conduct hydro-acoustic fish surveys, support remote (underwater, aerial, and satellite) sensing operations, and conduct real-time oceanographic and meteorological sampling. In addition, the vessels must be highly maneuverable at low speeds and be acoustically "quiet" to minimize avoidance reactions of fish and marine mammals. Finally, they must meet modern safety and habitability standards and international conventions for marine pollution, and have a sufficient number of berths to accommodate the scientific complement and crew.

Many of NOAA's time-series assessments provide the foundation for advice to managers. To maintain the consistency and continuity of time-series data, new vessels will operate parallel to existing platforms to calibrate the new ships prior to the decommission of existing vessels.

In future budget requests NOAA will seek replacement of existing obsolete and deteriorating FRVs – one ship in FY 2001, FY 2002, and FY 2003. NOAA is currently identifying the most cost effective procurement option.

Adjustments-to-base, program reductions and terminations are shown in Section 4: Supplementary Information.

Fleet Maintenance



The NOAA Ship RUDE; commissioned March 1967. Drawing by Bob Hitz.

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Other Accounts

Atlantic Salmon

Fisheries Finance Program Account - Total Request: $10,258,000

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

The FY 2000 President's Budget requests a net decrease of $18.1 million for the Fisheries Finance Program account. Included in this amount is a $1.7 million increase to cover the administrative expenses of the Federal Ship Financing Fund. The amount also includes an increase of $8.3 million to reduce harvesting capacity in the Northeast scallop fishery. This increase will be used to buy out vessels and permits in this overcapitlized fishery through a combination of direct payments and loans repaid through the collection of fees.

Promote and Develop Fishery Products & Research Pertaining to American Fisheries (P&D) - Total Request: $1,500,000

The American Fisheries Promotion Act (AFPA) of 1980 authorized a grants program for fisheries research and development projects and a National Fisheries Research and Development Program to be carried out with Saltonstall-Kennedy (S-K) funds. S-K funds are derived from duties on imported fisheries products. An amount equal to 30 percent of these duties is being transferred to the Department of Commerce from the Department of Agriculture. The FY 2000 Budget estimates this transfer at $66.4 million. Of this $66.4 million, $1.5 million will be used for the S-K grants program to develop a healthy fishery based industry (including costs of program administration). The remainder of the transfer ($64.9 million) will be used to offset the Operations, Research, and Facilities (ORF) account. The duties transferred to this account are calculated on a calendar year basis and, if necessary, will be revised after the submission of the President's request.

Other Accounts

Pacific Coastal Salmon Recovery - Total Request: $100,000,000

This account was established to support a new Pacific Coastal Salmon Recovery Initiative for the purpose of helping share the costs of state, tribal and local conservation activities. This fund is NOAA's contribution to a broad interdepartmental initiative bolstering and deploying existing and new Federal capabilities to assist in the conservation of at-risk Pacific salmon runs in the western states of California, Oregon, Washington, and Alaska. These Federal grants would be matched dollar for dollar with non-Federal contributions. The Fund would be established under existing authorities by the Secretary of Commerce and made available through agreements with the Governors of each of the four states for distribution to assist state, tribal and local conservation efforts. The Secretary will establish terms and conditions for the effective use of the funds and specific reporting requirements appropriate for ensuring full accountability.

Coho Salmon

Fishing Vessel and Gear Damage Compensation Fund - Total Request: $0

This program was authorized by the Fisherman's Protective Act of 1967, as amended by P.L. 95-376, Section 10 (f) (1), of September 18, 1978, and P.L. 96-561 of 1980. This Fund provides compensation to fishing vessel owners who sustain losses or damage to their gear or vessels attributed to other fishing vessels. The Fund is supported by a surcharge imposed upon foreign fishing permit fees and is operated through the appropriation of existing balances from previous year surcharges and interest earned. No appropriation is requested for this fund.

Fishermen's Contingency Fund (FCF) - Total Request: $953,000

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

The Fund is supported by assessments on holders of leases, explorations, permits, easements, and rights of way in areas of the Outer Continental Shelf. For FY 2000, an appropriation of $0.95 million is requested for claims and administrative expenses. This amount is equal to the FY 1999 appropriation.

Foreign Fishing Observer Fund (FFOF) - Total Request: $189,000

The Foreign Fishing Observer Fund provides observer coverage of foreign fishing activities within the 200-mile Exclusive Economic Zone (EEZ). The Fund is supported by fees charged to foreign fishermen for the cost of placing an observer aboard their vessel while operating within the EEZ. Beginning in FY 1985, foreign fishermen were also permitted to contract directly with NMFS approved observer contractors to obtain observers (the Supplemental Observer Program). The FY 2000 budget requests $0.19 million, equal to the FY 1999 level. Appropriated funds plus direct contracting under the Supplemental Observer Program will provide 100 percent observer coverage.

Coastal Zone Management Fund (CZMF) - Total Request: [$4,000,000] [Offset to ORF]

The Coastal Zone Management Fund was established by the Coastal Zone Reauthorization Amendments of 1990 (CZARA). The fund consists of loan repayments from the former Coastal Energy Impact Program. The proceeds are to be used to offset the ORF account for the costs implementing the Coastal Zone Management Act of 1972, as amended.

Damage Assessment and Restoration Revolving Fund (DARRF) - Total Request: ($1,500,000)

The Damage Assessment and Restoration Revolving Fund was established under Section 1012(a) of the Oil Pollution Act of 1990, to facilitate oil and hazardous material release response, damage assessment, and natural resource restoration activities of NOAA. The DARRF provides for the deposit of sums transferred by any party or governmental entity and, to retain for future use, funds that are recovered through settlement or awarded by court or recovered by NOAA through negotiated settlement or reimbursement. In FY 1999, receipts from settlements are expected to be $1.5 million.

.

OTHER ACCOUNTS

($ IN THOUSANDS)

	FY 1999 ENACTED		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	***AMT.***	***FTE***	***AMT.***	***FTE***	***AMT.***	***FTE***	***AMT.***
Build Sustainable Fisheries	6	32,525	6	32,525	30	11,714	24	(20,811)
Recover Protected Species						100,000		100,000
Sustain Healthy Coasts		(1,500)		(4,000)		(4,000)		
TOTAL BA - OTHER ACCOUNTS	6	31,025	6	28,525	30	107,714	24	79,189
CZMF mandatory collections	49	(4,000)		4,000		4,000		
Transfer from Department of Agriculture	(5)	(66,426)	(5)	(66,426)	(5)	(66,426)		
TOTAL Discretionary Budget Authority	50	(39,401)	1	(33,901)	25	45,288	24	79,189

Section 3:
NOAA Budget Request by Goal
The Strategic Plan

- ❑ Summary of FY 2000 Budget Request
- ❑ FY 2000 Request Highlights
- ❑ Advance Short Term Warning and Forecast Service
- ❑ Implement Seasonal to Interannual Climate Forecasts
- ❑ Predict and Assess Decadal to Centennial Change
- ❑ Promote Safe Navigation
- ❑ Build Sustainable Fisheries
- ❑ Recover Protected Species
- ❑ Sustain Healthy Coasts

The NOAA Strategic Plan

An FY 2000 Overview

For the year 2005, NOAA envisions a world in which societal and economic decisions are coupled strongly with a comprehensive understanding of the environment. Environmental stewardship, assessment and prediction will serve as keystones to enhancing economic prosperity and the quality of life, better protecting lives and property, and strengthening the U.S. balance of trade. This vision depends on actions now that:

- Create and disseminate reliable assessments and predictions of weather, climate, space environment, ocean and living marine resources, nautical, and geodetic phenomena and systems.

- Implement integrated approaches to environmental management and ocean and coastal resources development for economic and social health, protection of essential fish habitat, and recovery of endangered and threatened species of fish and marine mammals.

- Ensure access to continuous operations observing capabilities - from satellites to ships to radars and submersibles.

- Build and use new information networks.

- Develop public-private and international partnerships for the expansion and transfer of environmental knowledge and technologies.

- Invest in scientific research and the development of new technologies to improve current operations and prepare for the future.

- Improve NOAA's abilities to serve its customers and forge stronger ties with its partners and stakeholders.

Achieving NOAA's Vision for 2005

- NOAA's Strategic Plan describes the goals and objectives that have been established to fulfill its vision. The strategy consists of seven interrelated goals that are grouped within the two missions of Environmental Assessment and Prediction, and Environmental Stewardship. The execution of NOAA's goal-based strategy depends strongly on a stable and robust infrastructure and administrative and human resources, as well as on the underlying capabilities of the agency as a national resource for research, observing systems, and environmental data and information services.

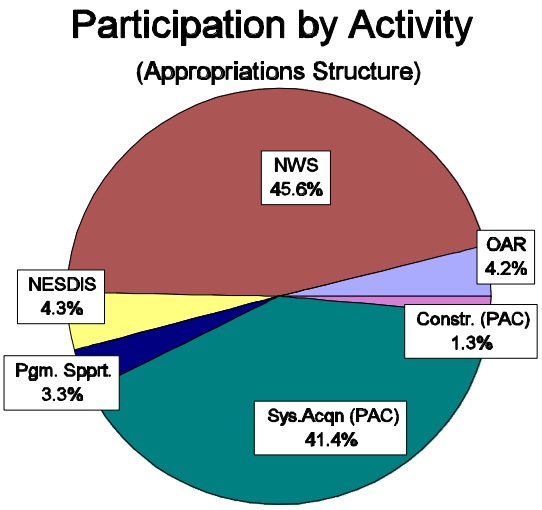
Advance Short-Term Warning and Forecast Services

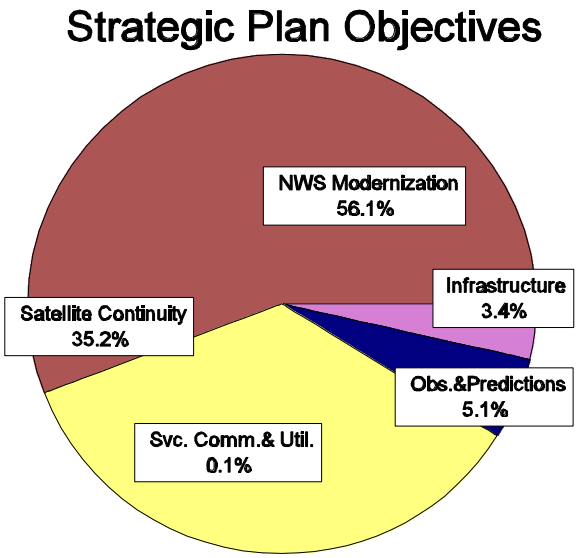
Total Request: $1,325,451,000

Vision - NOAA's vision for 2005 is to provide significantly improved short-term warning and forecast products and services that enhance public safety and economic productivity to the Nation. NOAA will enhance its ability to observe, understand, and model the environment, and effectively disseminate products and services to users.

Challenge - Our environment has profound effects on human welfare and economic well being. Each year, hundreds of lives and billions of dollars are lost due to severe storms, floods and other natural events that can be predicted minutes to months in advance. NOAA's current ability to predict short-term change is restricted by observations that are incomplete in time and space. This limits the ability to improve basic understanding, and predictive modeling of weather and other natural phenomena. NOAA is committed to improving its observing systems, developing a better understanding of natural processes, and enhancing its predictive models and dissemination systems.

Implementation Strategy - The objectives of this goal are to:





ASTWFS

- Sustain modernized weather service operations;

- Maintain continuous operational satellite coverage critical for warnings and forecasts;

- Strengthen observing and prediction systems through scientific, technological and programmatic advances and international cooperation; and

- Improve customer service to the public, emergency managers, the media, and private forecast planners through effective communication and utilization of NOAA's products.

Benefits - Increasing our understanding of the environment through research and investing in new technologies will provide more accurate and timely weather warnings and forecasts required by the Nation. Improved forecasts will support management of water resources, and help avoid flood damage. Extended forecasts of solar and geomagnetic disturbances will increase efficiencies for space operations, and power generation and satellite communications networks. Advanced modeling techniques and more complete observations will reduce uncertainties in hurricane track prediction, saving millions of dollars by avoiding unnecessary evacuation costs. Accurate outlooks of future conditions will provide better information for planning weather sensitive activities over land and ocean. Critical contributions for the Administration's Natural Disaster Reduction Initiative will be provided from the research, monitoring and operational program in this NOAA goal.

Improvements associated with the modernized weather services have allowed for huge dividends. A cost-benefit analysis by the National Institute of Standards and Technology estimated economic benefits to the Nation to be about eight times greater than the costs involved. The Nation should realize annual benefits approaching $7 billion from the modernization.

FY 1998 Accomplishments:

- Improvements in the accuracy and timeliness of severe weather, flooding, and other natural hazards are directly linked to modernized technologies. NWS Modernization and Restructuring efforts, in particular, have shown improvements in services combined with productivity and efficiency gains. That is, lower costs associated with delivering more accurate and timely warning and forecast services are accomplished while concurrently increasing the benefits from more timely pertinent information.

- NWS has completed its deployment of 123 Next Generation Weather Radars (NEXRAD). Deployment of the Advanced Weather Interactive Processing

System (AWIPS) now underway is expected to be completed by June 1999. Approximately 88 of 152 units have been installed as of the end of 1998. Office closures are moving along as well; 132 offices have been closed as of January 1999.

- Record breaking ice storms occurred across interior Maine, northern New York, northern New Hampshire and northern Vermont in January of 1998. Over 500,000 people were without power for days and some for weeks. The NWS issued special weather statements up to 3 days in advance of the storm. Winter Storm Warnings were issued between 12 - 39 hours before the severe icing. Flooding was also a threat during this event, and the NWS issued River Flood Warnings 8 - 24 hours before the onset of flooding and up to 36 hours before flood crests were reached. This event also had a major impact on Canada as it was the worst Canadian natural disaster ever with over 3 million people losing power.

- Several tornado outbreaks occurred across the southeast U. S. in an active 1998 tornado season. Through September, the Nation experienced nearly 1,200 tornadoes with over 126 deaths. Tornado outbreaks in February and April were well forecasted as Severe Weather Outlooks and statements from the Storm Prediction Center indicated many states were under a moderate to high risk of severe weather 24 hours prior to the event. Significant tornado warning lead times were issued from 9 - 43 minutes with local officials and the media praising the NWS performance.

- Much of California and the southeast U. S. recorded new records for rainfall between December 1997 and March 1998, receiving nearly 300 percent over the normal precipitation. NWS forecasters were able to provide timely and accurate flood warnings for many of these events by using rainfall estimates provided by Next Generation Weather Radar (NEXRAD) and information from the Advanced Hydrologic Prediction System.

- In an active 1998 fire season, NWS provided critical fire weather support and forecasts for wildfires in central and northern Florida and long-term support at the federal level for wildfires in Central America.

ASTWFS

- The NWS office at Guam issued products 72 hours in advance noting the probable track of Typhoon Paka over Guam. NWS issued a Typhoon Watch 48 hours in advance and a typhoon warning with 30 hours lead time, minimizing the loss of life.

- The National Hurricane Center and NWS offices were busy with an active tropical season as 14 named storms formed in the Atlantic Basin. Seven made landfall in the U. S. Highly accurate weather watches and warnings were issued for all of these events accounting for the very low loss of life. For instance, Hurricane Georges made a severe impact on Puerto Rico, southern Florida and the Gulf Coast where damages totaled over $3 billion yet there were only two deaths. Eighty-seven percent (87%) of respondents of a south Alabama poll rated the NWS performance during Hurricane Georges as good or excellent.

- A new satellite, NOAA-K, that will improve weather forecasting and monitor environmental events around the world was successfully launched in May 1998.

- The Air Force handed over control of the Defense Meteorological Satellite Program (DMSP) to NOAA in May. This transaction now allows NOAA to have primary control of all U.S. meteorological satellites; however, the Air Force will maintain a back-up command and control facility. This action is an important step toward the Vice President's National Performance Review regarding polar satellite convergence. NOAA is operating DMSP with 80% fewer people than the Air Force.

- The National Space Weather Program has taken a revolutionary step toward forecasting geomagnetic storms. As a result of NOAA's modifications to the NASA Advanced Composition Explorer Satellite, real-time solar wind observations have increased forecast accuracy to virtually 100%. This represents the biggest achievement in space weather forecasting in 30 years. NOAA's contribution now gives forecasters and industry up to an hour of warning lead-time and provides essential data needed to drive numerical forecast models. This achievement will be even more significant as we enter the peak of the solar cycle in 2000.

- Scientists and weather forecasters from NOAA, Department of Defense, and various universities participated in two major research experiments, the California Land-Falling Jets Experiment (CALJET) and the North Pacific Experiment (NORPEX). Data collection from NOAA aircraft during these experiments was used in numerical weather prediction models and resulted in improved forecasts and warnings for the West Coast.

Key FY 2000 Activities:

- Maintain NWS modernized operations
- Provide operation and maintenance support for 152 fielded Advanced Weather Interactive Processing Systems (AWIPS)
- Continue implementation of the Secretary's mitigation actions to provide staffing and operations for new WFOs at Key West, FL; and Caribou, ME; including continuing operations at Erie, PA and Williston, ND.
- Continue the radiosonde replacement program to ensure critical upper air data.
- Initiate national implementation of AHPS in the Upper Midwest and tributaries within the Ohio River basin.
- Begin modernizing the cooperative observer network by replacing obsolete rain gauge recording devices, temperature sensors, and other out-of-date parts.
- Provide additional aircraft observations to improve numerical weather prediction models.
- Continue the procurement, launching, and operation of polar orbiting satellites and the follow-on series of geostationary weather satellites.
- Complete Phase I design and development of five key NPOESS sensors and algorithms, and initiate Phase II production of these sensors to meet the civil and national security requirements for acquiring and disseminating global and regional, space-based, remotely-sensed environmental data.
- Provide for continued research to improve the forecast accuracy and lead-time for hurricane tracking and landfall prediction.
- Provide necessary observations, forecasting tools, and end-user products to minimize the disruption of U. S. technological systems from hazardous space weather, including funding for the first year construction of ACE follow-on, GEOSTORMS.
- Continue support for the Department's Natural Disaster Reduction Initiative (NDRI).
- Provide additional flight crew for the NOAA G-IV high altitude jet.

ASTWFS

Key Performance Measures

	1995 act.	1996 act.	1997 act.	1998 est.	1999 est.	2000 est.
Flash Flood Warnings						
Lead time (min)	26	39	45	52	45	46
Accuracy (%)	60	79	82	83	85	86
Severe Thunderstorm Warnings						
Lead time (min)	17	18	18	18	19	20
Accuracy (%)	75	82	82	84	84	85
Tornado Warnings						
Lead time (min)	10	10	10	11	11	12
Accuracy (%)	60	59	59	67	70	70
Hurricane Landfall Warnings						
Accuracy of landfall (mi)			*			
w/24 hour lead time	81	90	44	82	84	81
Temperature						
Correct forecasts (%)	84	85	86	86	87	87
Correct onset freezing (%)	72	74	70	54	78	80
Precipitation Forecasts						
Lead time (days advance)	2.3	2.3	2.3	2.3	2.3	2.4
Snow Forecasts						
Accuracy heavy snow (%)	42	44	45	50	55	60

* FY 1997 preliminary measure for Hurricane Landfall Warning is not representative of a typical hurricane season as only one landfall storm occurred during the Fiscal Year.

Advance Short-Term Warning & Forecast Services

($ in Thousands)

Strategic Plan Objectives	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Sustain Modernized Weather Service Operations	4,783	730,702	4,783	750,954	4,581	743,691	(202)	(7,263)
Satellite Continuity	587	437,068	587	437,818	587	466,933		29,115
Enhance Observations & Predictions	332	56,133	332	56,761	336	67,701	4	10,940
Improve Service Communication & Utilization	21	1,870	21	1,915	21	1,915	0	0
Infrastructure	628	43,927	628	45,709	628	45,211	0	(498)
Total	6,351	1,269,700	6,351	1,293,157	6,153	1,325,451	(198)	32,294

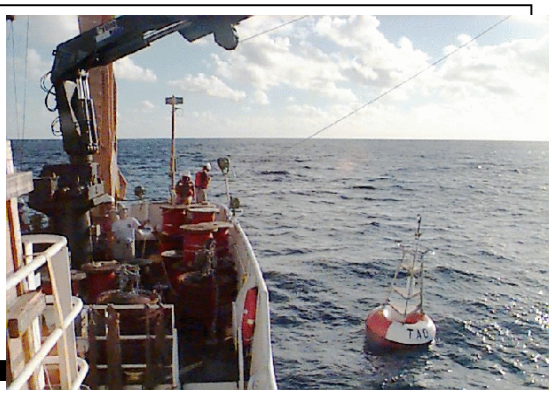
Advance Short-Term Warning & Forecast Services

($ in Thousands)

Participation By Activity	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Oceanic and Atmospheric Research	296	56,813	296	56,613	296	55,813		(800)
National Weather Service	4,669	547,828	4,669	564,218	4,490	603,520	(179)	39,302
National Environmental Satellite, Data & Information Service	507	54,385	750	55,135	507	56,321		1,186
Program Support	690	40,347	690	43,258	694	43,608	4	350
Facilities	4	3,647	4	653	4	1,478		825
System Acquisition - PAC	180	553,481	180	560,081	157	547,799	(23)	(12,282)
Construction -PAC	5	13,199	5	13,199	5	16,912		3,713
Total	6,351	1,269,700	6,594	1,293,157	6,153	1,325,451	(198)	32,294

Implement Seasonal to Interannual Climate Forecast

Total Request: $112,626,000



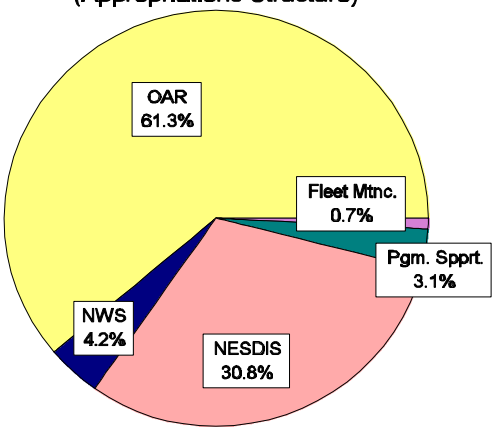
The NOAA Ship KA'IMIMOANA deploying weather buoys in the Pacific.

Vision - NOAA, working together with academic and multinational partners, will provide up to one-year and longer lead-time forecasts of known skill of global climate variability, especially El Niño and its associated precipitation, temperature, and storm patterns. These forecasts will increase society's ability to mitigate economic losses and social disruption.

Challenge - The largest interannual climate variability that has a degree of predictability is caused by the El Niño-Southern Oscillation (ENSO) phenomenon in the Pacific Ocean. Temperature and precipitation patterns, changes in ocean circulation, and changes in storm frequency caused by ENSO have global effects on economies and planning. Based on the application of ENSO-related research, NOAA issues monthly and seasonal probability outlooks for temperature and rainfall, and successfully forecasted the 1997-1998 El Niño six months in advance. ENSO-related effects range from severe drought to strong storms, with some regions experiencing floods and landslides while others suffer from fire and smoke. However, the ability to improve the accuracy and reliability of multi-season forecasts requires

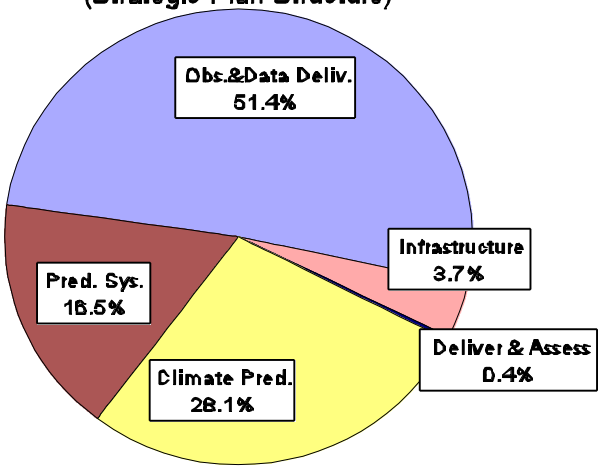
Participation by Activity

(Appropriations Structure)



Strategic Plan Objectives

(Strategic Plan Structure)



enhanced modeling and incorporation of the impacts of other modes of climate variability, like those from trends associated with decade-to-decade swings such as the North Atlantic Oscillation and the Pacific Decadal Oscillation, or long-term trends. The impact of global change on short-term climate variability like ENSO or the North Atlantic Oscillation must also be understood, requiring enhanced process understanding and an expanded observing system. In addition, NOAA must work towards an expanded operational suite of new products which integrate regionally-focused, climate-related impacts spanning short (one-week) to long (multi-season) time scales.

Implementation Strategy - The objectives of this goal are to:

- implement climate prediction systems to deliver useful seasonal to interannual climate forecasts for the U.S. and collaborate in a multinational effort to generate and use similar forecasts;

- enhance global observing and data systems required to provide data for the initialization and validation of model predictions of seasonal to interannual climate variations;

- invest in process and modeling research that leads to improved predictability of temperature and rainfall distributions; and

- assess the impacts of climate variability on human activity and economic potential, and improve public education so that climate forecasts are understood and acted upon.

Benefits - We can now predict El Niño events with a level of skill and enough lead time that hundreds of millions of dollars a year can be saved in the Nation's economy and abroad. Climate services will be as important to 21st Century economies and societies as weather forecasting is today. Better climate forecasting can result in benefits to the Nation's agriculture, and ultimately consumers, of more than $300 million annually from improved agricultural decisions. For example, the ability to perfectly forecast ENSO events one year in advance would permit the Nation's corn inventories to decline 8 percent, with annual savings of nearly $240 million. A cost-benefit analysis of one NOAA program to understand and model ENSO, the Tropical Ocean Global Atmosphere (TOGA) program, shows a real economic return on investment of at least 13% - 26% for U.S. agriculture alone. A global ENSO forecast would have much greater benefits. ENSO forecasts will also improve fisheries management, as warm ENSO events have been associated with reduced marine catches. Global forecasts of climate variability will enhance agricultural, water resources, and other economic and social response planning.

FY 1998 Accomplishments - By any standard, this was an extraordinary year for seasonal to interannual climate forecasting. NOAA forecast six months in advance and

with record skill the 1997/98 El Niño and its impact on temperature and rainfall variations in the U.S., predicting that California and the southeast U.S. would receive unusually heavy rainfall and that the Nation's winter overall would be milder than normal. NOAA responded rapidly and effectively to the El Niño, providing timely responses to unprecedented demands for climate information and forecasts from the public, media, and decision-makers.

During FY 1998, other key accomplishments across the four objectives supporting this strategic goal included:

- Successfully predicting an increased likelihood of above normal tropical cyclone and hurricane activity over the Atlantic and Caribbean during the Fall of 1998 due to La Niña conditions.

- Completed data rescue of weather station information dating from the 1700s to 1970s.

- Increased data accessibility by making more NOAA data sets available via Internet, including the Satellite Active Archive and the new Geostationary Satellite Archive System, and via CD-ROM.

- Extended and improved long time series climate-related data sets such as the Comprehensive Ocean Atmosphere Data Set (COADS), the Global Historical Climate Network (GHCN) precipitation data set, and the NCEP reanalysis of meteorological data.

- As part of the composite global climate observing system, NOAA collaborated with the National Science Foundation and universities to begin expanding the ENSO Observing System by adding more temperature, salinity, and current measurements and extending the Tropical Atmosphere Ocean (TAO) array from 8 degrees North and South to 18 degrees North and South by deploying new generation autonomous profiling floats, drifting buoys, and high density Volunteer Observing Ship (VOS) lines in the Eastern Pacific.

- Established clear linkages between El Niño and individual major weather events over North America, including the January 1998 ice storm over the northeast Nation and Canada, and the flooding rains in central and southern California in February.

- Developed "Threats Assessment," a new experimental forecast product, to increase lead times for guidance on the risks of major large-scale weather events over the Nation.

ISICF

- As part of NOAA's rapid response to the 1997-98 El Niño event, supported special multi-disciplinary projects to determine the impacts of El Niño on the West Coast and Alaska, including effects on storms (NORPEX and CALJET), air-sea interactions, and the coastal ecosystem.

- Completed the Pilot Field Phase for Pan American Climate Studies (PACS) on atmosphere-ocean interactions in the eastern equatorial Pacific.

- Expanded ocean observations into the tropical Atlantic through the initiation of the Pilot Research Moored Array in the Tropical Atlantic (PIRATA) program.

- Organized and participated extensively in media briefings, public education, and outreach efforts, greatly increasing public understanding of and preparedness for El Niño.

- Enhanced regional assessment activities, including initiation of a new California pilot project on the use of climate information by California emergency managers and water managers.

Key FY 2000 Activities:

- NOAA will begin deploying an array of floating buoys in the North Atlantic and North Pacific to measure temperature, salinity, and currents to produce ‘weather maps’ of the upper ocean.

- Maintain the ENSO observing system on an operational basis, to provide essential measurement for skillful forecasts of the ENSO phenomenon.

- Expand the observing system of 12 deep ocean moorings in the tropical Atlantic to improve understanding and predictions of climate variability, including interannual variations in Atlantic hurricane activity, and floods and droughts in adjacent regions.

- Enhance the NOAA Virtual Laboratory and continue quantitative studies to evaluate, maintain, and improve the current array of in situ observing systems.

- Begin expansion of the NOAA Virtual Data System (NVDS) to include data from non-federal organizations such as the Regional Climate Centers.

- Continue the Global Ocean-Atmosphere-Land System (GOALS) to improve seasonal to interannual predictions.

ISICF

- Continue the Global Energy and Water Cycle Experiment (GEWEX) Continental-Scale International Project (GCIP), focusing on hydrologic modeling and water resources in the eastern Mississippi Basin and the topographic effects of precipitation and hydrology in the northwest region of the Basin.

- Support the International Research Institute (IRI) and expand related national and regional applications programs.

- Maintain climate assessment activities, particularly in the area of regional assessments.

- Develop regionally specific seasonal-to-interannual forecasts over North America.

ISICF

Key Performance Measures

	1995 act.	1996 act.	1997 act.	1998 act.	1999 est.	2000 est.
ENSO Forecasts accuracy (correlation) 1/	.76	.85	.81	.85	.85	.85
U.S. Temperature skill score 2/	24	15	22	23	20	20
ENSO observing system operational (%)	--	0	0	50	75	90
New and improved data sets developed and produced (#)	--	7	7	6	6	6
Global Continental Scale International Project experiments implemented (%)	--	20	40	40	60	80
GOALS experiments implemented (%)	--	5	15	15	20	25

1/ Accuracy is the correlation of the forecast with actual conditions.

2/ Skill score means 100 times the number of correct forecasts divided by the number of forecasts made (N), minus the number of correct forecasts expected through random chance (E), divided by the total number of forecasts made minus E.

Implement Seasonal to Interannual Climate Forecasts

($ in Thousands)

Strategic Plan Objectives	***FY 1999 ENACTED***		***FY 2000 BASE***		***FY 2000 PRES. REQUEST***		***INC./DEC. (REQUEST - BASE)***	
	FTE	***AMT***	***FTE***		***FTE***	***AMT.***	***FTE***	***AMT.***
Implement Prediction Systems	74	18,566	74	18,566	74	18,566		
Maintain and Improve Observing & Data Delivery Systems	344	58,618	357	59,693	357	57,875		(1,818)
Conduct Research for Improved Climate Predictions	77	29,701	77	30,011	77	31,611		1,600
Deliver Climate Services and Assess Socioeconomic Impacts		1,122		422		422		
Infrastructure	54	3,968	54	4,124	54	4,152		28
Total	549	111,975	562	112,816	562	112,626		(190)

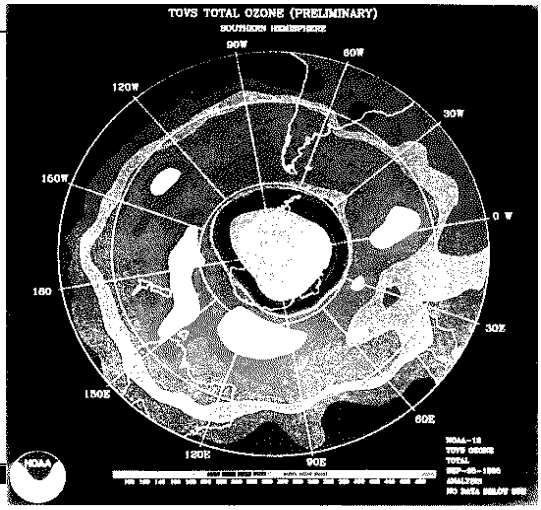
Implement Seasonal to Interannual Climate Forecasts

($ in Thousands)

Participation By Activity	***FY 1999 ENACTED***		***FY 2000 BASE***		***FY 2000 PRES. REQUEST***		***INC./DEC. (REQUEST - BASE)***	
	FTE	***AMT.***	***FTE***	***AMT.***	***FTE***	***AMT.***	***FTE***	***AMT.***
Oceanic and Atmospheric Research	174	63,599	187	63,317	187	68,917		5,600
National Weather Service	54	4,688	54	4,688	54	4,688		
National Environmental Satellite, Data & Information Service	266	39,958	266	40,443	266	34,625		(5,818)
Program Support	54	3,052	54	3,457	54	3,457		
Facilities		72		73		165		92
Fleet Maintenance & Planning	1	542	1	774	1	774		
Construction - PAC		64		64				(64)
Total	549	111,975	562	112,816	562	112,626		(190)

Predict & Assess Decadal to Centennial Climate Change

Total Request: $103,766,000



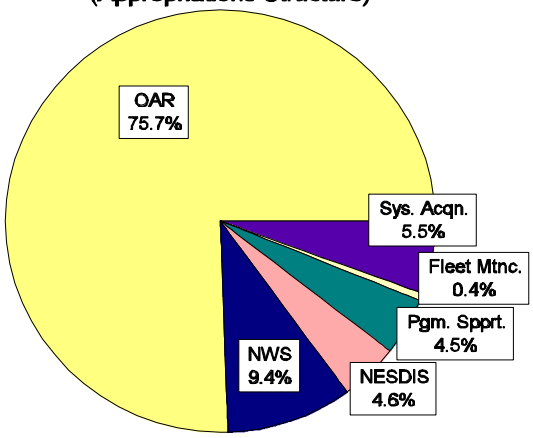
TOVS Satellite image of ozone over Antarctica

Vision - NOAA and its research partners will provide science-based information for improving the predictive understanding of decadal-to-centennial changes in the global environment, specifically for: long-term climate change and greenhouse warming, ozone layer depletion, and air quality improvement.

Challenge - Our planet is a place of natural and human-induced change. Human activities are now recognized as impacting the global heat balance and climate system, thinning of the stratospheric ozone layer, and atmospheric pollution. While these changes increasingly promise to impact our societal systems and natural environments, they challenge the world scientific community to improve its prediction and assessment capabilities. Explanatory environmental models must be strengthened through better understanding of the atmospheric and oceanic processes so that we may meet the challenges of understanding and foreseeing climate variability and long-term change in approaching decades. Sound economic and social decisions depend upon assessed scientific information as a touchstone.

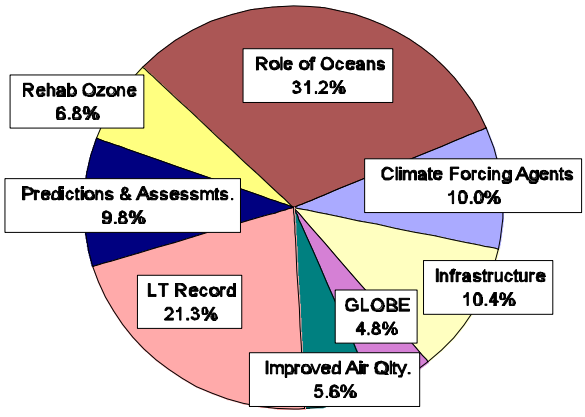
Participation by Activity

(Appropriations Structure)



Strategic Plan Objectives

(Strategic Plan Structure)



PADCC

Implementation Strategy - The objectives of this goal are

- to characterize the agents and processes that force decadal to centennial climate change;

- understand the role of the ocean as a reservoir of both heat and carbon dioxide to address a major source of uncertainty in climate models;

- ensure a long-term climate record by enhancing domestic ad international weather networks, observing procedures, and information management systems. Document present and past changes and variations in the climate system, including extreme events, and rapid climate changes, exploiting national and international observing networks, satellites, and paleoclimatic data;

- guide the rehabilitation of the ozone layer by providing the scientific basis for policy choices associate with ozone-depleting compounds and their replacements;

- provide the scientific basis for improved air quality by improving the understanding of high surface ozone episodes in rural areas and by strengthening the monitoring network to detect cleaner air quality and improving the characterization of airborne fine particles; and

- develop models for the prediction of long-term climate change (including extreme events and rapid climate changes), carry out scientific assessments, and provide human impacts information.

Benefits - Nations have committed to eliminating production of compounds that deplete the ozone layer (Montreal Protocol). Research is not only helping define "ozone-friendly" replacement compounds and monitoring the atmospheric decline in ozone-depleting substances, but also documenting that the recovery of the ozone layer is as expected. Anticipatory research on global climate change supports sustainable development by providing timely information to society to make sound decisions about the role of human activities in global climate change and variability. NOAA research has identified areas of air quality changes, such as high surface ozone in rural areas, that require the development of a fundamental understanding of their causes. New research is pointing to more effective ways to meet those goals, thereby avoiding costly over-regulation. Providing research results that address key scientific uncertainties, presenting the improvements in understanding in up-to-date assessments, and summarizing this knowledge in policy-relevant terms to government and industrial leaders are the cornerstones of environmental stewardship.

FY 1998 Accomplishments - NOAA had many key accomplishments across the objectives supporting this strategic goal in FY 1998. NOAA continued to make progress

in understanding and documenting decadal to centennial climate changes. NOAA provided major scientific input and leadership to the Intergovernmental Panel on Climate Change (IPCC), the World Meteorological Organization (WMO), United Nations Environment Programme (UNEP), the public-private partnership, and the North American Research Strategy for Tropospheric Ozone (NARSTO).

In FY 1998, NOAA:

- Narrowed the uncertainties in the global carbon dioxide budget, improved understanding of the trends and forcing of greenhouse gases and methane, and reduced the uncertainty in climate forcing by ozone changes.

- Helped formulate the scientific scope to be covered in the FY 2001 major climate assessment of the Intergovernmental Panel on Climate Change (IPCC). NOAA provided the highest quality and objective scientific information on greenhouse gases available to the U.S. policy-makers.

- Improved the representation of the oceans in coupled climate prediction models and improved understanding of the role of the oceans in the carbon cycle.

- Determined that the ocean is a significant sink for atmospheric methyl bromide, an ozone depleting gas. The estimate of its atmospheric lifetime has been reduced substantially which corresponds to a significant lowering (30 percent) of the ozone depletion potential of this compound.

- Improved the explanatory capability of climate models and their correlation with historical observations regarding global surface temperatures, carbon dioxide concentrations, and atmospheric sulfate aerosols.

- Reported that the uptake of carbon dioxide over the North American continent during the period 1988-1992 was significantly higher than previously estimated by other methods. The carbon sink over North America was larger by far than over any other land mass regardless of area.

- Continued to document the effectiveness of international agreements concerning the stratospheric ozone layer and to advance assessments for the rehabilitation of the ozone layer.

Key FY 2000 Activities:

Document and improve our understanding of the change in the frequency and intensity of extreme precipitation events and the increase of 20th Century precipitation in North America.

PADCC

Continue to advance understanding of the role of natural and human-influenced emissions in altering the radiation balance of the Earth, with an emphasis on new measurements of the carbon dioxide uptake by vegetation and the radiative role of tropospheric ozone.

- Complete the initial state-of-science assessment of rural ozone chemistry under the Health of the Atmosphere research project to provide a fundamental understanding of new air quality issues.

- Assess the trends of acidic deposition levels in the United States from recent data.

- Develop better models for climate prediction, with a focus on an improved representation of the cooling influence of aerosol particles. This will help lay the groundwork for an improved understanding of the radiation science in climate models that will provide insight to the climate predictions to be contained in the year 2001 assessment of the Intergovernmental Panel on Climate Change.

- Update and improve global databases of decadal to millennial length time series of climatic change to provide a better baseline against which human-caused changes can be compared.

- Document the relationship between the El Nino Southern Oscillation phenomenon and decadal time-scale climate trends and deploy chemical and biological sensors on the equatorial Pacific mooring buoy system.

- Document and improve our understanding of past changes in the hydrological cycle as related to ongoing and projected increases in global temperatures.

- Provide an estimate of the natural surface-level ozone abundances in North America, which will help establish the background against which human perturbations can be assessed.

- Use the leased or purchased very large scalable computer system to attack some of the most important problems in modeling the behavior of the climate system that presently prevent credible regional climate projections.

Invest in Observation Infrastructure by beginning COOP Network modernization and Rain Gauge Network to maintain Nation’s climate record.

Key Performance Measures

The scientific community has in place a regular process for evaluating, on a several-year time scale, the major scientific advances in climate science. This process is the periodic assessment of the state of scientific understanding of the climate system. NOAA's measure of performance is that 90% of the research in relevant areas of endeavor be incorporated into these assessments, namely, the vast majority of NOAA's results are deemed by our scientific peers to be major advances in understanding. Three to five years is the period generally used to expect substantial overall advancements in a field such that a new state-of-understanding assessment could be justified. Those products take 2 ½- to 3-years to produce.

Performance Measure	1999	2000	2001	2001	2002
Results of 90% of the research activities cited in the 2001 IPCC third Assessment of Climate Change	NA	NA	90% cited	NA	NA
Results of 90% of the research activities cited in the 2002 UNEP/ WMO Assessments of ozone depletion	NA	NA	NA	NA	90% cited
Results of 90% of the research activities cited in the 1998 NARSTO Assessment of surface level ozone	90% cited	NA	NA	NA	NA
Results of 90% of the climate trends research cited in the U.S. National Climate Assessment	NA	90% cited	NA	NA	NA

DOC: The Digital Department
http://www.ncdc.noaa.gov/pw/cg/decadal.html

Predict and Assess Decadal-to-Centennial Change

($ in Thousands)

Strategic Plan Objectives	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Characterize Global Climate Forcing Agents	44	7,237	44	7,305	44	10,405		3,100
Understand the Role of Oceans in Global Change	211	29,221	211	30,644	211	32,344		1,700
Guide the Rehabilitation of the Ozone Layer	44	7,033	44	7,099	44	7,099		
Provide Prediction, Assessment & Human Impact Information	41	8,956	41	9,018	41	10,218		1,200
Ensure a Long-Term Climate Record	75	24,125	75	24,125	75	22,125		(2,000)
Provide the Scientific Basis for Improved Air Quality	3	5,412	3	5,412	3	5,799		387
GLOBE	9	2,500	9	2,500	9	5,000		2,500
Infrastructure	58	5,008	58	5,034	58	10,776		5,742
Total	485	89,492	485	91,137	485	103,766		12,629

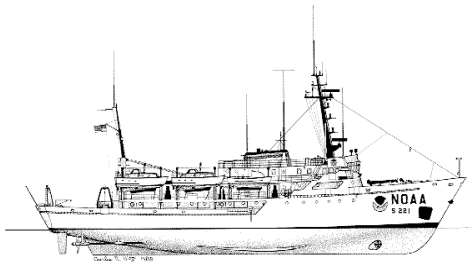
Predict and Assess Decadal-to-Centennial Change

($ in Thousands)

Participation By Activity	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Oceanic and Atmospheric Research	374	67,936	374	69,553	374	78,440		8,887
National Weather Service	55	8,189	55	8,189	55	9,689		1,500
National Environmental Satellite, Data & Information Service		8,219		8,219		4,719		(3,500)
Program Support	54	4,459	55	4,614	55	4,614		
Facilities		83		84		190		106
Fleet Maintenance & Planning	1	542	1	414	1	414		
Systems Acquisition - PAC						5,700		5,700
Construction- PAC		64		64				(64)
Total	484	89,492	485	91,137	485	103,766		12,629

Promote Safe Navigation

Total Request: $101,074,000

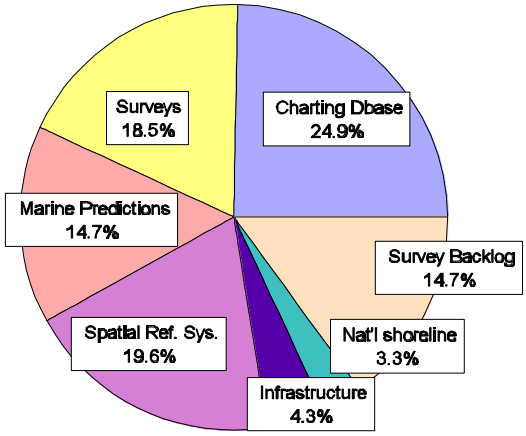


The NOAA Ship RAINIER conducts hydrographic surveys used for nautical charting.

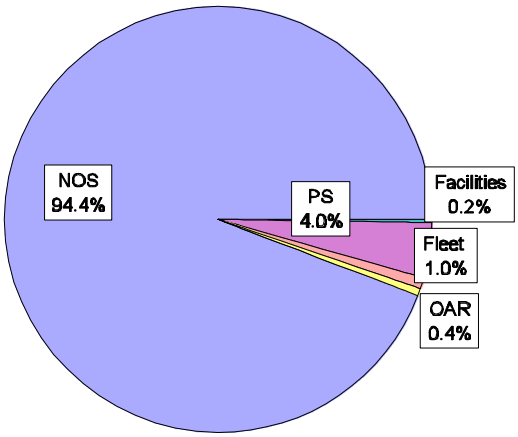
Vision - By 2005, merchant ships, fishing vessels and recreational boats will safely ply our coastal waters, electronically guided by space-based navigation and advanced information technologies. NOAA will revolutionize U.S. marine navigation, mapping and surveying and assist commercial shipping in moving increased cargoes safely and efficiently into and out of the Nation's ports and harbors. NOAA will provide a precise satellite derived reference system as the basis for the Nation's nautical data and geographical positioning needs.

Challenge - Ships have doubled in length, width and draft in the last 50 years and seagoing commerce has tripled, leading to increased risk in the Nation's ports. Between 1993 and 1996, tankers alone were involved in 174 groundings, 14 collisions and 12 deaths. Navigation tools must be modernized. Up-to-date nautical charts are essential for the safety of life and property, and for safe and efficient navigation. Approximately 60 percent of NOAA's nautical charting data were obtained before 1940. Although considered to be the best

Strategic Plan Objectives



Participation by Activity



available at that time, dramatic improvements in efficiency and accuracy have been realized in the technology used to collect data. Two-thirds of the data used for tidal predictions are more than 40 years old. The existing coordinate reference system must be renovated to provide the higher accuracy and accessibility available from the Global Positioning System (GPS).

Implementation Strategy - The objectives of the Promote Safe Navigation goal are to:

- build, maintain, and deliver a digital nautical charting database to underpin new electronic navigation systems which integrate satellite positioning, tidal heights and currents, radar and sonar, and navigational aids;

- update nautical surveys of the Nation's coastal areas using full-bottom coverage technologies;

- define the national shoreline in an accurate and consistent manner using state of the art technology to serve the Nation's navigational and coastal;

- Provide mariners with real-time observations and forecasts of water levels, tides, and currents, and weather conditions in ports; and

- transform the obsolete geodetic reference frame into a Global Positioning System (GPS)-based system of monumented marks and continuously-operating reference stations to support the digital revolution in mapping, charting, and surveying.

Benefits - New technology including full-bottom nautical surveys, digital charting, satellite positioning (GPS) and real-time observations of tides and currents promise to reduce maritime transportation risks, enhance environmental protections and heighten the competitiveness of the U.S. shipping industry. With today's deep-draft container ships, each additional inch of clearance translates into as much as tens of thousands of dollars in additional cargo trade in or out of the U. S. Newer technologies will result in more complete and accurate surveys of the ocean floor, and will enable the mariner to know the ship's precise position relative to charted obstacles as well as its depth and underkeel clearance. These technologies also will support the needs of coastal zone planners, regulatory officials and researchers as they work to ensure the safe, sustainable and efficient development of our coastal and ocean resources.

FY 1998 Accomplishments - During FY 1998, NOAA:

- Increased the annual production of new nautical chart editions from 338 (in FY 1997) to 368 (in FY 1998); and decreased data-to-chart production time from 20 months to 8 months by continuing to implement a just-in-time delivery system for applying new hydrographic data to nautical chart editions.

- Completed all 198 planned Electronic Navigational Charts covering 40 critical port areas.

- Developed the Raster Chart Update Service and increased sales of raster nautical charts by 73 percent.

- Installed and operated shallow-water multibeam and side-scan sonar systems on NOAA hydrographic vessels for full bottom coverage nautical surveys; awarded survey contracts and commenced contract surveying.

- Established a cooperative agreement with Lockheed Martin to collaborate on research and development of technology for PORTS.

- Affected real-time monitoring of all National Water Level Observation Network and PORTS sensors and implemented prototype Continuous Operational Real-Time Monitoring System.

- Flew aerial photography for post-hurricane (Bonnie and Georges) shoreline mapping; mapped Alaskan shoreline using synthetic aperture radar.

- Brought on line 34 Continuously Operating Reference Stations to improve the accuracy of GPS readings for end-users, and installed 77 horizontal Federal Base Network (FBN) stations and 83 vertical FBN stations to continue laying the basic positional framework for the National Spatial Reference System.

Key FY 2000 Activities:

- Conduct hydrographic surveys to continue making progress toward the reduction of the backlog of critical areas to be surveyed, and use these data to produce up-to-date nautical charts that are critical to promoting the safety and efficiency of maritime transportation.

- Complete the addition of vector data to the digital nautical chart database in order to provide mariners with the accurate, up-to-date electronic chart data needed to safely and efficiently navigate waterways using today's computer and positioning technology.

- Continue to improve the ability to measure heights using GPS, resulting in more accurate tide measurements and enabling larger ships to pass safely into our Nation's ports.

PSN

- Continue to improve access to the National Spatial Reference System by adding reference points to the system and increasing the availability of quality-controlled GPS reference data by bringing more Continuously Operating Reference Stations on line, resulting in significant safety and economic benefits to a broad range of industries, academia, local, state and federal governments and other entities.

- Provide quality assurance of real-time information supplied directly to the user, including PORTS data used to facilitate critical life and property decisions, by ensuring that all sensors/instruments are operating correctly, are continuing to provide accurate data and have the need for corrective maintenance identified in an efficient manner.

DOC: The Digital Department
http://anchor.ncd.noaa.gov/psn/psn.htm

Key Performance Measures

	1995 act.	1996 act.	1997 act.	1998 act.	1999 est.	2000 est.
Nautical chart suite updated (%) (replaced by A and B below)	20	23	33	36	'*	'*
A # of Print-On-Demand Charts updated for Notice to Mariners (Suite of 1000 Charts)	N/A	N/A	N/A	N/A	250	500
B % of Raster Charts Updated for weekly Notice to Mariners	N/A	N/A	N/A	N/A	100	100
Reduce critical area survey backlog (43,000 SNM backlog) Cumulative reduction (%)	6	9	12	15	18	22
National Water Level Observation Network Cumulative % modernized	65	70	78	78	75	75
National Spatial Reference System Cumulative % complete	42	53	60	69	72#	80#
Digital nautical database available Cumulative % raster charts Cumulative % vector charts** (% of total data collected) # Vector Charts	36 N/A N/A	100 1 N/A	 100 25 N/A	 100 100 N/A	 100 100 73	100 100 190

* Due to the transition to Print-on-Demand, this Performance Measure is replaced by the new Print-on-Demand and the Raster Chart Update Performance Measures (Measures A and B).

** The vector database is being built by adding data layers (or themes), rather than by one chart at a time. For instance, all shoreline data are being collected for a region, rather than for an individual chart. Once every theme has been added to the database, all charts will be completed at essentially the same time in FY 1999.

Number of Continuous Operating Reference Stations increased from 200 to 300 in FY 1999.

Promote Safe Navigation

($ in Thousands)

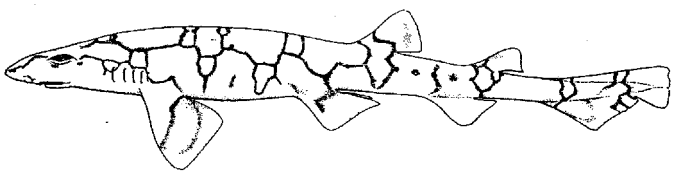
Strategic Plan Objectives	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Build Nautical Charting Database	175	23,950	175	24,123	175	25,123		1,000
Update Nautical Surveys	319	20,539	319	20,821	319	18,661		(2,160)
Provide Marine Predictions	141	12,000	141	12,133	141	14,883		2,750
Establish National Spatial Reference System	197	19,659	197	19,849	197	19,849		
Define National Shoreline		3,311		3,311		3,311		
Address Survey Backlog/Contracts		14,000		14,000		14,900		900
Infrastructure	46	4,105	46	4,260	46	4,347		87
Total	878	97,564	878	98,497	878	101,074		2,577

Promote Safe Navigation

($ in Thousands)

Participation By Activity	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
National Ocean Service	807	92,248	807	92,986	807	95,476		2,490
Oceanic and Atmospheric Research		389		389		389		
Program Support	69	3,532	69	3,696	69	3,696		
Facilities		68		69		156		87
Fleet Maintenance & Planning	2	1,327	2	1,357	2	1,357		
Total	878	97,564	878	98,497	878	101,074		2,577

Build Sustainable Fisheries

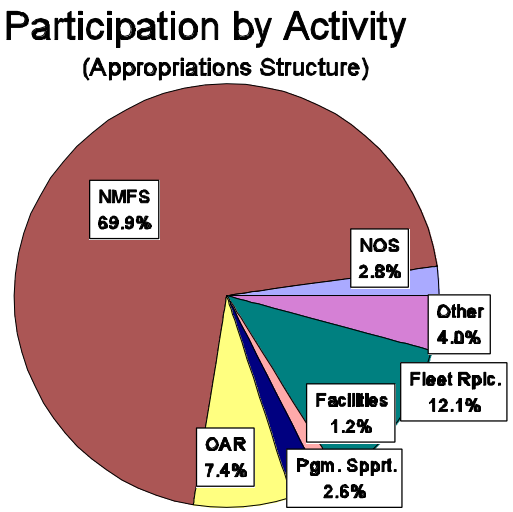


Chain Dogfish

Total Request: 426,345,000

Vision - NOAA's vision for the next decade is to greatly increase the Nation's wealth and quality of life through sustainable fisheries that support fishing industry jobs, provide safe and wholesome seafood, and ensure recreational fishing opportunities.

Challenge - Billions of dollars in economic growth, thousands of jobs and countless recreational fishing opportunities are wasted as a result of overfishing and overcapitalization in commercial and recreational fisheries. While many fisheries are well managed and are producing positive benefits, others are severely depleted, and must be restored to realize their long-term potential. For example, the historically important New England groundfish fishery was severely curtailed in 1994 due to the collapse of stocks. Transboundary resources can be especially vulnerable as they require international cooperation to achieve effective conservation and management. U.S. fisheries are troubled by bycatch, including juvenile and protected marine species, controversial allocation decisions among elements of fishing industries and degradation and loss of essential fish



habitat. The lack of sufficient scientific information makes it necessary, at times, to make conservative management decisions. There is an increasing domestic and global demand for seafood. In order to meet this growing demand, and in light of the growing number of wild stocks that are overfished or fully utilized, it is important for the Nation to develop marine aquaculture, and to do so in an environmentally sound manner.

Implementation Strategy - The objectives of this strategic planning goal are to:

- eliminate and prevent overfishing and overcapitalization - by assessing the status of fishery resources, advancing fishery predictions, managing for economic growth in the fishing industry and ensuring adequate and voluntary compliance with fishery regulations;

- attain economic sustainability in fishing communities - by providing research and services for fishery-dependent industries and maximizing benefits from marine resources; and

- develop environmentally and economically sound marine aquaculture - by supporting aquaculture research and development and ensuring responsible industry practices.

Benefits - Rebuilding overexploited fish stocks by eliminating overfishing and improving fish habitat, and improving the economics of fishieries by reducing overcapitilization, are the key elements in a transition to sustainable fisheries. These activities will result in a more viable and competitive U.S. fishing industry, which in turn will lead to economic and social improvement in fisheries-dependent communities. Along with economic gains and the rebuilding of living marine resources, improved fisheries management and conservation will enhance recreational opportunities and save lives by eliminating the dangerous and wasteful race for the fish. By developing environmentally sound aquaculture, the increasing demand for seafood can be met with high quality and reliable products without contributing to overfishing of wild populations.

FY 1998 Accomplishments - During FY 1998, NOAA continued to provide national leadership to maintain and improve the health of the Nation's fisheries. The following are the year's highlights:

- Publication of the National Standard Guidelines for Fishery Conservation and Management - NOAA Fisheries finalized the revisions and additions to the National Standards guidelines, which assist in the development and review of fishery management plans (FMPs) amendments and regulations prepared by the regional Fishery Management Councils and the Secretary of Commerce. On May 5, 1998, NOAA Fisheries published the final rule for guidelines in the federal

Register. The revisions and additions to the guidelines implement the October 1996 Sustainable Fisheries Act amendments to the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). Congress established the National Standards to be the guiding principles for the management of our Nation's fishery resources, and to be the basis upon which all proposed management programs are judged.

Net Fish Traps.

- List of Overfished Fisheries - Under the reauthorization of the MSFCMA, the Secretary of Commerce is required to report to Congress annually on the status of the Nation's fisheries and identify those fisheries that are overfished or are approaching a condition of being overfished. The 1998 report has been prepared and covers a greater number of assessed fisheries. This report is critical in achieving the goals of the MSFCMA to rebuild stocks and achieve the maximum benefits to the Nation. The report serves as the trigger mechanism for efforts to rebuild overfished stocks.

- Publication of the NMFS Strategic Research Plan - As part of its efforts to implement the Sustainable Fisheries Act, NOAA Fisheries has developed the five-year Plan for Fisheries Research. The plan covers fisheries, habitat, and protected species research to meet requirements of the MSFMCA. Fishery managers use this research to make scientifically sound decisions to achieve sustainable use of our Nation's living marine resources. The Plan encompasses four areas of research:
  - 1) research to support fisheries conservation and management;
  - 2) conservation and engineering research;

- 3) research on the fisheries; and
- 4) information and management research.

- Development of Aquaculture Policy - Constituent and congressional support for aquaculture dictates that NOAA bring together its diverse programs to develop a comprehensive aquaculture policy and strategy to provide a context for agency activities for the next 10 years. NOAA has a strong statutory basis for the promotion and regulation of marine aquaculture. The development of an environmentally and economically sound aquaculture program is one of the three objectives in NOAA's Strategic Planning Goal to Build Sustainable Fisheries. The NOAA aquaculture policy was signed in February 1998 and focuses on a sustainable aquaculture industry that will meet growing consumer demand for aquatic foods and products that are high quality, safe, competitively priced, and are produced in an environmentally responsible manner with maximum opportunity for profitability in all sectors of the industry.

- Publication of an Essential Fish Habitat (EFH) interim rule - NOAA Fisheries published an interim rule which sets the implementation of EFH under MSFCMA. NMFS conducted 30 public meetings to brief constituencies, including Regional Fisheries Councils, of this action. As a result, the Fisheries Regional Councils have developed EFH amendments to the Fisheries Management Plans. Amendments are nearly complete for all the 39 affected FMPs. The implementation of EFH would have major impacts on states and other federal agencies. NOAA is presently working with other federal agencies through an outreach program.

Key FY 2000 Activities:

- Implement provisions of the Sustainable Fisheries Act amendments to MSFCMA based on available information on overfishing, bycatch, essential fish habitat and safety at sea. Research is required to understand the effects of fishing impacts on habitat and develop management programs to mitigate those impacts. Other activities include completing reports and studies, establishing advisory panels, and promulgating new regulations. The new requirements substantially increase the workload of the eight regional fishery management councils.

- Increase the geographic scope and the rate at which fishery habitat restoration efforts are undertaken on both regional and community levels in partnership with public and private interests. NOAA will address the full range of habitats vital to NOAA's trust resources including wetlands, salt marshes, seagrass beds, mangroves, anadromous fish spawning areas, and coral reefs.

- Improve NOAA's analytical capability to predict and monitor the economic and social consequences of fisheries management decisions on fishing communities.

NOAA will implement a comprehensive plan for fisheries data collection nationally that will improve fisheries data and fill gaps in the current data collection systems with respect to economic and social data.

- Continue to collect resource survey data with an emphasis on stocks of unknown

or uncertain status, and on high priority stocks. The Sustainable Fisheries Act requires an expansion of effort to achieve annual assessments of all stocks. Data collection will be accomplished with NOAA platforms or through charter arrangements for vessels, through satellite remote sensing and data communication capabilities and through the collection of additional fishery-dependent statistics.

- Develop programs related to the management of fishing effort; a central registry system of limited access permit systems; a standardized vessel registration system; and the inventory and regulation of allowable gear by fishery.

- Conduct a source selection leading to an award of a contract initiating construction of the first of the four new Fishery Research Vessels (FRVs). The construction of these new vessels will provide essential support to the Build Sustainable Fisheries goal by providing state of the art platforms for the conduct of stock assessment surveys including acoustic surveys, operationalize other advanced and emerging technologies, and replace the existing aging fisheries fleet. The acquisition team will also clarify regionally specific design requirements for the second FRV and complete a requirements package for the third and fourth FRVs.

BSF

- Advance enforcement and surveillance programs to educate the public, deter potential offenders and detect, apprehend and prosecute willful violators. Fisheries management measures promulgated to comply with the Sustainable Fisheries Act will require increased enforcement. Strategies will include implementation of a technologically advanced Vessel Monitoring System that avoids expensive and intrusive at-sea boardings and continuing examination of satellite capabilities for fisheries enforcement purposes.

- Support aquaculture for indigenous species of marine species in near and off-shore environments and in on-shore recirculating systems. In addition to developing technology, NOAA will evaluate impacts of aquaculture activity on ecosystems and wildstock genetic integrity and health. Efforts will address siting, permitting, licensing and regulatory requirements, especially for aquaculture in the exclusive economic zone. Financial assistance will be provided for environmentally sound aquaculture ventures.

DOC: The Digital Department
http://www.noaa.gov/nmfs/sustain.html

Key Performance Measures

	1995 act.	1996 act.	1997 act.	1998 act.	1999 est.	2000 est.
% of SFA requirements met	N/A	N/A	N/A	N/A	20	40
% of stocks assessed (of 201 identified)	74	78	79	79	79	80
% completion of information technology procurement/operations	53	74	85	90	95	100
# Fishery Management Plans with access controls implemented (of 39 FMPs)	19	24	25	23	27	30
# of fleets using vessel monitoring systems for spatial/temporal regulations	1	3	3	3	5	6

Build Sustainable Fisheries

($ in Thousands)

Strategic Plan Objectives	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Assess the Status of Fishery Resources	1,492	190,080						
Advance Fishery Prediction	17	20,950						
Managing for Economic Growth	384	117,983						
Ensuring Adequate Compliance	181	17,775						
Provide Research and Service	47	18,250						
Eliminate and Prevent Overfishing and Overcapitalization			1,852	285,225	1,862	268,502	10	(16,723)
Attain Economic Sustainability in Fishing Communities			262	47,087	283	51,048	21	3,961
Develop Environmentally & Economically Sound Marine Aquaculture			7	28,757	17	26,252	10	(2,505)
Infrastructure	209	39,624	209	37,364	209	80,543	0	43,179
Total	2,330	404,662	2,330	398,433	2,371	426,345	41	27,912

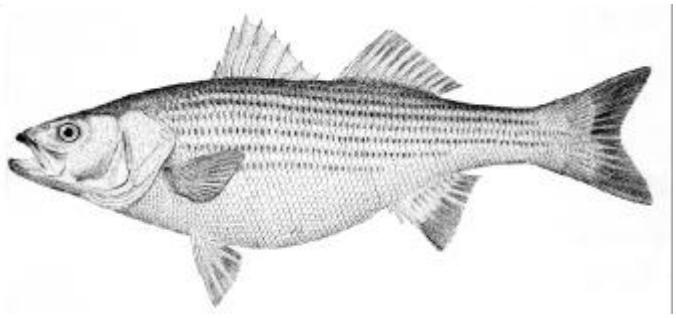
Build Sustainable Fisheries

($ in Thousands)

Participant By Activity	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
National Ocean Service	14	9,200	14	9,220	14	11,820		2,600
National Marine Fisheries Service	2,077	291,373	2,077	294,499	2,094	298,152	17	3,653
Oceanic and Atmospheric Research	24	35,145	24	32,095	24	31,386		(709)
Program Support	196	10,374	196	11,179	196	11,179		
Facilities	8	8,535	8	2,093	8	5,300		3,207
Fleet Maintenance & Planning	5	7,315	5	6,627	5	4,227		(2,400)
Construction -PAC		9,195		9,195		1,000		(8,195)
Fleet Replacement -PAC						51,567		51,567
Other PAC		1,000		1,000				(1,000)
Fisheries Finance Program Account		28,338		28,338	24	10,258	24	(18,080)
Fisheries Promotional Fund						(1,186)		(1,186)
Promote and Develop Fisheries Products	5	3,045	5	3,045	5	1,500		(1,545)
Fishermen's Contingency Fund	1	953	1	953	1	953		
Foreign Fishing Observer Fund		189		189		189		
Total	2,330	404,662	2,330	398,433	2,371	426,345	41	27,912

Recover Protected Species

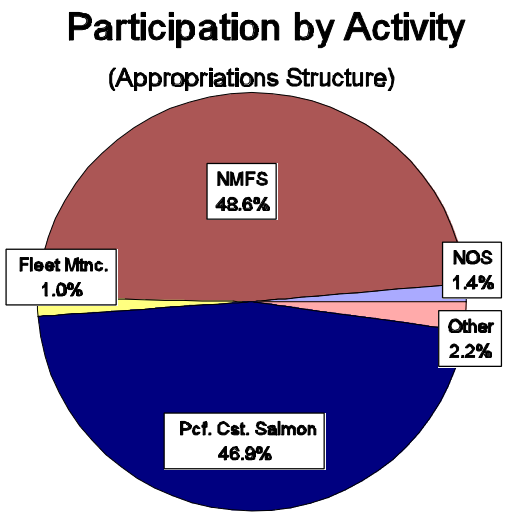
Total Request: $213,339,000



Striped Bass

Vision - NOAA's vision is to conserve marine species and to recover those in danger of extinction. By 2005, NOAA will be on the road to recovering every marine species at risk and maintaining the healthy marine ecosystems upon which they depend.

Challenge - Marine resources contribute billions of dollars to the Nation's economy. However, many commercial and recreational activities contribute to stress on marine species. Many populations of marine organisms are depleted or declining due to human activity in marine ecosystems and unknown causes. For example, West Coast salmon populations are at-risk due to a combination of factors including habitat loss and commercial overexploitation. Despite protective measures, fishing-related mortality continues to threaten marine turtles in the Nation's waters. Several seal and sea lion populations in Alaska are declining rapidly and the causes are uncertain. Recovery plans have been developed for the most endangered species, but implementation for others, especially for stocks of marine mammals and sea turtles, is needed. The desired outcome is to recover protected species in danger of extinction and to maintain healthy species and ecosystems, in a manner compatible with the sustainable use of marine resources.

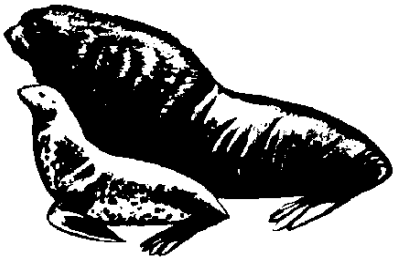


RPS

Implementation Strategy - The objectives of this goal are to:

- reduce the probability of extinction for protected species; and
- maintain healthy species and ecosystems.

Benefits - Through conservation of the Nation's living marine resources, NOAA will enhance economic and cultural opportunities for future generations. The existence of the Marine Mammal Protection Act, the ESA and other legislation provides a clear indication of public support for strong efforts to conserve living marine resources. This effort will enable the preservation of marine biodiversity by balancing the utilization of natural resources with the management of protected species. Recovering species, and avoiding the further decline of others, will contribute to the overall health and understanding of marine ecosystems. Improved science will lead to better long-term management and conservation strategies.



Steller sea lion and pup.

FY 1998 Accomplishments - During FY 1998, NOAA:

- Listed species and made substantial progress at reversing the decline of others in FY 1998. Johnson's seagrass was listed as threatened with extinction. Oregon coastal coho salmon was also listed as threatened, as were stocks of West Coast steelhead trout on the Lower Columbia River and in the Central Valley of California. In the Rogue River in southwestern Oregon, NOAA found that efforts to protect coho salmon are causing a rebound in the species. As well, NOAA found that the population of Atlantic right whales was maintained through early warning systems and take reduction strategies for fisheries.

- Continued to develop and implement recovery plans and take reduction plans for protected species. NOAA published a take reduction plan for marine mammals in the mid-Atlantic Ocean. A take reduction plan for the Gulf of Maine harbor porpoise was published in early FY 1999. In the eastern North Pacific, NOAA monitored the delisted gray whale population to ensure its continued population recovery.

- For lobster harvesting and other commercial fisheries, developed gear modifications to protect Atlantic large whales. Also, NOAA implemented the International Dolphin Conservation Program, which changes the standard for the "dolphin-safe" label affixed to canned tuna to mean that no dolphins were killed or seriously injured during tuna harvesting.

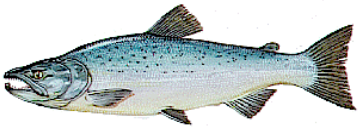
- Made strides in protecting at risk turtle species by promoting the use of turtle excluder devices (TEDs) in the U.S. and internationally. The endangered Kemp's ridley turtle population experienced an increased survival rate through the use of TEDs in the U.S. and Mexico. Threatened Atlantic loggerhead turtles also experienced an increase in survival through TED use in the U.S. and abroad. The Recover Protected Species goal will continue to focus on the protection and recovery of at risk turtle populations in FY 2000.

FY 2000 Key Activities:

Through its salmon recovery effort, NOAA will dramatically expand Pacific salmonid recovery actions with federal, state, and private landowners to restore and maintain habitat in the Pacific Northwest and West Coast, and implement conservation practices conducive to salmon recovery, including:

- Partnering with other federal agencies to meet the increasing need for consultation on the impacts of federal actions and those of clients of other agencies. NOAA will work with the Department of Agriculture and the Environmental Protection Agency to address salmon conservation needs and requirements in federal planning and activities.

- Increasing NOAA participation with the Interior Columbia Basin Ecosystem Management Program by providing consultation and advisory services specifically regarding projects to improve habitat and increase populations of listed steelhead and chinook salmon.



Chinook Salmon

- Implementating of the 1999 ESA Section 7 Biological Opinion regarding the impact of federal dams in the Columbia River basin. The opinion will dramatically affect the allocation of water resources in the Pacific Northwest. The opinion addresses the operation of federal hydro projects and will enable NMFS to effectively respond to the accelerated schedule for dam relicensing in the Pacific Northwest.

- Supporting state and tribal implementation of management and conservation of listed and candidate salmon populations. Under its salmon recovery effort, NOAA will continue to work with participating States and tribal organizations to implement cooperative agreements under Section 6 of the ESA.

RPS

Hawaiian Monk seal and pup.

Through our efforts to prevent the extinction of protected species, NOAA will attempt to stem the declines of northern Atlantic and North Pacific right whales, Hawaiian monk seals, Steller sea lions, the Pacific leatherback turtle, and the northern Atlantic loggerhead turtle, all of which are on the brink of extinction. This will be done through a combination of research, monitoring, and management actions to determine the causes for the decline and to implement recovery measures, such as:

- Increasing the collapsing population of the Pacific leatherback populations, NOAA will eliminate incidental take in commercial driftnet and longline fisheries; support international efforts to protect nesting turtles and their eggs and nesting habitat; and determine migratory patterns, habitat requirements and primary foraging areas for the species throughout the leatherback range.

- For loggerhead turtles, developing gear technology to eliminate incidental take in non-shrimp commercial fisheries; determine population size and status in the Nation's waters; determine the population range and level of mortality; and develop cooperative international efforts to protect the loggerhead population.

- In the case of the monk seal, conducting ecology studies to protect and conserve foraging habitat and conducting health assessments to mitigate the impact of disease, of particular importance with translocation efforts. As well, the translocation of weaned pups and removal of debris from essential habitat will together benefit population growth.

- Completing a large-scale population assessment of the North Atlantic right whale, providing an accurate measure of the species status. Data from the assessment will be used in developing and implementing efforts to reduce species mortality due to human activity. A population status study of the North Pacific right whale will be initiated, monitoring trends in abundance and identifying and protecting critical habitat.

- For Steller sea lions, focusing on reducing known threats from fishery interactions and assessing and monitoring the status of this endangered stock.

- Supporting partnerships for recovery and conservation of protected resources with Alaskan Natives, states, fishers, and foreign nations. These will involve research and educational actions to ensure conservation of shared stocks.

- Taking a proactive role to prevent the need for ESA listing. We will identify areas and prioritize habitats essential for biodiversity and protected species conservation. NOAA's efforts will be focused on coral reef ecosystem and ESA candidate

species assessment and conservation. This will be done through assessment and identification of threats and through establishing cooperative conservation programs and, where necessary, restoration of these areas.

RPS

Key Performance Measures

	1995 act.	1996 act.	1997 act.	1998 act.	1999 est.	2000 est.
# recovery plans developed (cum)	11	13	10	20	25	27
# recovery plan priority activities implemented (annual)	8	8	8	8	15	20
# species with population status improved (annual)	4	11	12	23	15	16
# status reviews used to establish and evaluate conservation programs (annual)	3	3	11	18	11	13
# investigation on mortality of protected species (annual)	9	11	7	10	10	15
# cooperative conservation programs implemented (cum)	3	4	4	10	10	10

Recover Protected Species

($ in Thousands)

Strategic Plan Objectives	*FY 1999 ENACTED* FTE	AMT.	*FY 2000 BASE* FTE	AMT.	*FY 2000 PRES. REQUEST* FTE	AMT.	*INC./DEC. (REQUEST - BASE)* FTE	AMT.
Assess Status and Impacts	351	37,868						
Implement Conservation Plans	199	37,557						
Maintain Healthy Species and Ecosystems			360	32,068	369	37,541	9	5,473
Implement Conservation Plans			190	44,237	327	170,449	137	126,212
Infrastructure	25	4,209	25	4,957	25	5,349		392
Total	575	79,634	575	81,262	721	213,339	146	132,077

Recover Protected Species

($ in Thousands)

Participation By Activity	*FY 1999 ENACTED* FTE	AMT.	*FY 2000 BASE* FTE	AMT.	*FY 2000 PRES. REQUEST* FTE	AMT.	*INC./DEC. (REQUEST - BASE)* FTE	AMT.
National Ocean Service						3,000		3,000
National Marine Fisheries Service	530	74,073	530	74,921	676	103,606	146	28,685
Oceanic and Atmospheric Research		340		340		340		
National Environmental Satellite, Data & Information Service		1,202		1,202		1,202		
Program Support	41	1,334	41	1,429	41	1,429		
Facilities	2	747	2	754	2	1,705		951
Fleet Maintenance & Planning	2	1,379	2	2,057	2	2,057		
Construction - PAC		559		559				(559)
Pacific Coastal Slamon Funds						100,000		100,000
Total	575	79,634	575	81,262	721	213,339	146	132,077

Recover Protected Species

($ in Thousands)

Strategic Plan Objectives	*FY 1999 ENACTED* FTE	AMT.	*FY 2000 BASE* FTE	AMT.	*FY 2000 PRES. REQUEST* FTE	AMT.	*INC./DEC. (REQUEST - BASE)* FTE	AMT.
Assess Status and Impacts	351	37,868						
Implement Conservation Plans	199	37,557						
Maintain Healthy Species and Ecosystems			360	32,068	369	37,541	9	5,473
Implement Conservation Plans			190	44,237	327	170,449	137	126,212
Infrastructure	25	4,209	25	4,957	25	5,349		392
Total	575	79,634	575	81,262	721	213,339	146	132,077

Recover Protected Species

($ in Thousands)

Participation By Activity	*FY 1999 ENACTED* FTE	AMT.	*FY 2000 BASE* FTE	AMT.	*FY 2000 PRES. REQUEST* FTE	AMT.	*INC./DEC. (REQUEST - BASE)* FTE	AMT.
National Ocean Service						3,000		3,000
National Marine Fisheries Service	530	74,073	530	74,921	676	103,606	146	28,685
Oceanic and Atmospheric Research		340		340		340		
National Environmental Satellite, Data & Information Service		1,202		1,202		1,202		
Program Support	41	1,334	41	1,429	41	1,429		
Facilities	2	747	2	754	2	1,705		951
Fleet Maintenance & Planning	2	1,379	2	2,057	2	2,057		
Construction - PAC		559		559				(559)
Pacific Coastal Slamon Funds						100,000		100,000
Total	575	79,634	575	81,262	721	213,339	146	132,077

Sustain Healthy Coasts

Total Request: $315,268,000

Fagatale Bay National Marine Sanctuary

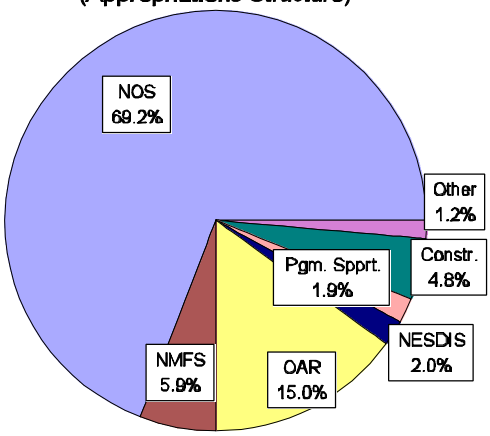
Vision - By 2005, the Nation's coasts will have more productive and diverse habitats for fish and wildlife, and cleaner coastal waters for recreation and the production of seafood. Coastal communities will have thriving, sustainable economies based on well-planned development and healthy coastal ecosystems.

Challenge - Despite significant progress in developing the technology, information and management systems that foster sustainable economies and conservation of coastal resources, rapid population growth and increasing demands in many coastal areas have degraded natural resources and led to declines in both economic productivity and environmental integrity. Over half of the U.S. population lives in coastal areas, but only 10 percent of the U.S. land area is coastal. Coastal areas provide essential habitats for over 70 percent of U.S. commercial and recreational fisheries species. Healthy coastal environments support tourism, recreation, fishing and other industries that generate more than $100 billion annually in coastal communities across the Nation.

Degradation of coastal environments threatens communities, businesses and human health. In 1995, U.S. beaches were closed or warnings were issued on more than 3,522 occasions. Degraded water quality continues to close or restrict the use

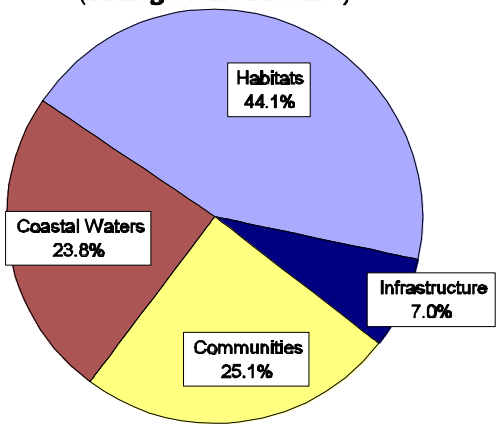
Participation by Activity

(Appropriations Structure)



Strategic Plan Objectives

(Strategic Plan Structure)



of nearly 30 percent of U.S. shellfish growing waters, including 4.5 million acres or 50 percent of shellfish growing areas in the Gulf of Mexico, the Nation's top shellfish-producing region. These are indications that more needs to be done to protect the economic and environmental opportunities of U.S. coastal zones. Maintaining the health, productivity and biodiversity of coastal ecosystems is essential to sustainable development of coastal economies and the future welfare of the Nation.

Implementation Strategy - Objectives of the Sustain Healthy Coasts strategic planning goal are to:

- Protect, conserve and restore coastal habitats and their biodiversity.

- Promote clean coastal waters to sustain living marine resources and ensure safe recreation, healthy seafood, and economic vitality.

- Foster well-planned and revitalized coastal communities that sustain coastal economies, are compatible with the natural environment, minimize the risks from nature’s hazards, and provide access to coastal resources for the public's use and enjoyment.

Benefits - This goal provides information, technology, research and management tools to address the practical needs and concerns of coastal resource managers at local, state, tribal and Federal levels. NOAA's coastal activities form an integrated program of monitoring, research, assessment, restoration, information dissemination and resource management that provides governmental and non-governmental groups with the basis for sound decisions and sustainable development of coastal areas. Federal-state partnerships such as the Coastal Zone Management Program, National Estuarine Research Reserve System and National Sea Grant College Program are essential activities supporting this goal. Research is a critical tool providing improved understanding of the way in which coastal ecosystems function, and increasing the ability to predict responses of ecosystems and society to human activities. This information allows managers and stakeholders to take appropriate actions for sustainable use of coastal resources and to avoid costly damages. NOAA's coastal programs are effective tools to ensure that the Nation's coastal ecosystems are managed for the long-term benefit of the public.

FY 1998 Accomplishments - In FY 1998, NOAA:

- Co-hosted with the Department of Navy the first national conference on oceans. The Year of the Ocean Conference focused on key issues concerning sustainable use of U.S. coastal and ocean resources including coastal and ocean navigation and transportation, coastal habitat, fishing resources and the interaction of ocean processes on weather and climate.

- NOAA co-led federal efforts to assist state and coastal communities in assessing, monitoring and responding to harmful algal bloom outbreaks such as pfiesteria and other species that cause red and brown tides.

- NOAA initiated new partnerships to explore the deep ocean. The Partnership for Sustainable Seas with the National Geographic Society and the Goldman Foundation will use new underwater technologies (including manned and unmanned submersibles) to explore the biological diversity and other characteristics of deep ocean areas within NOAA's 12 National Marine Sanctuaries. In addition, NOAA's National Sea Grant Program continues to support research partnerships that identified several new chemical products from marine organisms for pharmaceutical development in FY 1998.

NOAA increased protection and restoration for the Nation's valuable coastal habitats. For example, in FY 1998 NOAA:

- Worked with state and local governments to restore over 14,000 acres of coastal wetlands;

- Led or participated in over 25 major efforts to restore damaged coastal habitats from coral reefs to coastal wetlands and provided technical support to the Environmental Protection Agency at 350 coastal Superfund waste sites;

- Responded to over 92 spills of hazardous materials in coastal waters, and numerous groundings of vessels and other incidents impacting marine resources;

- Added a new Coastal Zone Management program (Georgia) and a new Estuarine Research Reserve (Jacques Cousteau - Mullica River, New Jersey) increasing federal-state partnerships in this area;

- Launched the first national State of the Coast report (http://state_of_coast.noaa.gov) to provide direct access to information and experts on the status, pressures, and responses related to U.S. coastal resources;

- Provided critical data and resources to the interagency South Florida Ecosystem Restoration effort by initiating an integrated coastal monitoring program. NOAA is responsible for information, monitoring and restoration of coastal portions of the interagency ecosystem restoration effort; and

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- Provided information for definition and description of essential fish habitat as required under the Magnuson-Stevens Fishery Conservation and Management Act.

Key FY 2000 Activities:

- Expand NOAA's ability to understand coastal fisheries habitat and be able to understand the stresses and impacts that cause changes to these vital habitats. Better knowledge of coastal fisheries habitat will enable NOAA to work with states and other agencies to protect, conserve, and restore these habitats for the benefit of fisheries as well as the whole coastal ecosystem.

- In support of the National Oceans Conference, NOAA will expand exploration of the earth's last frontier, the ocean. This includes expansion of ocean bottom observatories to develop advanced technologies for exploring and understanding the undersea environment. The new funding would also support understanding and protection of our National Marine Sanctuaries through direct observation of its undersea resources as well as gaining better knowledge of the importance that the ocean has in our economy and environment.

- Expand understanding on a variety of stresses to the coastal environment through improved research. NOAA will continue to reduce economic and environmental effects of aquatic nuisance species in coastal waters through research into impacts and cost-effective controls and prevention. Research in the Arctic will also enable NOAA to better understand this unique environment and the impacts human activities have there.

- Strengthen the Nation's coral reef restoration capabilities. In support of the Lands Legacy Initiative, NOAA will undertake a variety of coral reef restoration projects to prevent the degradation occurring from minor but cumulatively destructive incidents as well as establishing coral nurseries to help restore injured coral. Work will be done to determine optimal reef restoration techniques, and to transfer these techniques to others. These activities will build on the increased coral reef research requested as part of the President's pledge at the National Oceans Conference in 1998 to protect the biodiversity of our fragile coral reef ecosystems.

- Enhance the Nation's ability to protect and understand important estuarine habitat through the National Estuarine Research Reserve System (NERRS) as an important part of the Lands Legacy Initiative. With the addition of five new reserves and the doubling of the system's protected areas from the nearly 500,000 acres to approximately 1 million acres by FY 2000, NOAA has an unique


Sandy shoreline near Naples, FL.

opportunity to work with its state partners in the system to improve education, monitoring, research, and training for estuarine areas around the country. This includes critical land acquisition to improve habitat protection and construction projects to fulfill mandated research and public education activities. Activities undertaken at NERRS improve local, regional and national ability to conduct long-term research and develop new sustainable coastal management techniques, as well as promote improved water quality and habitat through better understanding of estuarine and watershed areas.

- Continue to improve the Nation's marine resource protection capabilities through the National Marine Sanctuary Program which will enhance protection for our coastal resources as part of the Lands Legacy Initiative. NOAA will improve its ability to manage the existing marine sanctuaries and implement key activities to support sound management including resource inventories, the development of tools and techniques, and assessing protection effectiveness and potential problems. A comprehensive effort to update the site selection criteria and to identify additional, potential candidate sites will be undertaken. with one new site to be identified in FY 2000. The result will be marine resource protection for some of the Nation's most unique ecosystems and habitat such as coral reefs, important cultural resources such as historic shipwrecks, America's most significant habitats for Humpback, Right, and Blue whales, and other important marine mammal colonies in the Pacific.

- As part of the South Florida Ecosystem Restoration Initiative to provide integrated coastal monitoring in Florida Bay and the Florida Keys National Marine Sanctuary, continue to restore South Florida's living marine resources and coral reefs; determine causes of declines and effects of human actions on coastal resources; and continue analysis of the economic impacts of restoration efforts in coastal areas.

- Understand the influence of atmospheric deposition on coastal water quality and habitat through improved coastal monitoring and assessment. Atmospheric deposition of nitrogen is believed to be one of the largest sources of indirect pollution to coastal systems. Working with other agencies and states, NOAA will begin the first national assessment of the effects of this deposition to the country's coastal waters. The results will help planning to improve coastal water and habitat quality.

- Support the Clean Water Initiative by helping protect coastal communities from toxic pollution, reducing the flow of pollution from nonpoint sources into coastal

waters and mitigating the impacts of nonpoint pollution, such as harmful algal blooms and pfiesteria. These activities are being undertaken in support of the Administration's Clean Water Action Plan. NOAA's request for additional funding will strengthen and enhance a number of NOAA programs that address nonpoint pollution and the growing impacts of coastal pollution.

- In order to fully achieve clean coastal waters, improved support for the critical capabilities of NOAA's growing Coastal Zone Management (CZM) Program and Coastal Nonpoint Pollution Control Program (CNPCP) is needed. These programs provide funding for comprehensive research, monitoring, planning, response, scientific and technical support to states and communities in order to address one of the greatest threats to U.S. coastal areas - nonpoint source pollution.

- The initiative will also help address the growing outbreaks of harmful algal blooms and other symptoms of water pollution and degraded coastal ecosystems that adversely impact coastal economies and habitat. Additional efforts in new regions to improve research for understanding and predicting the occurrence and impacts of HABs will be undertaken. This will also support research on hypoxia in the northern Gulf of Mexico to understand causes and effects of the hypoxia and examine management strategies for control the nutrient runoff and other sources that cause this problem.

• Facilitate dredging projects by providing technical assistance to state and local managers for making effective dredging decisions beneficial to the environment and economy, including addressing contaminated sediments. NOAA will provide decision makers with tools for determining disposal options and work with them and other federal agencies to restore important coastal habitat using dredge materials. The services and tools provided will help benefit both vital marine and coastal habitat and support community economic vitality as part of the Administration's Lands Legacy Initiative.

• Improve the ability of states and NOAA to revitalize coastal communities by increasing capacity for states and localities to address the impacts and pressures on coastal resources resulting from increased development and urban sprawl. This part of the Lands Legacy Initiative will provide grants and technical assistance to state governments would help address a variety of coastal community issues including the environmental impacts of development, promote "smart growth" approaches, and revitalize and reuse urban waterfronts. This effort will include such considerations as public access to the coast, brownfields reuse, and improved port, harbor, and marina management within the community. Significant improvements to the health and vitality of coastal communities nationally,

decreased pressure on adjacent natural areas, improved environmental quality within coastal communities, and an improved coastal economy would benefit the community as well as improve coastal water quality and impacts of human activities on coastal habitat.

- As part of NDRI, work with coastal states to develop risk atlases; provide new remote sensing data to more effectively evaluate and mitigate the risk and costs of natural disasters to coastal communities; and assess the impacts of natural hazards on coastal habitat.

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Key Performance Measures

	1995 act.	1996 act.	1997 act.	1998 est.	1999 est.	2000 est.
Protection/Restoration of coastal habitats (cum):						
# Acres restored	4,000	7,000	12,000	26,000	43,000	55000
# Damage cases settled	19	23	26	29	32	3,500
# Interagency restoration projects	5	9	16	20	55	
Completion of Coastal protection systems:						
State Coastal Nonpoint Pollution Programs						
% Approved (% of 35 states)	0	0	77	83	83	86
% Implemented	0	0	0	0	13	20
State Coastal Zone Management Programs (% of 35 states)	83	83	89	91	94	97
% of 40 Key U.S. Coastal Ecosystems With:						
Reduced risks from hazardous chemicals	5	10	15	20	25	30
Assessments of Water quality and natural resources	18	20	23	25	28	30
Assessments of levels and effects of toxic contaminants	10	15	20	25	28	30
# Coastal Management Tools and products improved for (cum):						
Assessing and reducing risks from natural hazards (e.g., hypoxia, harmful algae, severe weather):						
Natural Hazard Risk assessment	1	2	2	2	6	83
Mitigating Coastal Hazards	0	0	0	0	1	514
Monitoring Coastal Resources	0	0	0	0	0	8
Using remote sensing data	4	6	8	10	12	8
Ecosystem modeling	2	2	7	7	7	
regional assessments	4	4	6	7	7	

Sustain Healthy Coasts

($ in Thousands)

Strategic Plan Objectives	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Protect, Conserve and Restore Habitats	548	117,112	527	118,219	581	138,958	54	20,739
Promote Clean Coastal Waters	214	76,426	209	76,096	211	75,134	2	(962)
Foster Well-Planned and Revitalized Coastal Communities	30	50,202	43	49,840	54	79,032	11	29,192
Infrastructure	98	17,257	98	17,542	98	22,144		4,602
Total	890	260,997	877	261,697	944	315,268		53,571

Sustain Healthy Coasts

($ in Thousands)

Participant By Activity	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
National Ocean Service	448	152,659	557	158,297	608	218,247	51	59,950
National Marine Fisheries Service	170	17,104	170	17,364	186	18,674	16	1,310
Oceanic and Atmospheric Research	115	63,188	42	59,576	42	47,285		(12,291)
National Environmental Satellite, Data & Information Service	9	6,171	9	6,225	9	6,225		
Program Support	97	6,152	97	5,904	97	5,904		
Facilities	1	113	1	118	1	835		717
Fleet Maintenance & Planning	1	495	1	414	1	414		
Construction - PAC		11,115		11,115		15,000		3,885
Damage Assessment & Restoration Revoloving Fund				2,684		2,684		
Coastal Zone Management Fund	49	4,000						
Total	890	260,997	877	261,697	944	315,268	67	53,571

Section 4:
Supplemental Information

- ❏ Outyear Budget Request
- ❏ Reauthorization and Legislation
- ❏ Appropriation Summary for FY 2000
- ❏ Summary of Changes from 1999 - Operations, Research, and Facilities
- ❏ Details of the FY 2000 President's Budget
- ❏ Decreases and Terminations

Supplemental Information

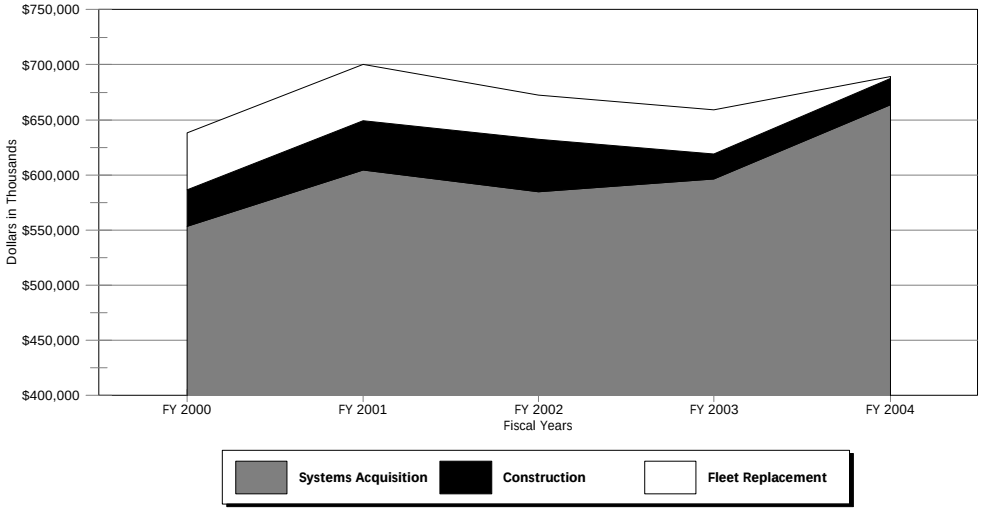
Summary of Advance Appropriation Request for Projects in the Procurement, Acquisition and Construction Account

(Dollars in thousands)

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	To Complete	Total
Systems Acquisition							
NEXRAD	$9,560	$9,060	$9,060	$9,060	$9,060		$45,800
ASOS	4,180	6,125	7,565	6,655	5,495		30,020
AWIPS	22,575	21,525	7,900	3,500	2,550		58,050
Computer Facility Upgrades	11,100	12,835	16,135	12,335	11,835		64,240
Radiosonde Replacement Program	8,350	8,350	8,350	8,350	3,000		36,400
GFDL Supercomputer	5,700	8,000	8,000	8,000	8,000	6,500	44,200
ACE Follow-on/GEOSTORM	4,340	6,160	6,580	6,580	6,580		30,240
POES K-N'	140,979	114,594	98,253	73,699	61,241	94,011	582,777
POES Convergence	80,100	113,600	180,000	230,500	333,500	2,209,750	3,147,450
GOES I - M	77,082	58,615	15,960	11,476	9,009	4,922	177,064
GOES N - Q	189,533	245,609	226,841	226,256	213,464	609,306	1,711,009
Subtotal, Systems Acquisition	553,499	604,473	584,644	596,411	663,734	2,924,489	5,927,250
Construction							
WFO Construction	13,367	12,225	12,725	7,552	8,536		54,405
NERRS	12,000	12,000	12,000	12,000	12,000		60,000
Alaska Facilities/Juneau	1,000	15,000	20,000				36,000
Marine Sanctuaries	3,000	3,000	3,000	3,000	3,000		15,000
NORC Rehabilitation	3,545	2,380					5,925
Subtotal, Construction	32,912	44,605	47,725	22,552	23,536	0	171,330
Fleet Replacement							
Fleet Replacement	51,567	51,000	39,778	40,226	2,060		184,631
Subtotal, Fleet Replacement	51,567	51,000	39,778	40,226	2,060	0	184,631
Total, Obligations	**$637,978**	**$700,078**	**$672,147**	**$659,189**	**$689,330**	**$2,924,489**	**$6,283,211**
Recoveries from prior years	(7,400)	(8,404)	(10,612)	(10,824)	(10,824)	TBD	
Total, Budget Authority (B.A.)	**$630,578**	**$691,674**	**$661,535**	**$648,365**	**$678,506**	**$2,924,489**	**$6,274,807**
No Advanced Appropriation Reqested							
ACE Follow-on/GEOSTORM				(6,580)	(6,580)		(13,160)
NERRS		(12,000)	(12,000)	(12,000)	(12,000)		(48,000)
Alaska Facilities/Juneau		(15,000)	(20,000)	0	0		(35,000)
Marine Sanctuaries		(3,000)	(3,000)	(3,000)	(3,000)		(12,000)
Fleet Replacement		(51,000)	(39,778)	(40,226)	(2,060)		(133,064)
Subtotal	0	(81,000)	(74,778)	(61,806)	(23,640)	0	(241,224)
Total, Advance Appropriation Requested	**$630,578**	**$610,674**	**$586,757**	**$586,559**	**$654,866**	**$2,924,489**	**$6,033,583**

Procurement Acquisition & Construction

Summary of Outyear Request



Supplemental Information

Reauthorization Required By FY 2000

Several Public Laws covering the budget authority in the FY 2000 budget need reauthorization in the 1st session of the 106th Congress. These authorizing acts and the appropriate dollar amounts are shown on the chart below.

National Oceanic & Atmospheric Administration	1999 Enacted	2000 Base	2000 Request
National Marine Fisheries Service Endangered Species Act P.L. 100-478, exp. 9/92	38,306	38,726	66,869
National Marine Fisheries Service Marine Mammal Protection Act, As amended by P.L. 97-58 exp. 9/99	22,927	23,337	25,379
National Marine Fisheries Service Magnuson-Stevens Fisheries Conservation Act, P.L.104-297 Exp. 9/99	165,286	167,420	168,500
National Ocean Service Coastal Zone Management Act P.L. 92-593 Exp. 9/99	62,500	60,850	96,200
National Ocean Service National Marine Sanctuaries Act P.L. 92-532 Exp. 9/99	14,350	14,000	26,000
National Ocean Service Coastal Nonpoint Source Program P.L. 101-506 Exp. 9/95	1,000	1,000	6,000

Other Legislation for FY 1999

Seafood Inspection. The FY 2000 Budget contains language to transfer the Seafood Inspection Program to the Food and Drug Administration. This is in support of the Vice President's National Review Initiative.

Supplemental Information

Appropriation Summary for FY 2000

(Dollars in thousands)

FEDERAL FUNDS: **Appropriation:**	**1998**	**1999**	**2000 Estimate**	**Increase/ Decrease**
Operations , Research, and Facilities (ORF)	$1,498,550	$1,579,844	$1,738,911	$159,067
Rescission of unobligated balances (ORF)	0	0	(3,400)	(3,400)
Procurement, Acquisition, and Construction (PAC)	491,609	584,677	630,578	45,901
Coastal Zone Management Fund	0	0	4,000	4,000
Fisherman's Contingency Fund	194	953	953	0
Foreign Fishing Observer Fund	154	189	189	0
Federal Ship Financing Fund	0	0	0	0
Pacific Coastal Salmon Recovery Account	0	0	100,000	100,000
Fisheries Promotional Fund (Rescission)	0	0	(1,186)	(1,186)
Fisheries Finance, Program	338	28,338	10,258	(18,080)
TOTAL APPROPRIATION	1,990,845	2,194,001	2,480,303	286,302
Coastal Zone Management Fund				
Discretionary spending authority from collections	7,212	4,000	0	(4,000)
CZMF Mandatory Offsetting Collections	(3,115)	(4,000)	(4,000)	0
	4,097	0	(4,000)	(4,000)
TRANSFERS				
Operations , Research, & Facilities				
FROM: Promote & Develop Fishery Products	62,381	63,381	64,926	1,545
Disaster Research and Prevention (USDA)	0	7,000	0	(7,000)
Damage Assessment & Restoration Revolving	1,162	1,500	0	(1,500)
Coastal Zone Management Fund	0	0	4,000	4,000
Agency for International Development	75	0	0	0
TO: General Administraiton	(1,000)	0	0	0
Subtotal, ORF	62,618	71,881	68,926	(2,955)
Coastal Zone Management Fund				
TO: ORF	0	0	(4,000)	(4,000)
Promote & Develop Fishery Products (P&D)				
TO: ORF	(62,381)	(63,381)	(64,926)	(1,545)
FROM: Department of Agriculture	65,734	66,426	66,426	0
Subtotal, P&D	3,353	3,045	1,500	(1,545)
Damage Assessment & Restoration Revolving Fund (DARRF)				
TO: ORF	(1,162)	(1,500)	0	1,500
FROM: Department of Interior	0	0	0	0
Subtotal, DARRF	(1,162)	(1,500)	0	1,500
TOTAL, TRANSFERS	64,809	73,426	66,426	(7,000)
Permanent Appropriation per Federal Credit Reform Act (P.L. 105-33)	700	0	0	0
NOAA Corps Retirement Pay	[8,000]	[7,000]	13,900	13,900
TOTAL BUDGET AUTHORITY (All funds)	2,060,451	2,267,427	2,556,629	289,202
Less Mandatory Funds	(63,319)	(62,426)	(76,326)	(13,900)
DISCRETIONARY BUDGET AUTHORITY	1,997,132	2,205,001	2,480,303	275,302
PROPOSAL FOR LATER TRANSMITTAL				
Navigation and Magnuson Fees Authorization	0	0	(34,000)	(34,000)
DISCRETIONARY BUDGET AUTHORITY w/Fees	1,997,132	2,205,001	2,446,303	241,302

Supplemental Information

Summary of Changes From FY 1999 for
Operations, Research and Facilities
(Dollars in thousands)

	FTE	Amount
Enacted B.A.	12,543	$1,651,725
Adjustments to Base		
Financing:		
Restoration of FY 1999 Deobligations		33,000
Recoveries for Prior Years-FY 1999		(33,000)
Subtotal		0
Adjustments :		
Mandatory Payments for NOAA Corps Retirement		
Payments for Retired Pay for Commissioned Officers are an entitlement under 33 U.S.C. 853o, 33 U.S.C. 853p, and 33 U.S.C. 857-2.		13,900
No further funding for will be included in Program Support for Retired Pay Commissioned Officers.		(7,000)
Offset ORF Appropriation with Coastal Zone Management Fund		
NOAA proposes to offset the ORF account for the costs implementing the Coastal Zone Management Act of 1972, as amended. This action would increase ORF discretionary Budget Authority, and eliminate Budget authority in the Coastal Zone	49	4,000
Terminate Transfer of Damage Assessment and Restoration Revolving Fund (DARRF) to ORF		
NOS, Estuarine and Coastal Assessment		(5,597)
Unobligated balance transferred from DARRF		4,097
FY 1999 Reprogramming		
From OAR, Marine Environmental Research, (GLERL)		(6,825)
To NOS, Estuarine and Coastal Assessment, (GLERL)		6,825
FY 1999 Realignments		
From Facilities, Sandy Hook Lease		(2,000)
From Facilities, Columbia River Facilities		(4,465)
From Facilities,NWS WFO Facilities Maintenance		(3,000)
To NMFS, Fisheries Management Program		2,000
To NMFS, Fisheries Management Program, Columbia River Hatcheries		4,465
To NWS, Local warnings and Forecasts, WFO Maintenance		3,000
From NOS, Estuarine and Coastal Assessment, Ocean Assessment Program		(1,000)
To NOS, Estuarine and Coastal Assessment, Response and Restoration		1,000
Subtotal	49	9,400
Transfer:		
From NMFS, Disaster Research and Prevention (FY 1999 Transfer from Agriculture)		(7,000)
Transfer to Procurement, Acquisition and Construction from NWS, Radiosonde Replacement, Computer Facility Upgrade		(6,600)
Subtotal	0	(13,600)

Supplemental Information

	FTE	Amount
Other Changes:		
Annualization of Jan., 1999 Pay Raise		$6,045
2000 Pay Raise		23,115
Within-grade step increases		7,395
Civil Service Retirement System (CSRS)		(1,260)
Federal Employees Retirement System (FERS)		1,631
Thrift Savings Plan		296
Federal Insurance Contribution Act (FICA) - OASDI		961
Health insurance premiums		1,764
Employees Compensation Fund		233
Travel:		
Per diem		616
Transportation of things		107
Rental payments to GSA		1,355
Rental payments to others		126
Communications, utilities and miscellaneous charges:		246
Postage		117
FTS 2000		460
Printing and reproduction		184
Other services		2,480
CAMS		9,000
Supplies and materials		727
Equipment		776
Grants		338
HBCU		1,000
Subtotal, Other cost changes	0	57,712
ATBs Absorbed	0	(17,824)
ATBs Requested	49	35,688
Total, Changes to Base	49	35,688
FY 2000 Base	12,592	1,687,413
Total Program Change	55	130,924
Total FY 2000 Request	12,647	$1,818,337

Supplemental Information

	FY 1999 Enacted		FY 2000 Base		FY 2000 Request		Increase/ (Decrease)	
	FTE	Enacted	FTE	Amount	FTE	Amount	FTE	Amount
NATIONAL OCEAN SERVICE								
Navigation Services								
Mapping and Charting	238	34,260	238	34,495	238	33,335	0	(1,160)
Address Survey Backlog/Contracts	0	14,000	0	14,000	0	14,900	0	900
Geodesy	197	19,659	197	19,849	197	19,849	0	0
Tide and Current Data	141	12,000	141	12,133	141	14,883	0	2,750
Total, Navigation Services.....	576	79,919	576	80,477	576	82,967	0	2,490
Ocean Resources Conservation and Assessment								
Estuarine and Coastal Assessment								
Oceanic and Coastal Research	61	7,410	61	7,470	61	7,970	0	500
GLERL.....	0	0	60	6,885	60	6,085	0	(800)
Ocean assessment program.....	175	42,611	175	41,781	190	46,281	15	4,500
Response and restoration	108	8,774	108	9,884	119	19,884	11	10,000
Transfer from Damage Assessment Fund	0	5,597	0	0	0	0	0	0
Subtotal.....	344	64,392	404	66,020	430	80,220	26	14,200
Coastal Ocean Science								
Coastal ocean program.....	21	18,400	21	18,430	21	19,430	0	1,000
Subtotal.....	21	18,400	21	18,430	21	19,430	0	1,000
Total, Ocean Resources Conserv. & Assess.	365	82,792	425	84,450	451	99,650	26	15,200
Ocean and Coastal Management:								
Coastal Management								
CZM Administration	49	4,500	49	4,500	57	5,500	8	1,000
CZM grants.....	0	53,700	0	53,700	0	55,700	0	2,000
CZM 310 Grants	0	0	0	0	2	28,000	2	28,000
National Estuarine Research Reserve	0	4,300	0	4,300	0	7,000	0	2,700
Nonpoint pollution control.....	0	4,000	0	4,000	0	6,000	0	2,000
Coastal Zone Management Fund (Obligate in Fund)	(49)	(4,000)	0	0	0	0		0
Subtotal.....	0	62,500	49	66,500	59	102,200	10	35,700
Ocean Management								
Marine sanctuary program.....	97	14,350	97	14,350	112	26,000	15	11,650
Subtotal.....	97	14,350	97	14,350	112	26,000	15	11,650
Total, Ocean and Coastal Management.	97	76,850	146	80,850	171	128,200	25	47,350
Acquisition of Data	231	14,546	231	14,726	231 0	17,726 0	0	3,000
TOTAL, NOS.....	1,269	254,107	1,378	260,503	1,429	328,543	51	68,040

Supplemental Information

	FY 1999 Enacted		FY 2000 Base		FY 2000 Request		Increase/ (Decrease)	
	FTE	Enacted	FTE	Amount	FTE	Amount	FTE	Amount
NATIONAL MARINE FISHERIES SERVICE:								
Information Collection & Analyses:								
Resource Information	945	106,675	945	108,379	955	96,918	10	(11,461)
Antarctic research.....	0	1,200	0	1,200	0	1,200	0	0
Chesapeake Bay Studies.....	0	1,890	0	1,890	0	1,500	0	(390)
Right whale research.....	0	350	0	350	0	200	0	(150)
MARFIN.....	0	3,000	0	3,000	0	3,000	0	0
SEAMAP.....	0	1,200	0	1,200	0	1,200	0	0
Alaskan groundfish surveys.....	0	900	0	900	0	661	0	(239)
Bering Sea pollock research.....	0	945	0	945	0	945	0	0
West Coast groundfish.....	0	800	0	800	0	780	0	(20)
New England stock depletion.....	0	1,000	0	1,000	0	1,000	0	0
Hawaii stock management plan.....	0	500	0	500	0	0	0	(500)
Yukon River chinook salmon.....	0	700	0	700	0	700	0	0
Atlantic salmon research.....	0	710	0	710	0	710	0	0
Gulf of Maine groundfish survey.....	0	567	0	567	0	567	0	0
Dolphin safe technologies.....	0	250	0	250	0	250	0	0
Pacific salmon treaty program.....	0	7,444	0	7,444	0	5,587	0	(1,857)
Hawaiian monk seals.....	0	700	0	700	0	500	0	(200)
Stellar sea lion recovery plan.....	0	2,520	0	2,520	0	1,440	0	(1,080)
Hawaiian sea turtles.....	0	275	0	275	0	248	0	(27)
Bluefish/striped bass	0	1,000	0	1,000	0	0	0	(1,000)
Halibut/Sablefish	0	1,200	0	1,200	0	1,200	0	0
Subtotal.....	945	133,826	945	135,530	955	118,606	10	(16,924)
Fishery Industry Information								
Fish statistics.....	168	13,000	168	13,257	170	14,257	2	1,000
Alaska groundfish monitoring.....	0	5,500	0	5,500	0	5,200	0	(300)
PACFIN/catch effort data.....	0	4,700	0	4,700	0	3,000	0	(1,700)
GULF FIN data collection effort		3,000	0	3,000	0	0		(3,000)
Rec. fishery harvest monitoring.....	0	3,900	0	3,900	0	3,100	0	(800)
Subtotal.....	168	30,100	168	30,357	170	25,557	2	(4,800)
Information Analyses & Dissemination	247	20,900	247	21,342	247	21,342	0	0
Computer hardware and software.....	0	4,000	0	4,000	0	4,000	0	0
Subtotal.....	247	24,900	247	25,342	247	25,342	0	0
Total, Info., Collection, & Analyses..	1,360	188,826	1,360	191,229	1,372	169,505	12	(21,724)

Supplemental Information

	FY 1999 Enacted		FY 2000 Base		FY 2000 Request		Increase/ (Decrease)	
	FTE	Enacted	FTE	Amount	FTE	Amount	FTE	Amount
Conservation and Management Operations:								
Fisheries Management Programs	262	29,900	262	32,587	283	36,487	21	3,900
Columbia River hatcheries.....	0	13,600	0	18,065	0	14,765	0	(3,300)
Columbia River end. species studies..	0	288	0	288	0	288	0	0
Fisheries Habitat Restoration			0	0	0	22,700	0	22,700
NE Fisheries Management			0	0	0	5,180	0	5,180
Regional councils.....	0	13,000	0	13,000	0	13,300	0	300
International fisheries commissions..	0	400	0	400	0	400	0	0
Management of George's Bank.....	0	478	0	478	0	478	0	0
Pacific tuna management.....	0	2,300	0	2,300	0	1,250	0	(1,050)
Subtotal.....	262	59,966	262	67,118	283	94,848	21	27,730
Protected Species Management	262	6,200	262	6,806	271	9,406	9	2,600
Driftnet Act implementation.....	0	3,378	0	3,378	0	3,278	0	(100)
Marine Mammal Protection Act.....	0	7,583	0	7,583	0	7,225	0	(358)
Endangered Species Act recovery plan.	131	28,000	131	28,000	263	55,450	132	27,450
Dolphin Encirclement Studies	9	3,300	9	3,300	9	3,300	0	0
Native marine mammals		750	0	750	0	700		(50)
Observer/training	0	2,650	0	2,650	0	4,225		1,575
Subtotal.....	402	51,861	402	52,467	543	83,584	141	31,117
Habitat Conservation	116	9,000	116	9,158	132	10,858	16	1,700
Enforcement & Surveillance	181	17,775	181	18,096	194	19,121	13	1,025
Total, Conservation and Mgmt. Opns...	961	138,602	961	146,839	1,152	208,411	191	61,572
State and Industry Assistance Programs:								
Grants to States								
Interjurisdictional fisheries grants	0	2,600	0	2,600	0	2,600	0	0
Disaster research and prevention (Transfer from Ag)	0	7,000	0	0	0	0	0	0
Anadromous grants.....	0	2,100	0	2,100	0	2,100	0	0
Interstate fish commissions.....	0	7,750	0	7,750	0	4,000	0	(3,750)
Subtotal	0	19,450	0	12,450	0	8,700	0	(3,750)
Fisheries Development Program								
Fisheries trade promotion activities..								
Product quality and safety.....	90	9,824	90	10,028	66	8,328	(24)	(1,700)
Hawaiian Fisheries Development.....	0	750	0	750	0	0	0	(750)
Fisheries Biotechnology.....	0		0	0	0	0	0	0
Subtotal.....	90	10,574	90	10,778	66	8,328	(24)	(2,450)
Total, State & Industry Assist. Progs.	90	30,024	90	23,228	66	17,028	(24)	(6,200)
Acquisition of Data	366	25,098	366	25,488	366	25,488	0	0
TOTAL, NMFS.....	2,777	382,550	2,777	386,784	2,956	420,432	179	33,648

Supplemental Information

	FY 1999 Enacted		FY 2000 Base		FY 2000 Request		Increase/ (Decrease)	
	FTE	Enacted	FTE	Amount	FTE	Amount	FTE	Amount
OCEANIC AND ATMOSPHERIC RESEARCH:								
Climate and Air Quality Research:								
Interannual & Seasonal Climate Research.	27	14,900	27	14,900	27	16,900	0	2,000
Subtotal.....	27	14,900	27	14,900	27	16,900	0	2,000
Long-Term Climate & Air Quality Research	224	30,000	224	30,413	224	34,600	0	4,187
High Performance Computing.....	6	12,000	6	12,000	6	13,500	0	1,500
Subtotal.....	230	42,000	230	42,413	230	48,100	0	5,687
Climate and Global Change	118	63,000	118	63,000	118	69,700	0	6,700
GLOBE	9	2,500	9	2,500	9	5,000	0	2,500
Subtotal.....	127	65,500	127	65,500	127	74,700	0	9,200
Total, Climate and Air Quality.....	384	122,400	384	122,813	384	139,700	0	16,887
Atmospheric Programs								
Weather Research	228	36,100	228	36,600	228	36,600	0	0
Wind profiler.....	0	4,350	0	4,350	0	4,350	0	0
Subtotal.....	228	40,450	228	40,950	228	40,950	0	0
Solar-Terrestrial services and research	65	6,000	65	6,100	65	6,100	0	0
Total, Atmospheric Program.....	293	46,450	293	47,050	293	47,050	0	0
Ocean and Great Lakes Programs:								
Marine Environmental Research	99	26,801	99	26,950	99	22,300	0	(4,650)
GLERL.....	60	6,825	0	0	0	0	0	0
Subtotal.....	159	33,626	99	26,950	99	22,300	0	(4,650)
Sea Grant								
Sea grant college program.....	22	57,500	22	57,500	22	51,500	0	(6,000)
Subtotal.....	22	57,500	22	57,500	22	51,500	0	(6,000)
Undersea Research Program								
NOAA Undersea Research Program.....	8	14,550	8	14,550	8	9,000	0	(5,550)
Subtotal.....	8	14,550	8	14,550	8	9,000	0	(5,550)
Total, Ocean & Great Lakes Programs	189	105,676	129	99,000	129	82,800	0	(16,200)
Acquisition of Data	117	12,884	117	13,020	117	13,020	0	0
TOTAL, OAR.....	983	287,410	923	281,883	923	282,570	0	687

Supplemental Information

	FY 1999 Enacted		FY 2000 Base		FY 2000 Request		Increase/ (Decrease)	
	FTE	Enacted	FTE	Amount	FTE	Amount	FTE	Amount
NATIONAL WEATHER SERVICE:								
Operations and Research:								
Local Warnings and Forecasts	4,295	357,034	4,295	438,223	4,108	450,411	(187)	12,188
MARDI.....	0	64,036	0	0	0	0	0	0
Radiosonde Replacement.....	0	2,000	0	0	0	0	0	0
Advanced Hydrological Prediction Syst.	0	0	0	0	0	2,200	0	2,200
Susquehanna River Basin Flood Sys..	0	1,250	0	1,250	0	619	0	(631)
Aviation forecasts.....	0	35,596	0	35,596	0	35,596	0	0
WFO Maintenance			0	3,000	0	4,000	0	1,000
Subtotal.....	4,295	459,916	4,295	478,069	4,108	492,826	(187)	14,757
Central Forecast Guidance	266	35,574	266	37,081	266	37,081	0	0
Atmospheric and Hydrological Research	38	2,964	38	3,090	38	3,090	0	0
Total, Operations and Research.....	4,599	498,454	4,599	518,240	4,412	532,997	(187)	14,757
Systems Acquisition:								
Public Warning and Forecast Systems								
NEXRAD.....	128	38,346	128	39,333	128	39,325	0	(8)
ASOS.....	38	7,116	38	7,333	38	7,573	0	240
AWIPS/NOAAPort.....	13	12,189	13	12,189	21	38,002	8	25,813
Computer Facility Upgrades.....	0	4,600	0	0	0	0	0	0
Total, Systems Acquisition.....	179	62,251	179	58,855	187	84,900	8	26,045
TOTAL, NWS.....	4,778	560,705	4,778	577,095	4,599	617,897	(179)	40,802
NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE:								
Satellite Observing Systems:								
Polar spacecraft and launching								
Polar convergence/IPO								
Geostationary spacecraft and launching..								
Global disaster information network (GDIN)			0	0	0	2,000		2,000
Ocean remote sensing.....	0	4,000	0	4,000	0	4,000	0	
Environmental observing services	507	53,300	507	54,050	507	53,236	0	(814)
Total, Satellite Observing Systems....	507	57,300	507	58,050	507	59,236	0	1,186
Environmental Data Management Systems :								
Data and Information Services.....	275	33,550	275	34,089	275	31,521	0	(2,568)
Environmental Data Systems Modernization	0	16,335	0	16,335	0	12,335	0	(4,000)
Regional Climate Centers	0	2,750		2,750	0	0		(2,750)
Total, EDMS.....	275	52,635	275	53,174	275	43,856	0	(9,318)
TOTAL, NESDIS.....	782	109,935	782	111,224	782	103,092	0	(8,132)

Supplemental Information

	FY 1999 Enacted		FY 2000 Base		FY 2000 Request		Increase/ (Decrease)	
	FTE	Enacted	FTE	Amount	FTE	Amount	FTE	Amount
PROGRAM SUPPORT:								
Administration and Services:								
Executive direction and administration	292	19,200	292	19,573	292	19,573	0	0
Systems Acquisition Office (SAO).....	9	700	9	712	9	712	0	0
Subtotal.....	301	19,900	301	20,285	301	20,285	0	0
Central Administrative Support.....	795	31,850	795	41,583	795	41,583	0	0
HBCU		0	0	1,000	0	1,000	0	0
Subtotal.....	795	31,850	795	42,583	795	42,583	0	0
Retired Pay Commissioned Officers (mandatory beginning 00	0	7,000	0	0	0	0	0	0
Total, Administration and Services	1,096	58,750	1,096	62,868	1,096	62,868	0	0
Aircraft Services	106	10,500	106	10,669	110	11,019	4	350
Total, Aircraft Services.....	106	10,500	106	10,669	110	11,019	4	350
TOTAL, PS.....	1,202	69,250	1,202	73,537	1,206	73,887	4	350
Facilities								
NOAA Maintenance and Repairs.....	6	1,800	6	1,818	6	1,818	0	0
Sandy Hook lease.....	0	2,000	0	0	0	0	0	0
Environmental compliance.....	9	2,000	9	2,026	9	3,899	0	1,873
NWS WFO Facilities Maintenance.....	0	3,000	0	0	0	0	0	0
Columbia river facilities.....	0	4,465	0	0	0	0	0	0
NARA records management			0	0	0	262		262
Facilities Operations:			0	0				
Boulder			0	0	0	3,850		3,850
Total, Facilities [Non-Fixed Assets]	15	13,265	15	3,844	15	9,829	0	5,985
Fleet Maintenance and Planning	12	11,600	12	11,643	12	9,243	0	(2,400)
Subtotal Obligations	11,818	1,688,822	11,867	1,706,513	11,922	1,845,493	55	138,980
Rent Saving to finance Goddard			0	0	0	(4,656)		(4,656)
Offset for Fee Collections	0		0	0	0	[34,000]	0	[34,000]
Mandatory Payments for NOAA Corps Retirement			0	13,900	0	13,900	0	0
DIRECT OBLIGATIONS	11,818	1,688,822	11,867	1,720,413	11,922	1,854,737	55	134,324
REIMBURSABLE OBLIGATIONS	725	229,400	611	195,767	611	195,767	0	0
Navigation and Magnuson Fee Collections	0	4,000	0	4,000	0	4,000	0	[30,000]
New Offsetting collections	0	3,600	0	3,600	0	3,600	0	0
TOTAL REIMBURSABLE OBLIGATIONS	725	237,000	611	203,367	611	203,367	0	0
TOTAL OBLIGATIONS	12,543	1,925,822	12,478	1,923,780	12,533	2,058,104	55	134,324

Supplemental Information

	FY 1999 Enacted		FY 2000 Base		FY 2000 Request		Increase/ (Decrease)	
	FTE	Enacted	FTE	Amount	FTE	Amount	FTE	Amount
FINANCING:								
Direct:								
Prior year recoveries	0	(33,000)	0	(33,000)	0	(33,000)	0	0
Unobligated balance transferred from DARRF	0	(4,097)	0	0	0	0	0	0
Unobligated balances (unavailable)			0	0	0	0	0	0
Reimbursable:								
Federal funds	0	(172,000)	0	(172,000)	0	(172,000)	0	0
Non-federal funds	0	(57,400)	0	(23,767)	0	(23,767)	0	0
Offset for Fee Collections	0	(4,000)	0	(4,000)	0	(4,000)	0	[30,000]
New offsetting collection (data sales)	0	(3,600)	0	(3,600)	0	(3,600)	0	0
BUDGET AUTHORITY	12,543	1,651,725	12,478	1,687,413	12,533	1,821,737	55	134,324
Less Mandatory Funding			0	(13,900)	0	(13,900)		
Discretionary Budget Authority	12,543	1,651,725	12,478	1,673,513	12,533	1,807,837	55	134,324
FINANCING FROM:								
Promote and develop American fisheries.....	0	(63,381)	0	(63,381)	0	(64,926)	0	(1,545)
Damage assess. & restoration revolving fund.	0	(1,500)	0	0	0	0	0	0
Coastal Zone Management			0	(4,000)	0	(4,000)	0	0
Disaster research and prevention (transfer from Ag.)		(7,000)	0	0	0	0	0	0
APPROPRIATION, ORF	12,543	1,579,844	12,478	1,606,132	12,533	1,738,911	55	132,779
Budget Authority, Total (from above)	12,543	1,651,725	12,478	1,687,413	12,533	1,821,737	55	134,324
Less Rescission of Unobligated balances (unavailable)			0	0	0	(3,400)	0	(3,400)
ORF Total BA w/Rescisssion	12,543	1,651,725	12,478	1,687,413	12,533	1,818,337	55	130,924
ORF Discretionary BA w/Rescission	12,543	1,651,725	12,478	1,673,513	12,533	1,804,437	55	130,924
ORF Appropriation w/Rescission	12,543	1,579,844	12,478	1,606,132	12,533	1,735,511	55	129,379
Navigation & Fisheries Fees (For Later Transmission)								
Direct Obligations (From Above)	11,818	1,688,822	11,867	1,720,413	11,922	1,854,737	55	134,324
Less Navigation and Fisheries Fees			0	0	0	(34,000)	0	(34,000)
Revised Direct Obligations	11,818	1,688,822	11,867	1,720,413	11,922	1,820,737	55	100,324
REIMBURSABLE OBLIGATIONS	725	237,000	611	203,367	611	203,367	0	0
Navigation and Magnuson Fee Collections	0	0	0	0	0	30,000	0	30,000
Revised Reimbusable obligations	725	237,000	611	203,367	611	233,367	0	30,000
Net total Obligations	12,543	1,925,822	12,478	1,923,780	12,533	2,054,104	55	130,324
Budget Authority, Total (from above)	12,543	1,651,725	12,478	1,687,413	12,533	1,818,337	55	130,924
Less Fee Collection Offset			0	0	0	(34,000)	0	(34,000)
ORF Total BA w/Fees & Rescission	12,543	1,651,725	12,478	1,687,413	12,533	1,784,337	55	96,924
ORF Discretionary BA w/Fees & Rescission	12,543	1,651,725	12,478	1,673,513	12,533	1,770,437	55	96,924
ORF Appropriation w/Fees& Rescission	12,543	1,579,844	12,478	1,606,132	12,533	1,701,511	55	95,379

Supplemental Information

	FY 1999 Enacted		FY 2000 Base		FY 2000 Request		Increase/ (Decrease)	
	FTE	Enacted	FTE	Amount	FTE	Amount	FTE	Amount
PROCUREMENT, ACQUISITION AND CONSTRUCTION								
Systems Acquisition								
NEXRAD	11	7,000	11	7,000	7	9,560	(4)	2,560
ASOS	0	3,855	0	3,855	0	4,180	0	325
AWIPS	89	67,667	89	67,667	70	22,575	(19)	(45,092)
Central Computer Upgrade	0	9,900	0	14,500	0	11,100	0	(3,400)
Radiosonde Replacement Program			0	2,000	0	8,350		6,350
GFDL Supoercomputer			0	0	0	5,700		5,700
ACE Follow-on/GEOSTORM			0	0	0	4,340		4,340
Polar								
Polar K-N'	20	149,917	20	149,917	20	140,979	0	(8,938)
Polar Convergence	13	50,000	13	50,000	13	80,100	0	30,100
GOES								
GOES I-M	0	95,776	0	95,776	0	77,082	0	(18,694)
GOES N-Q	47	169,366	47	169,366	47	189,533	0	20,167
Total, Systems Acquisition	180	553,481	180	560,081	157	553,499	(23)	(6,582)
Construction								
Boulder Laboratory Above Standard Cost	0	6,370	0	6,370	0	0	0	(6,370)
NWS WFO Construction	5	9,526	5	9,526	5	13,367	0	3,841
National Centers for Environmental Prediction	0	850	0	850	0	0	0	(850)
Santa Cruz Research Lab	0	4,200	0	4,200	0	0	0	(4,200)
National Estuarine Research Reserve Construction	0	7,300	0	7,300	0	12,000	0	4,700
Alaska Facilities Fisheries Center Juneau	0		0	0	0	1,000	0	1,000
Pribilof Island Cleanup	0	700	0	700	0	0	0	(700)
Marine sanctuaries			0	0	0	3,000		3,000
NORC rehabilitation			0	0	0	3,545		3,545
Charleston/Fort Johnson		3,000	0	3,000	0	0		(3,000)
Outer Banks Community Foundation		750	0	750	0	0		(750)
New York Facilities		1,500	0	1,500	0	0		(1,500)
Total, Construction...	5	34,196	5	34,196	5	32,912	0	(1,284)
Fleet Replacement	0	0	0	0	0	51,567	0	51,567
Other (Fishermen's Health Care)		1,000	0	1,000	0	0		(1,000)
Total, Procurement,Acquisition & Construction Oblig.	185	588,677	185	595,277	162	637,978	(23)	42,701
Financing from Prior Year Recoveries	0	(4,000)	0	(7,400)	0	(7,400)	0	0
Total, Procurement,Acquisition & Construction BA	185	584,677	185	587,877	162	630,578	(23)	42,701
Less Transfers			0	0	0	0	0	0
Appropriation PAC	185	584,677	185	587,877	162	630,578	(23)	42,701

Supplemental Information

	FY 1999 Enacted		FY 2000 Base		FY 2000 Request		Increase/ (Decrease)	
	FTE	Enacted	FTE	Amount	FTE	Amount	FTE	Amount
OTHER ACCOUNTS: B.A.								
Construction:	0	0	0	0	0	0	0	0
Fleet modernization, shipbuilding & conversion	0	0	0	0	0	0	0	0
GOES Satellite Contingency Fund	0	0	0	0	0	0	0	0
Fishing vessel and gear damage fund.....	0	0	0	0	0	0	0	0
Fishermen's contingency fund	1	953	1	953	1	953	0	0
Foreign fishing observer fund	0	189	0	189	0	189	0	0
Fisheries Promotional Fund	0		0	0	0	(1,186)	0	(1,186)
Aircraft Procurement.....	0		0	0	0	0	0	0
Fisheries Financing Program	0	28,338	0	28,338	24	10,258	24	(18,080)
Federal Ship Financing Fund (Mandatory)	0		0	0	0	0	0	0
Pacific Coastal Salmon Funds	0	0	0	0	0	100,000	0	100,000
Promote and develop fisheries.....								
Transfer to ORF	0	(63,381)	0	(63,381)	0	(64,926)	0	(1,545)
Transfer from Department of Agriculture (Mandatory)	5	66,426	5	66,426	5	66,426	0	0
Total Obligations, P&D	5	3,045	5	3,045	5	1,500	0	(1,545)
Prior year recoveries	0		0	0	0	0	0	0
Unobligated balance, start of year			0	0	0	0		
Unobligated balance, end of year					0	0		
Subtotal Budget Authoriy	5	3,045	5	3,045	5	1,500	0	(1,545)
Transfer to ORF	0	63,381	0	63,381	0	64,926	0	1,545
Transfer from Department of Agriculture (Mandatory)	(5)	(66,426)	(5)	(66,426)	(5)	(66,426)	0	0
Total Appropriation, P&D	0	0	0	0	0	0	0	0
Damage Assessment & Rest. Revolving Fund..				4,184	0	4,184	0	0
Transfer to ORF, Unobligated Balance	0	4,097	0	0	0	0	0	0
Transfer to ORF	0	(1,500)	0	0	0	0	0	0
Offsetting Collections	0	1,500	0	(1,500)	0	(1,500)	0	0
Transfer from Interior, Unobligated Balance	0	(4,097)	0	0	0	0	0	0
Transfer from Interior	0	0	0	0	0	0	0	0
Total Obligations, DARRF	0	0	0	2,684	0	2,684	0	0
Unobligated balance, start of year	0		0	0	0	0	0	0
Unobligated Balance Transferred	0		0	(2,684)	0	(2,684)	0	0
Unobligated balance, end of year	0		0	0	0	0	0	0
Financing from Offsetting Collections	0	(1,500)	0	0	0	0	0	0
Subtotal Budget Authoriy	0	(1,500)	0	0	0	0	0	0
Transfer to ORF	0	1,500	0	0	0	0	0	0
Transfer from Interior	0	0	0	0	0	0	0	0
Total Appropriation, DARRF	0	0	0	0	0	0	0	0

Supplemental Information

	FY 1999 Enacted		FY 2000 Base		FY 2000 Request		Increase/ (Decrease)	
	FTE	Enacted	FTE	Amount	FTE	Amount	FTE	Amount
Coastal Zone Management Fund								
Transfer to ORF			0	(4,000)	0	(4,000)	0	0
Offsetting Collections (Cash)	0	4,000	0	4,000	0	4,000	0	0
Offsetting Collections (Unavailable Balances)	0		0	0	0	0	0	0
Unavailable for Obligation (limitation on Obligation)	0		0	0	0	0	0	0
B.A Gross (Discretionary)	0	4,000	0	0	0	0	0	0
Mandatory Offsetting Collections	49	(4,000)	0	(4,000)	0	(4,000)	0	0
Net B.A.	49	0	0	(4,000)	0	(4,000)	0	0
Prior year recoveries	0		0	0	0	0	0	0
Unobligated Balance, start of year	0		0	0	0	0	0	0
Unobligated balance, end of year	0		0	0	0	0	0	0
Spending Authority from Appropriation	0	0	0	0	0	0	0	0
Financing/ Other			0	0	0	0	0	0
Transfer to ORF			0	4,000	0	4,000	0	0
Appropriation	49	0	0	0	0	0	0	0
TOTAL B.A. OTHER ACCOUNTS	240	617,202	191	616,402	192	738,292	1	121,890
TOTAL B.A., NOAA - ALL ACCOUNTS	12,783	2,268,927	12,669	2,303,815	12,725	2,556,629	56	252,814
Less Mandatory Funds	(54)	(62,426)	(5)	(76,326)	(5)	(76,326)	0	0
CZMA offsetting collections						0		0
TOTAL Discretionary B.A.	12,729	2,206,501	12,664	2,227,489	12,720	2,480,303	56	252,814
Total, NOAA Appropriation	12,778	2,194,001	12,664	2,223,489	12,720	2,479,703	56	256,214
Total B.A NOAA - All ACCOUNTs with Fees	12,783	2,268,927	12,669	2,303,815	12,725	2,522,629	56	218,814
Total Discretionary B.A NOAA - All ACCOUNTs with Fees	12,729	2,206,501	12,664	2,227,489	12,720	2,446,303	56	218,814
Total, NOAA Appropriation with Fees	12,778	2,194,001	12,664	2,223,489	12,720	2,445,703	56	222,214

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TABLE OF TERMINATIONS

NATIONAL OCEAN SERVICE

($ IN THOUSANDS)

Operations, Research and Facilities	**Terminations AMT.**
Navigation Services	
Mapping and Charting	
(Joint Hydrographic Ctr) [Termination]	*(2,000)*
(Stream quality monitoring) [Termination]	*(160)*
Geodesy	
(S. Carolina Geodetic Survey) [Termination]	*(500)*
Total, Navigation Services	**(2,660)**
Ocean Resources Conservation and Assessment	
Estuarine and Coastal Assessment	
Ocean Assessment Program (OAP)	
(CWI - Pfiesteria and HAB Rapid Response)	
(CWI - Pfiesteria Research NC State) [Termination]	*(500)*
(Coop Institute Enviro Tech) [Termination]	*(5,800)*
(Nat'l Coral Reef Institute) [Termination]	*(1,000)*
(SC Citizens Clean Water Task Force) [Termination]	*(1,200)*
Total, Ocean Resources Conserv. & Assess.	***(8,500)***
Ocean and Coastal Management.	
Ocean Management	
Marine Sanctuary Program	
(Northwest Straits Citizens Advisory Commission) [Termination]	*(350)*
Total, Ocean and Coastal Management.	**(350)**
TOTAL NOS	**(11,510)**

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TABLE OF TERMINATIONS

NATIONAL MARINE FISHERIES SERVICE

($ IN THOUSANDS)

Operations, Research and Facilities	**Terminations AMT.**
Information Collection & Analyses	
Resource Information	
(Gulf of Mexico Consortium) [Termination]	*(1,500)*
(Gulf and South Atlantic Foundation) [Termination]	*(1,250)*
(Atlantic Herring and Mackerel) [Termination]	*(200)*
(Aquatic Resources Initiative) [Termination]	*(8,000)*
(Alaska Near Shore Fisheries) [Termination]	*(1,250)*
(Chesapeake Bay Oyster Research) [Termination]	*(450)*
(Charleston Bump) [Termination]	*(275)*
(Shrimp Pathogens) [Termination]	*(300)*
(Lobster Sampling) [Termination]	*(100)*
(Southeastern Sea Turtles)) [Termination]	*(300)*
(Hard Clam Population Densities) [Termination]	*(450)*
Right whale research	
(Gear Modification Research) [Termination]	*(150)*
Alaskan groundfish surveys	
(Calibrations Studies) [Termination]	*(239)*
Hawaii stock management plan [Termination]	(500)
Pacific salmon treaty program	
(Chinook salmon Agreement) [Termination]	(1,844)
Stellar sea lion recovery plan	
(North Pacific Universities MM Consortium) [Termination]	*(330)*
(US National Fish & Wildlife Service) [Termination]	*(750)*
Bluefish/striped bass [Termination]	(800)
(Southhampton College) [Termination]	*(200)*
Subtotal - Resource Information	**(18,888)**
Fishery Industry Information	
Alaska groundfish monitoring	
(Bering Sea Fishermen's Association [Termination]	*(300)*
GULF FIN Data Collection Effort [Termination]	(3,000)
Subtotal - Fishery Industry Information	**(3,300)**
Total, Info., Collection, & Analyses	**(22,188)**

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Conservation and Management Operations	
Fisheries Management Programs	
Subtotal - Fisheries Management Programs	0
Protected Species Management	
Endangered Species Act Recovery Plan	
(Technical Support for Washington State) [Termination]	*(1,000)*
(Technical Support to State of Alaska for Review of Plans) [Termination]	*(250)*
Subtotal - Protected Species Management	**(1,250)**
Total, Conservation and Mgmt. Opns	**(1,250)**
State and Industry Assistance Programs	
Grants to States	
Subtotal - State and Industry Assistance Programs	0
Fisheries Development Program	
Hawaiian Fisheries Development [Termination]	(750)
Subtotal - Fisheries Development Program	**(750)**
Total, State & Industry Assist. Programs.	**(750)**
TOTAL NMFS	**(24,188)**

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TABLE OF TERMINATIONS

OCEANIC AND ATMOSPHERIC RESEARCH

($ IN THOUSANDS)

Operations, Research and Facilities	Terminations AM1.
Climate and Air Quality Research	
Interannual and Seasonal Climate Research	
Subtotal - Climate and Air Quality Research	**0**
Total, Climate and Air Quality Research	**0**
Atmospheric Programs	
Weather Research	
Subtotal - Weather Research	**0**
Total, Atmospheric Program	**0**
Ocean and Great Lakes Programs	
Marine Environmental Research	
(Ocean Observations {to Univ of NC}) [Termination]	*(750)*
(NISA Implementation)	
(Chesapeake Bay Ballast Demonstration) [Termination]	*(850)*
(Tsumani Mitigation) [Termination]	*(2,300)*
(Lake Champlain Study) [Termination]	*(150)*
(Open Ocean Aquaculture) [Termination]	*(2,400)*
(Aquatic Ecosystem) [Termination]	*(4,000)*
(Sediment Control Study) [Termination]	*(50)*
(Gulf of Maine Council) [Termination]	*(500)*
(Thayer School of Engineering) [Termination]	*(1,000)*
Subtotal - Marine Environmental Research	**(12,000)**
Sea Grant	
Sea grant college program	
(Gulf of Mexico Oyster Initiative) [Termination]	*(1,000)*
Subtotal Sea Grant	**(1,000)**
Undersea Research Program	
NOAA Undersea Research Program	
(Jason) [Termination]	*(1,750)*
Subtotal - Undersea Research Program	**(1,750)**
Total Ocean and Great Lakes Programs	**(14,750)**
TOTAL OAR	**(14,750)**

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TABLE OF TERMINATIONS

NATIONAL WEATHER SERVICE

($ IN THOUSANDS)

Operations, Research and Facilities	**Terminations AMT.**
Operations and Research	
Local warnings and Forecasts	
(Coop Institute Utah -2002 Olympics) [Termination]	*(216)*
(OK First Prototype) [Termination]	*(399)*
(NOAA Weather Transmitter Tower - KY) [Termination]	*(200)*
(NOAA Weather Transmitters - GA) [Termination]	*(800)*
(NOAA Weather Transmitters - SD) [Termination]	*(400)*
(NOAA Weather Transmitters - IL) [Termination]	*(200)*
Subtotal - Local Warnings and Forecasts	**(2,215)**
Total, Operations and Research	**(2,215)**
Systems Acquisition	
Public Warning and Forecast Systems	
Total - Systems Acquisition	0
TOTAL NWS	**(2,215)**

NATIONAL ENVIRONMENTAL, SATELLITE, DATA AND INFORMATION SERVICES

($ IN THOUSANDS)

Operations, Research and Facilities	**Terminations AMT.**
Satellite Observing Systems	
Environmental Observing Services	
(Wind Demonstration) [Termination]	*(2,500)*
Total, Satellite Observing Systems	**(2,500)**
Environmental Data Management Systems	
Data and Information Services	
(Weather Records Preservation) [Termination]	*(5,000)*
Regional Climate Centers [Termination]	(2,750)
Total, Environmental Data Management Systems	**(7,750)**
TOTAL NESDIS	**(10,250)**

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TABLE OF TERMINATIONS

PROGRAM SUPPORT

($ IN THOUSANDS)

Operations, Research and Facilities	**Terminations AMT.**	ldditional ue Chngs gMT.
		0 *
		0 *
Executive Direction and Administration	0	0 * *
Systems Acquisition Office (SAO)	0	
Office of NOAA Corps Operations	0	0 *
Subtotal, Administration and Services	**0**	*[0]*
		0
Central Administrative Support	0	0 * *
[CAMS]		
HBCU	0	0 *
Subtotal, Central Administrative Support	**0**	U * *
Retired Pay Commissioned Officers	0	
Total, Administration and Services	0	ERR * *
TOTAL PS - ORF	0	

FLEET MAINTENANCE AND PLANNING AND FACILITIES MAINTENANCE

($ IN THOUSANDS)

Operations, Research and Facilities	**Terminations AMT.**
Fleet Maintenance and Planning	
(Pascagula Facility) [Termination]	*(2,000)*
TOTAL FLEET MAINT. & PLANNING	**(2,000)**
Facilities	
NOAA Maintenance and Repairs	*0*
TOTAL FACILITIES	**0**

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TABLE OF TERMINATIONS

OPERATIONS, RESEARCH,AND FACILITIES SUMMARY

($ IN THOUSANDS)

Operations, Research and Facilities	**Decrease/ Terminations AMT.**
National Ocean Service	(11,510)
National Marine Fisheries Service	(24,188)
Office of Oceanic and Atmospheric Research	(14,750)
National Weather Service	(2,215)
National Environ. Sat. Data & Info Service	(10,250)
Program Support	0
Fleet Maintenance & Planning	(2,000)
Facilities	0
Undistributed	
Undistributed Satellite Balances, per P.L. 105-18	
Rent Saving to finance Goddard	
Total Direct Obligations	**(64,913)**
Financing	
Recoveries of Prior Year	0
Unobligated balance Transferred from DARRF	0
Rescission of unobligated balances - Hurricane Andrew	(3,400)
Mandatory Payments for NOAA Corps Retirement	0
TOTAL Budget Authority ORF	**(68,313)**

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TABLE OF TERMINATIONS

PROCUREMENT, ACQUISITION AND CONSTRUCTION
($ IN THOUSANDS)

	Terminations AMT.
Systems Acquisition	
SUBTOTAL SYSTEMS ACQUISITION	**0**
Construction	
Boulder Laboratory Above Standard Cost [Termination]	(6,370)
National Estuarine Research Reserve Construction	
(Kasitsna Bay Lab & Kachenak Bay NERRS) [Termination]	*(1,300)*
(Great Bay NERRS) [Termination]	*(6,000)*
Fort Johnson Lab [Termination]	(3,000)
Outer Banks Community Foundation [Termination]	(750)
Long Island Bay Shore Aquarium [Termination]	(1,000)
Long Island Bay Shore Aquarium [Termination]	(1,000)
Botanical Gardens [Termination]	(500)
Pribilof Island Cleanup [Termination]	(700)
SUBTOTAL CONSTRUCTION PAC	**(20,620)**
OTHER	
SUBTOTAL OTHER PAC	**(1,000)**
TOTAL OBLIGATIONS	(21,620)
Financing	0
TOTAL Discretionary Budget Authority	(21,620)

OTHER ACCOUNTS
($ IN THOUSANDS)

	Terminations AMT.
Fisheries financing program	
(IFQ entry Level) [Termination]	*(100)*
(American Fisheries Act) [Termination]	*(28,000)*
TOTAL BA OTHER ACCOUNTS	(28,100)
TOTAL Discretionary BA NOAA	**(118,033)**
TOTAL Discretionary BA NOAA w/Fees	**(152,033)**