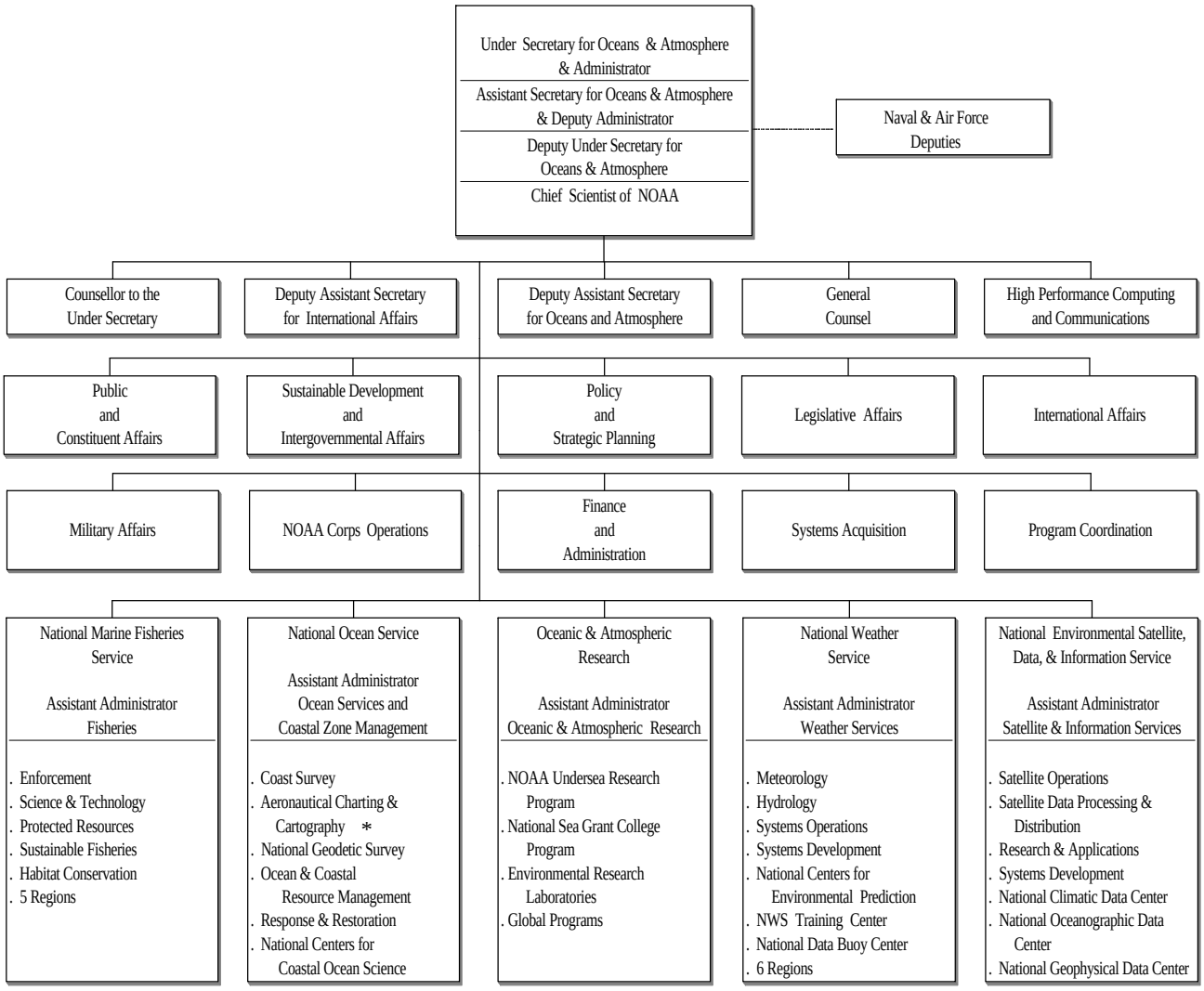
NOAA FY 2000 Budget Request

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

FEBRUARY 1, 1999

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

Dr. D. James Baker
Under Secretary for Oceans and Atmosphere

Terry D. Garcia
Assistant Secretary for Oceans and Atmosphere

Scott B. Gudes
Deputy Under Secretary for Oceans and Atmosphere

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.)

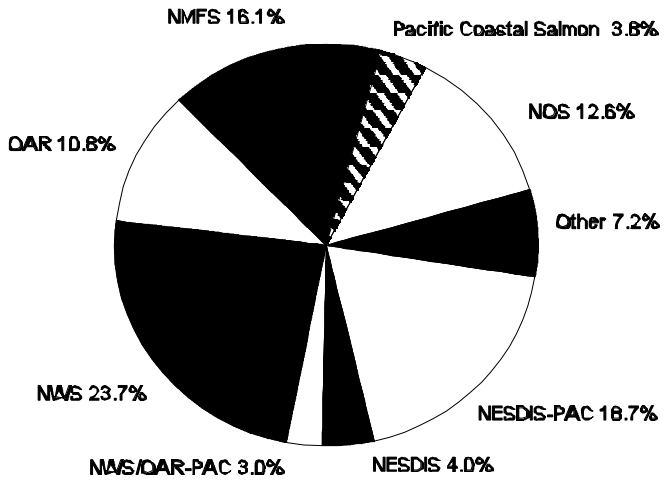
Summary of the FY 2000 NOAA
Budget Request
(Dollar amounts in thousands)

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

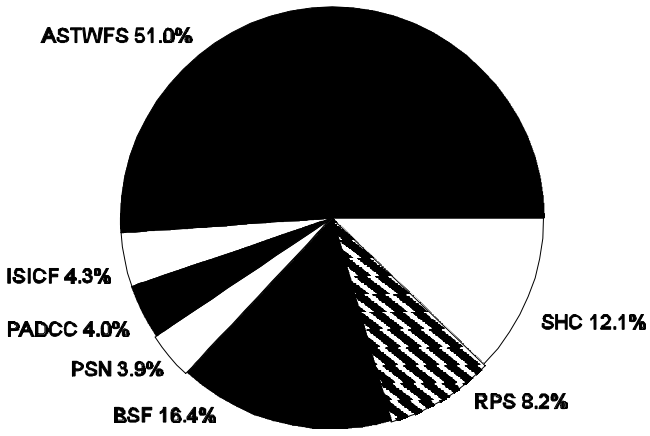
STRATEGIC MISSION

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.

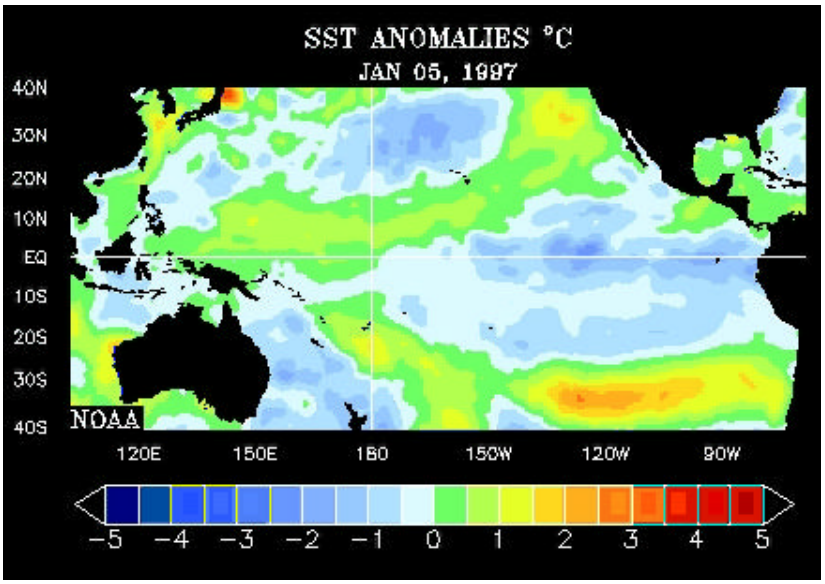
These objectives will be accomplished primarily through the efforts of the Office of Oceanic and Atmospheric Research (OAR), the National Environmental Satellite, Data, and Information Service (NESDIS), and the National Weather Service (NWS).

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.