Section 3:
NOAA Budget Request by Goal
The Strategic Plan

- ❑ Summary of FY 2000 Budget Request
- ❑ FY 2000 Request Highlights
- ❑ Advance Short Term Warning and Forecast Service
- ❑ Implement Seasonal to Interannual Climate Forecasts
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- ❑ Build Sustainable Fisheries
- ❑ Recover Protected Species
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The NOAA Strategic Plan

An FY 2000 Overview

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

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

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

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

- Build and use new information networks.

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

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

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

Achieving NOAA's Vision for 2005

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

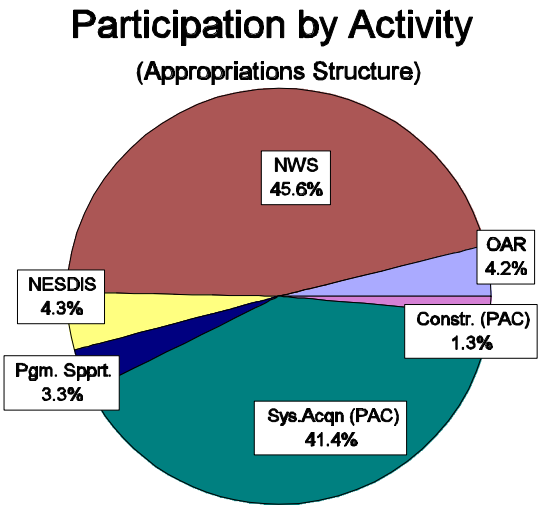
Advance Short-Term Warning and Forecast Services

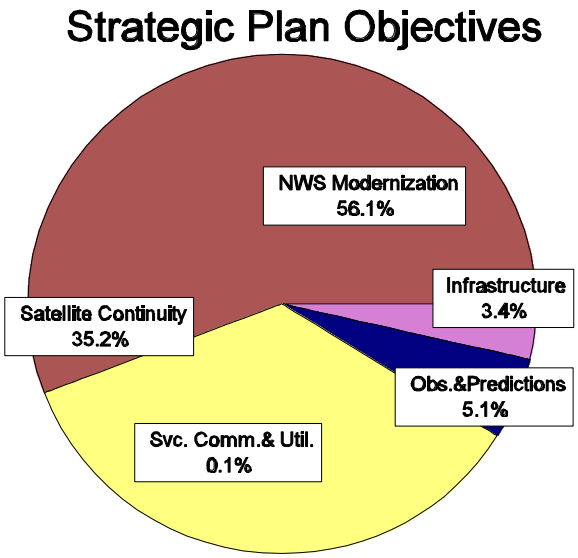
Total Request: $1,325,451,000

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

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

Implementation Strategy - The objectives of this goal are to:





ASTWFS

- Sustain modernized weather service operations;

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

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

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

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

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

FY 1998 Accomplishments:

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

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

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

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

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

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

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

ASTWFS

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

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

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

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

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

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

Key FY 2000 Activities:

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

ASTWFS

Key Performance Measures

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

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

Advance Short-Term Warning & Forecast Services

($ in Thousands)

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

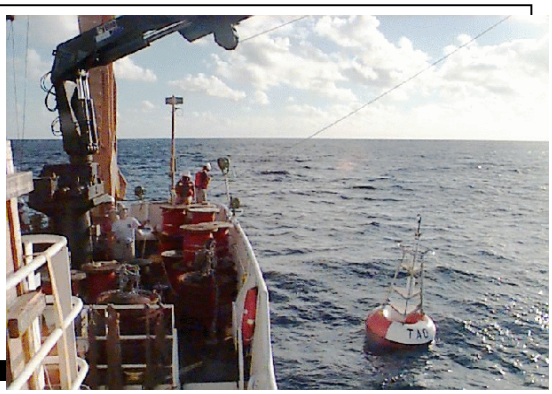
Advance Short-Term Warning & Forecast Services

($ in Thousands)

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

Implement Seasonal to Interannual Climate Forecast

Total Request: $112,626,000



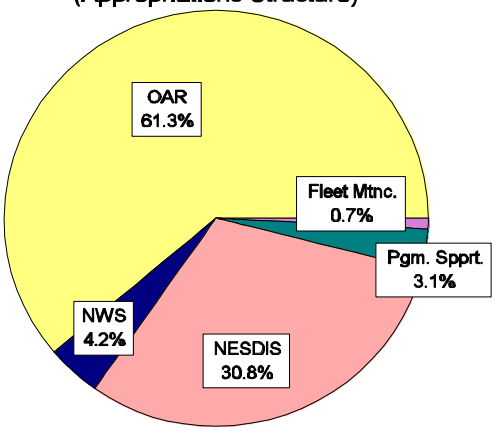
The NOAA Ship KA'IMIMOANA deploying weather buoys in the Pacific.

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

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

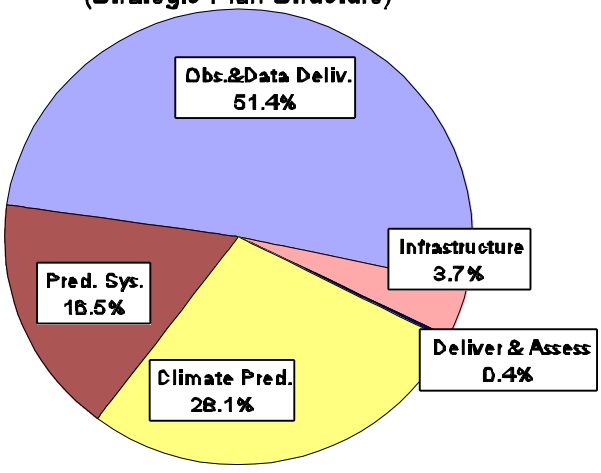
Participation by Activity

(Appropriations Structure)



Strategic Plan Objectives

(Strategic Plan Structure)



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

Implementation Strategy - The objectives of this goal are to:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ISICF

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

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

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

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

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

Key FY 2000 Activities:

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

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

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

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

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

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

ISICF

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

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

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

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

ISICF

Key Performance Measures

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

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

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

Implement Seasonal to Interannual Climate Forecasts

($ in Thousands)

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

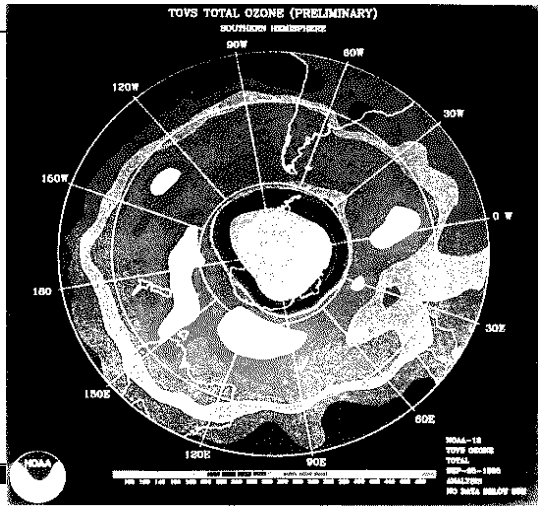
Implement Seasonal to Interannual Climate Forecasts

($ in Thousands)

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

Predict & Assess Decadal to Centennial Climate Change

Total Request: $103,766,000



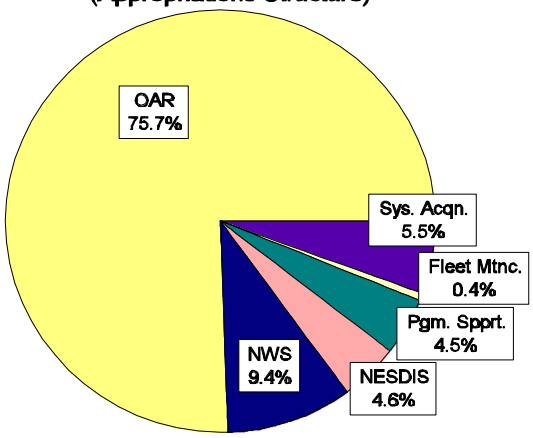
TOVS Satellite image of ozone over Antarctica

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

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

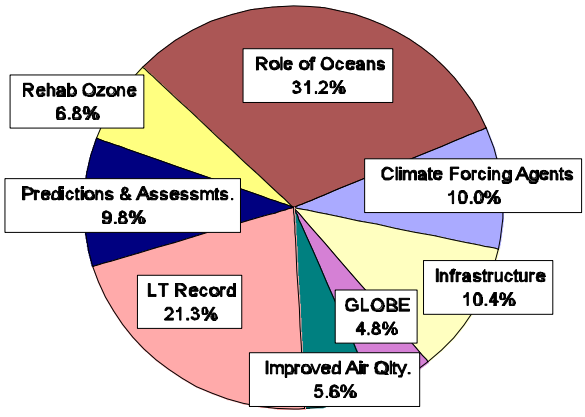
Participation by Activity

(Appropriations Structure)



Strategic Plan Objectives

(Strategic Plan Structure)



PADCC

Implementation Strategy - The objectives of this goal are

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

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

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

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

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

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

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

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

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

In FY 1998, NOAA:

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

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

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

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

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

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

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

Key FY 2000 Activities:

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

PADCC

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

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

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

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

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

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

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

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

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

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

Key Performance Measures

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

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

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

Predict and Assess Decadal-to-Centennial Change

($ in Thousands)

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

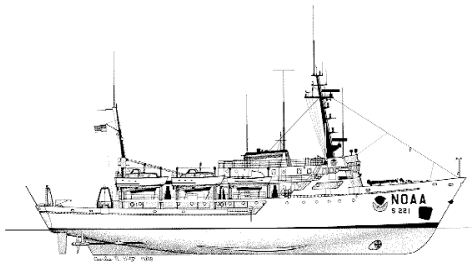
Predict and Assess Decadal-to-Centennial Change

($ in Thousands)

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

Promote Safe Navigation

Total Request: $101,074,000

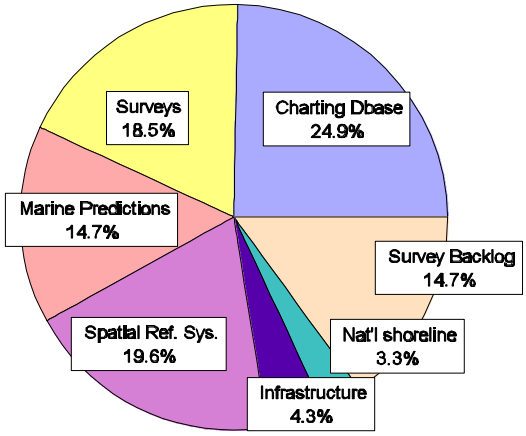


The NOAA Ship RAINIER conducts hydrographic surveys used for nautical charting.

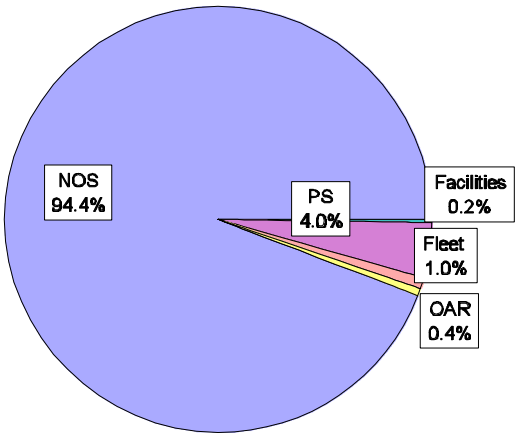
Vision - By 2005, merchant ships, fishing vessels and recreational boats will safely ply our coastal waters, electronically guided by space-based navigation and advanced information technologies. NOAA will revolutionize U.S. marine navigation, mapping and surveying and assist commercial shipping in moving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

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

Strategic Plan Objectives



Participation by Activity



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

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

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

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

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

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

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

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

FY 1998 Accomplishments - During FY 1998, NOAA:

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

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

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

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

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

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

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

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

Key FY 2000 Activities:

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

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

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

PSN

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

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

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

Key Performance Measures

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

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

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

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

Promote Safe Navigation

($ in Thousands)

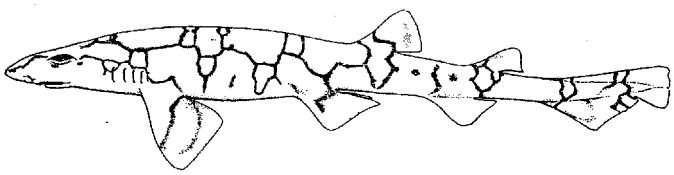
Strategic Plan Objectives	*FY 1999 ENACTED*		*FY 2000 BASE*		*FY 2000 PRES. REQUEST*		*INC./DEC. (REQUEST - BASE)*	
	FTE	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*	*FTE*	*AMT.*
Build Nautical Charting Database	175	23,950	175	24,123	175	25,123		1,000
Update Nautical Surveys	319	20,539	319	20,821	319	18,661		(2,160)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

Promote Safe Navigation

($ in Thousands)

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

Build Sustainable Fisheries

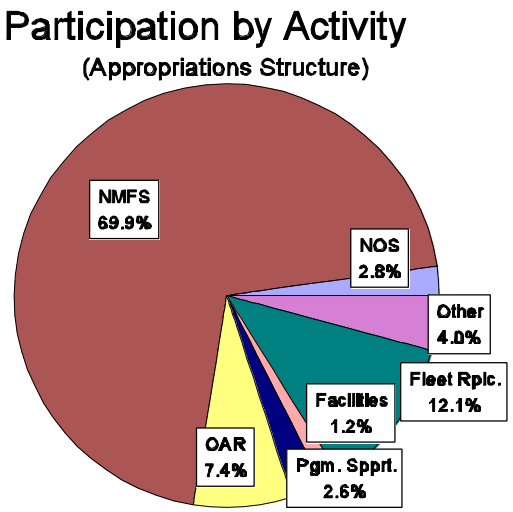


Chain Dogfish

Total Request: 426,345,000

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

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



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

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

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

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

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

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

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

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

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

Net Fish Traps.

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

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

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

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

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

Key FY 2000 Activities:

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

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

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

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

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

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

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

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

BSF

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

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

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

Key Performance Measures

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

Build Sustainable Fisheries

($ in Thousands)

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

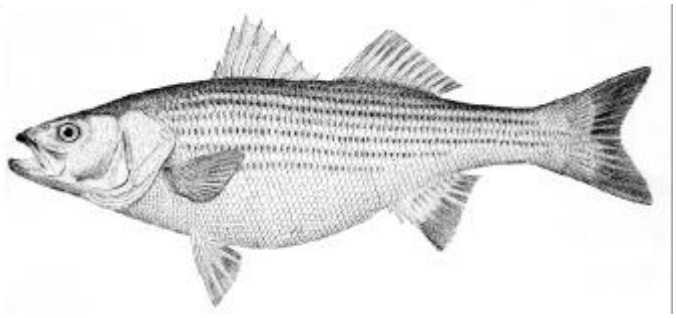
Build Sustainable Fisheries

($ in Thousands)

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

Recover Protected Species

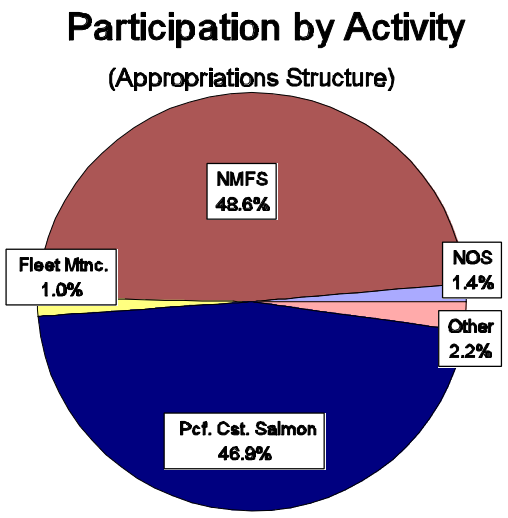
Total Request: $213,339,000



Striped Bass

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

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

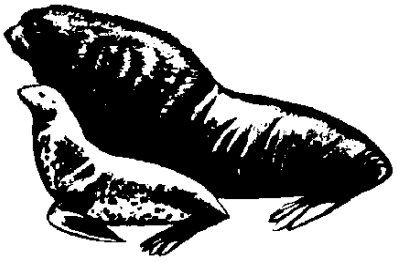


RPS

Implementation Strategy - The objectives of this goal are to:

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

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



Steller sea lion and pup.

FY 1998 Accomplishments - During FY 1998, NOAA:

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

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

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

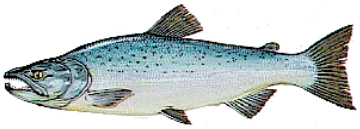
- Made strides in protecting at risk turtle species by promoting the use of turtle excluder devices (TEDs) in the U.S. and internationally. The endangered Kemp's ridley turtle population experienced an increased survival rate through the use of TEDs in the U.S. and Mexico. Threatened Atlantic loggerhead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

FY 2000 Key Activities:

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

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

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



Chinook Salmon

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

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

RPS

Hawaiian Monk seal and pup.

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

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

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

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

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

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

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

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

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

RPS

Key Performance Measures

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

Recover Protected Species

($ in Thousands)

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

Recover Protected Species

($ in Thousands)

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

Recover Protected Species

($ in Thousands)

Strategic Plan Objectives	*FY 1999 ENACTED* FTE	AMT.	*FY 2000 BASE* FTE	AMT.	*FY 2000 PRES. REQUEST* FTE	AMT.	*INC./DEC. (REQUEST - BASE)* FTE	AMT.
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Recover Protected Species

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Construction - PAC		559		559				(559)
Pacific Coastal Slamon Funds						100,000		100,000
Total	575	79,634	575	81,262	721	213,339	146	132,077

Sustain Healthy Coasts

Total Request: $315,268,000

Fagatale Bay National Marine Sanctuary

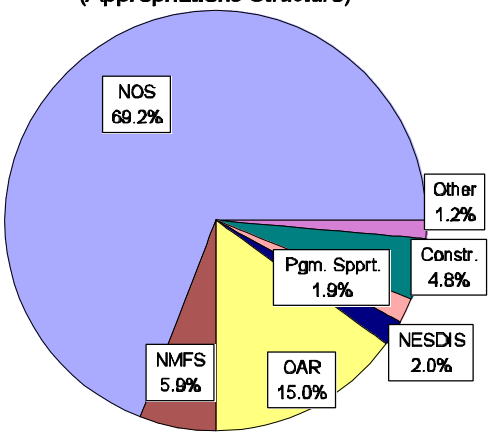
Vision - By 2005, the Nation's coasts will have more productive and diverse habitats for fish and wildlife, and cleaner coastal waters for recreation and the production of seafood. Coastal communities will have thriving, sustainable economies based on well-planned development and healthy coastal ecosystems.

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

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

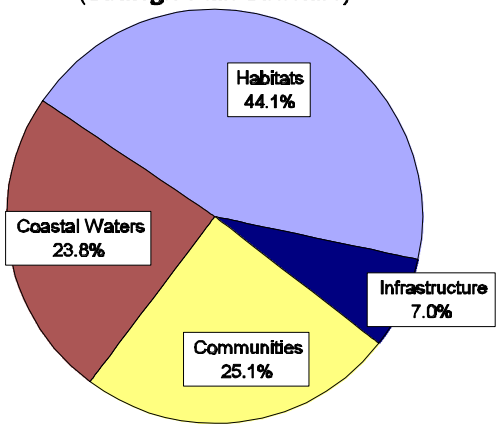
Participation by Activity

(Appropriations Structure)



Strategic Plan Objectives

(Strategic Plan Structure)



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

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

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

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

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

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

FY 1998 Accomplishments - In FY 1998, NOAA:

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

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

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

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

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

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

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

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

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

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

SHC

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

Key FY 2000 Activities:

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

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

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

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

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


Sandy shoreline near Naples, FL.

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

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

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

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

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

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

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

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

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

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

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

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

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Key Performance Measures

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

Sustain Healthy Coasts

($ in Thousands)

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

Sustain Healthy Coasts

($ in Thousands)

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