Subactivity: Ocean Resources Conservation and Assessment
Line Item: Ocean Assessment Program (OAP)

GOAL STATEMENT:

NOAA's National Ocean Service (NOS) promotes healthy coastal ecosystems by ensuring that economic development in coastal areas of the U.S. is managed in ways that maintain biodiversity and long-term productivity necessary for sustained use. Working in partnerships with Federal and State agencies NOAA provides coastal managers with the scientific understanding, information, products and services needed to balance the environmental, social, and economic goals of coastal communities and NOAA.

BASE DESCRIPTION:

Several NOS programs are located within the Ocean Assessment Program Line Item, including NOAA's Coastal Services Center, the NOAA Coral Reef Program, NOAA's Coastal Storms Program, and the Cooperative Institute for Coastal and Estuarine Environmental Technology.

Base activities support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

COASTAL SERVICES CENTER

The NOAA Coastal Services Center's (Center) mission is to build capacity for informed decision making about our coasts. The Center conducts its mission under several authorities, including 16 U.S.C. 1456c, which authorizes NOAA to provide coastal managers with technical assistance. The Center's primary customers are the Nation's coastal managers, including natural resource managers, planners, and emergency officials. The Center provides services, products, and expertise to this community that would otherwise be unavailable or unaffordable. By doing so, the Center is effectively "buying down" the cost of improving state and local coastal management programs, thereby enabling more effective and targeted implementation of the Coastal Zone Management Act. Partnerships between the Center and state and local coastal management organizations and their partners give rise to more than 100 projects each year. These projects produce new tools and approaches that often can be applied nationwide. The Center has developed a collaborative strategy, building effective working relationships not only across NOAA but also with other federal mission agencies.

In developing projects, the Center focuses on issues identified as important to the coastal resource management community—including hazards, habitat, the national spatial data infrastructure, coastal growth, and ocean and coastal observing systems. Customer requirements for programs and activities are determined through statutory guidance, direct interactions, needs assessments, surveys, evaluations, prototyping, CONOPS processes, competitive analysis, and partnering. Projects and activities must be 1) customer oriented; 2) focused on results; 3) undertaken in partnership; and 4) national in scope, yet local in approach. The Center is composed of employees from throughout the bureau, and the Center's annual operating plan is coordinated among all of NOAA's Line Offices.

The Center's functional areas of expertise include coastal management; access to information and technology; data development, integration and management; geographic information systems; remote sensing; technical assistance and training; and capacity building. The Center also leads the NOS-wide coordination of the Pacific Services Center in Hawaii, which brings NOS services to the State of Hawaii and other U.S. Pacific flag islands territories, and is deploying assets to other coastal areas to support and enhance NOAA's regional interactions and delivery of products and services. The Center is co-coordinating the Coastal Storms Program, a cross-NOAA Line Office effort, with the National Weather Service, and is working with multiple NOAA, interagency, and non-federal partners to help establish a combined regional and national framework and sustained capacity for an Integrated Ocean Observing System.

CORAL REEF PROGRAM

The NOAA Coral Reef Conservation Program implements priority actions to fulfill the Coral Reef Conservation Act and the U.S. Coral Reef Task Force's National Action Plan to Conserve Coral Reefs. NOAA is undertaking a series of activities to reduce human impacts on coral reefs and restore reef environments. The rapid decline and loss of these valuable marine ecosystems has significant social, economic, and environmental consequences in the U.S. and around the world. With government and non-government partners, the program supports a wide variety of priority activities including mapping and monitoring of reef ecosystems, support for state/territorial coral reef management, improved management of reef fisheries and implementation of coral reef marine protected areas.

Coral reefs are some of the most biologically rich and economically valuable ecosystems on Earth. These biologically complex ecosystems have great economic, social and cultural importance to the U.S. and other countries. They provide a wide variety of valuable products and services including:

- economic stability and food security for millions of people;
- chemicals and pharmaceuticals that contribute to improved human health;
- environmental services such as shoreline protection and climate change mitigation;
- areas of natural beauty and biodiversity; and
- significant sources of revenue and employment through tourism and other industries.

The global value of products and services from coral reef ecosystems has been estimated at over $300 billion. Coral reef ecosystems and their products and services are now seriously threatened by a variety of human impacts and environmental factors. Key threats include: over-exploitation and destructive fishing practices; pollution and sedimentation associated with urban development, deforestation and agriculture; habitat loss resulting from dredging and shoreline modification; vessel groundings and other direct physical impacts; invasive species; disease outbreaks; and impacts associated with climate change such as coral bleaching.

COASTAL STORMS

The Coastal Storms Program will harness and leverage NOAA and community resources to reduce the adverse impacts of coastal storms by developing improved and integrated products and services that address specific state/local decision-maker needs. The Coastal Storms Program brings NOAA-wide expertise, products, and services to specific regions to address challenges unique to those regions. Efforts to integrate existing product service lines to meet unique needs are also included. Targeted geographies include the St. John's water management district in northeast Florida, the coastal portion of the Lower Columbia River watershed, and the Southern California Bight. The specific issues addressed are determined by regional needs as articulated by users. Commonalities are emerging in observations, modeling, outreach, risk and vulnerability, and decision-maker needs assessments among pilot regions.

COOPERATIVE INSTITUTE FOR COASTAL AND ESTUARINE ENVIRONMENTAL TECHNOLOGY

The Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET) was established in 1997 as a partnership between the University of New Hampshire (UNH) and NOAA. The mission of CICEET is to provide the scientific basis for understanding and reversing the impacts of coastal and estuarine degradation through the development and application of environmental technologies and methods. CICEET operates in partnership with the National Estuarine Research Reserve System, which enables research to be conducted at controlled, relatively undisturbed sites. CICEET works with coastal managers to select projects relevant to their technology needs and transfer technology when completed.

PROPOSED LEGISLATION:

No legislation is proposed.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Ocean Resources Conservation and Assessment	FY 2005 ACTUALS	FY 2006 CURRENTLY AVAILABLE	FY 2007 BASE PROGRAM	FY 2007 ESTIMATE	INCREASE / DECREASE
Line Item: Ocean Assessment Program (OAP)					
Ocean Assessment Program Base (ECO)	22,003	8,176	-	-	-
Coastal Observation Technology System	2,146	-	-	-	-
Coastal Ocean Research & Monitoring Program	2,438	493	-	-	-
NOAA ICOOS	7,392	7,397	-	-	-
NOAA/UNH Joint Ocean Observing Technology Center	3,942	1,972	-	-	-
Gulf of Alaska Ecosystem Monitoring Program	1,971	1,676	-	-	-
Gulf of Maine Observing System	1,873	493	-	-	-
Long Island Sound Observing System	986	986	-	-	-
Central Gulf of Mexico Observing System (USM)	1,971	1,972	-	-	-
So Cal Coastal Ocean Observing System (Scripps)	1,479	1,480	-	-	-
Center for Integrated Marine Technologies	-	2,022	-	-	-
Alliance for Coastal Technologies	2,463	2,959	-	-	-
Center for Coastal Ocean Observation and Analysis	2,463	2,466	-	-	-
Carolina Coastal Ocean Observing and Prediction System	2,463	2,022	-	-	-
Wallops Ocean Observation Project	1,971	1,972	-	-	-
Coastal Ocean Monitoring Network for West Florida	739	-	-	-	-
Coastal Storms	2,463	1,233	1,221	2,874	1,653
Cook Inlet Coastal Monitoring and Habitat	986	986	-	-	-
Coastal Services Center (ECO)	22,672	19,725	14,508	14,508	-
Coastal Services Center (WW)	-	-	4,950	4,950	-
Digital Earth Model - MS	-	2,959	-	-	-
Pacific Coastal Services Center	2,218	4,438	-	-	-
Seacoast Science Center	986	-	-	-	-
EE Jusi Environmental Institute	739	-	-	-	-
Coastal Change Analysis	493	493	-	-	-
Lake Pontchartrain	1,479	1,972	-	-	-

Subactivity: Ocean Resources Conservation and Assessment	FY 2005 ACTUALS	FY 2006 CURRENTLY AVAILABLE	FY 2007 BASE PROGRAM	FY 2007 ESTIMATE	INCREASE / DECREASE
CREST	444	986	-	-	-
CI-CORE	2,463	2,466	-	-	-
Aquatic Research Consortium MS	2,463	2,466	-	-	-
Coop Institute for Coastal and Estuarine Enviro Tech	6,702	6,706	6,643	6,643	-
Hawaii Coral Reef Initiative	1,479	1,480	-	-	-
Nat'l Coral Reef Institute - Florida	986	986	-	-	-
Coral Reef - Puerto Rico	493	493	-	-	-
Coral Reef	24,643	24,656	24,740	25,702	962
National Fish and Wildlife Foundation - NFWF	689	690	-	-	-
Ocean Health Initiative	17,742	4,931	-	-	-
Monterey Bay Watershed	493	-	-	-	-
White Water to Blue Water	-	986	-	-	-
Oregon Ocean Observing	-	493	-	-	-
SURA Coastal Ocean Observing System	-	2,466	-	-	-
National Maritime Center	-	1,972	-	-	-
Lake Erie Monitoring	-	494	-	-	-
Louisiana Long Term Estuary Assessment	-	986	-	-	-
TOTAL	146,933	121,149	52,062	54,677	2,615
FTE	210	65	65	65	-

Note: The dollars in this table represent budget authority.

PROGRAM CHANGES FOR FY 2007:

Coastal Storms (0 FTE and +$1,653,000): NOAA requests an increase of $1,653,000, for a total of $2,874,000, to support regional expansion of NOAA's Coastal Storms Program. 71% ($7B) of annual U.S. disaster losses occur in coastal areas because of dense populations living in the paths of strong storms. The Coastal Storms Program's mission is to harness and leverage NOAA and community resources to reduce the adverse impacts of coastal storms by developing improved and integrated products and services that address specific state/local decision-maker needs. The Coastal Storms Program utilizes a phased regional implementation strategy and provides products and services tailored to meet regional needs. Specific products include integrated oceanographic and meteorological observations, forecast models, on-line decision support tools, and regionally based outreach and training.

The Coastal Storms Program completed its first pilot in Northeast Florida in early FY 2005 and is currently working in the coastal Lower Columbia River region of the Pacific Northwest and the Southern California Bight. Products and services for the Pacific Northwest will be completed in FY 2006.

Statement of Need

As demonstrated by the devastating impacts of Hurricanes Katrina and Rita in 2005, coastal communities need improved, robust products and services to help them plan for, respond to, and recover from coastal storms. Economic losses from Hurricane Katrina are expected to exceed $125B due to the impacts of storm surge, flooding and wind associated with the storm (Source: Risk Management Solutions, Newark, CA). Faced with increasing vulnerability of coastal communities, coastal and emergency managers have expressed a need for comprehensive, timely and accessible information to aid in making decisions at critical times. NOAA's Coastal Storms Program meets this need by reaching out across NOAA's organizational lines to provide a suite of products that help coastal communities increase their resilience to coastal storms. These products are developed in close coordination with regional partners and, in many cases, in collaboration with them. As a result, regional needs are met and NOAA resources are significantly leveraged with resources from federal, state, and local partners. The Coastal Storms Program's first regional effort took place in the St. Johns River Water Management District of Northeast Florida and was successfully completed in early FY 2005. Regional stakeholders have found the Coastal Storms Program's products to be very useful. For example, Trailer Bridge, an ocean shipping service, noted that "Decisions as to whether we can make safe approaches to the St. John's entrance channel and even dodging the most recent Tropical Storm Edouard are all better due to the proximity of [the Coastal Storms Program buoy]." Authorities and policy guidance related to the Coastal Storms Program include the Coastal Zone Management Act of 1972, the Inland Flood Forecasting and Warning System Act of 2002, the Coastal and Geodetic Survey Act of 1947, the Hydrographic Services Improvement Act of 1998, NOAA's 5-Year Research Plan, and the National Response Plan administered by FEMA.

Proposed Actions

With the requested funds, NOAA will continue the development of products and services for the Southern California Bight and begin initial efforts for the Northern Gulf of Mexico. Specific actions include the following:

- Continue support for developing products and services for Southern California (Approx. $1,533,000). Examples include an online, Geographic Information System based tool to help emergency and coastal managers identify key hazards for the region and tools available to address them (e.g., hazard mitigation planning); a seamless topographic-bathymetric database that will greatly enhance understanding of erosion and inundation due to storm surge and tsunamis; and an assessment of the ecological impacts of storm-water driven non-point source pollution in the region. Product development for Southern California began in FY 2005.
- Begin initial efforts for the Gulf of Mexico. This will include identifying regional needs and potential partners, including a regional partner to lead outreach and training for the region. (Approx. $120,000)

Benefits

The requested funds will ensure that NOAA is able to meet its commitments to Southern California and provide a robust suite of products for the region that will help address a wide range of storm related issues, including erosion, water quality, and flooding. Expectations for NOAA and the Coastal Storms Program among regional partners in California are high. Completing the products for this region in a timely fashion is critical. Expanding the Coastal Storms Program to the Gulf of Mexico will help ensure that this devastated region will have a greater ability to plan for, respond to, and recover from future hurricanes and tropical storms, particularly in addressing issues related to storm surge and coastal flooding.

Performance Goals and Measurement Data

This increase will support the objective, "Enhance conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs," under the Department of Commerce strategic goal to "Observe, protect, and manage the Earth's resources to promote environmental stewardship." This increase will support NOAA's Strategic Plan Goal to "Serve Society's Needs for Weather and Water Information.," and the following performance measure.

Performance Goal: Weather and Water **Performance Measure:** Number of regions in which capacity was built to address coastal storm related hazards.	**FY 2005**	**FY 2006**	**FY2007**	**FY 2008**	**FY 2009**	**FY 2010**
Without increase	1	2	2	3	3	3
With increase	--	--	2 (1 additional in progress)	3 (1 additional in progress)	3 (1 additional in progress)	4 (1 additional in progress)

Coral Reef Program (0 FTE and +$962,000): NOAA requests an increase of $962,000 and 0 FTE for a total of $25,702,000, to improve the condition of coral reefs. The increase will be used to augment state and territory grants for implementation of Local Action Strategy (LAS) priority projects. Local Action Strategies (LAS) have been developed in all seven coral reef jurisdictions – Florida, Hawaii, Guam, U.S. Virgin Islands, American Samoa, Puerto Rico, and the Commonwealth of the Northern Mariana Islands – to address high-priority focus areas for coral reef conservation. Six focus areas, fisheries management and over-fishing, land-based sources of pollution, recreational overuse, lack of public awareness, climate change and coral bleaching, and disease, were identified as priority for all jurisdictions. In addition, several jurisdictions identified additional focus areas of particular concern to those jurisdictions.

Statement of Need

In order to translate broad national goals into on-the-ground action, the U.S. Coral Reef Task Force (USCRTF) initiated the Local Action Strategy (LAS) process to develop local conservation initiatives with measurable results in each of the seven U.S. states and territories with coral reefs. The strategies are locally driven roadmaps for collaborative and cooperative action among federal, state or territory and nongovernmental partners to address specific threats to coral reef ecosystems. Each LAS includes a range of projects designed to meet particular objectives for managing these threats. The goals and objectives of the LAS are linked to those found in the U.S. National Action Plan to Conserve Coral Reefs, which was produced and adopted by the USCRTF in 2000. The following six focus areas were identified and prioritized by the USCRTF for local action: fisheries management and over-fishing, land-based sources of pollution, recreational overuse, lack of public awareness, climate change and coral bleaching, and disease. Additional focus areas were included by some jurisdictions to address key local threats to coral health, including invasive species in Hawaii and population pressure in American Samoa. Using the six priority USCRTF focus areas as a guide, Florida, Hawaii, Guam, U.S. Virgin Islands, American Samoa, Puerto Rico, and the Commonwealth of the Northern Mariana Islands led development of specific LAS for each of the locally relevant threats. Applying a collaborative decision-making process based on local needs, concerns, and capacities, each jurisdiction worked with a variety of partners to create strategies containing projects designed to address a particular issue.

Proposed Actions

- The requested increase will be used to augment existing state and territory grants for implementation of LAS priority projects. States and territories will use this grant funding to implement LAS strategies that they are unable to fund with existing resources. Specific projects to be implemented by each jurisdiction will depend on highest priority actions at the time that grant applications are submitted. Match requirements of the grant will ensure that the increase will leverage non-NOAA funds to increase on-the-ground action.
- In addition, the increase will allow for targeted training and technical assistance to meet LAS-associated needs. State and territorial staff do not always have a complete skill set to implement all strategies. Training and technical assistance will provide staff at all levels with increased skill sets to allow them to better address all aspects of coral reef management and protection, the benefits of which will last far beyond implementation of any particular strategy.

Benefits

The requested funds will improve coral reef management and protection in all seven coral reef jurisdictions. Funding implemented at the local level not only helps to preserve coral reef resources directly, it engages local communities in that process. This local engagement increases the efficacy of coral management actions, as it allows a broader range of individuals (not just those particularly employed in management positions) to understand the needs for and mechanisms of coral reef protection.

Performance Goals and Measurement Data

This increase will support the objective, "Enhance conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs," under the Department of Commerce strategic goal to "Observe, protect, and manage the Earth's resources to promote environmental stewardship." This increase supports NOAA's Strategic Plan goal, "to protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management," and the following performance measure.

Performance Goal: Ecosystems **Performance Measure:** Number of Local Action Strategy projects implemented to improve coral reef management efforts.	**FY 2005**	**FY 2006**	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**
Without Increase	70	70	70	70	70	70
With Increase	--	--	95	95	95	95

TERMINATIONS FOR 2007:

The following programs, or portions thereof, have been terminated in FY 2007: NOAA ICOOS ($7,397,000); Alliance for Coastal Technologies ($2,959,000); Center for Integrated Marine Technologies ($2,022,000); UNCW Coastal Ocean Research and Monitoring Program ($493,000); Gulf of Maine Observing System ($493,000); Alaska Ocean Observing System ($1,676,000); Long Island Sound Observing System ($986,000); Gulf of Mexico Observing System-USM ($1,972,000); Center for Coastal Ocean Observation and Analysis ($2,466,000); Carolina Coastal Ocean Observing and Prediction System ($2,022,000); Wallops Ocean Observation Project ($1,972,000); So Cal Coastal Ocean Observing System-Scripps ($1,480,000); Oregon Ocean Observing System ($493,000); SURA Coastal Ocean Observing System ($2,466,000); NOAA/UNH Joint Observing Technology Center ($1,972,000); Ocean Assessment Program ($8,176,000); Aquatic Research Consortium ($2,466,000); CI-CORE ($2,466,000); Cook Inlet Coastal Monitoring and Habitat ($986,000); Coastal Services Center ($1,041,000); Pacific Coastal Services Center ($3,538,000); Mississippi Digital Earth ($2,959,000); Coastal Change Analysis ($493,000); Hawaii Coral Reef Initiative ($1,480,000); Florida Coral Reef ($986,000); Coral Reef – Puerto Rico ($493,000); Cooperative Institute for Coastal and Estuarine Environmental Technology ($64,000); National Fish and Wildlife Foundation ($690,000); Lake Pontchartrain ($1,972,000); CREST ($986,000); Whitewater to Bluewater ($986,000); Ocean Health Initiative ($4,931,000); Maritime Center of the Gulf ($1,972,000); Lake Erie Monitoring ($494,000); Louisiana Long Term Estuary Assessment ($986,000).

Subactivity: Ocean Resources Conservation and Assessment
Line Item: Response and Restoration

GOAL STATEMENT:

The Office of Response and Restoration (OR&R) responds to threats in order to protect and restore coastal resources.

BASE DESCRIPTION:

NOAA responds to approximately 100 significant oil or chemical spills each year as scientific advisors to the U.S. Coast Guard, and provides solutions to cleanup agencies that protect and restore coastal resources at more than 200 hazardous waste sites each year along the nation's ocean and Great Lakes coasts. When oil or hazardous substances threaten or injure coastal and marine resources, NOAA and other state and federal natural resource trustees are responsible for ensuring that cleanup actions protect those resources from further injury; for assessing and recovering natural resource damages to restore the injured resources; and for seeking compensation on behalf of the public for the loss of services that the natural resources provided. NOAA's authorities for responding to threats to the nation's trust resources derive from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) and the Oil Pollution Act of 1990 (OPA). NOAA's Office of Response and Restoration (OR&R) implements CERCLA and OPA requirements by providing interdisciplinary scientific response to releases of oil, chemicals, and contaminants; protecting and restoring NOAA trust resources; and extending core expertise to address critical local and regional coastal challenges. OR&R's three primary program elements contribute NOAA's Strategic Plan Mission Goals to Support the Nation's commerce with information for safe, efficient, and environmentally sound transportation, and Protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management.

Base activities support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

EMERGENCY RESPONSE PROGRAM

OR&R's interdisciplinary scientific response team responds to oil and chemical spills and other emergencies. It is a key part of the NOAA Emergency Response Program. The team provides scientific advice to support of federal response efforts. OR&R scientists forecast the movement and behavior of spilled oil and chemicals, evaluate the risk to natural resources, and recommend protection priorities and appropriate cleanup actions. OR&R strengthens the nation's response capabilities by conducting research and monitoring in areas impacted by spills, developing software and technical guidance, and passing on these tools and expertise via local, national, and international training programs.

OR&R field staff are co-located with regional U.S. Coast Guard offices to ensure close cooperation and coordination for planning and responding to spill events and other emergencies. In addition to maintaining a highly prepared response team that coordinates on-scene scientific activities and provides scientific support for operational decisions during oil or hazardous material spills or other threats, OR&R supports local communities in developing and evaluating oil and hazardous materials response plans, fulfills trustee responsibilities as the Department of Commerce Regional Response Team representative, serves as the Department of Commerce's representative on the National Response Team (NRT), and chairs the NRT's Science and Technology Committee.

HABITAT PROGRAM

OR&R assessment, protection, and restoration activities carry out NOAA's trust mission as part of the agency's Habitat Program. OR&R regional coordinators, scientists, and economists work in partnership with government agencies, the public, and industry to:

- Provide technical advice on ecological risk, contaminated sediments, Brownfields, and remedial issues to accelerate natural resource recovery and community and waterfront revitalization.
- Assess impacts to NOAA trust resources by collecting data and conducting studies to determine whether coastal resources have sustained injury.
- Develop cooperative settlements to resolve liability for that damage.
- Plan for restoration and determine how much restoration is required for each injury.
- Work with co-trustees, responsible parties, and communities to implement resource restoration.

To improve protection of trust resources and to advance the field of restoration, OR&R develops and tests new approaches, techniques, and procedures for improved and cost-effective protection and cleanup strategies, damage assessment and remediation, and restoration of trust resources. This knowledge is passed on to other natural resource trustees, coastal managers, and decision-makers through training, technical assistance, and decision-making tools that promote planning—and so efficiencies in protection, clean up, and restoration--within a watershed management context.

To improve protection of trust resources and to advance the field of restoration, OR&R develops and tests new approaches, techniques, and procedures for improved and cost-effective protection and cleanup strategies, damage assessment and remediation, and restoration of trust resources. This knowledge is passed on to other natural resource trustees, coastal managers, and decision-makers through training, technical assistance, and decision-making tools that promote planning—and so efficiencies in protection, clean up, and restoration--within a watershed management context.

Another significant arena of activity is through OR&R's partnership with the NOAA Fisheries Service Restoration Center and General Counsel under the Habitat program. This partnership, known as the Damage Assessment and Restoration Program (DARP) allows NOAA to approach harm to coastal trust resources in an integrated way. During the past decade, DARP injury scientists, economists, restoration specialists, and attorneys have provided expertise and leadership to restore wetlands, fisheries, wildlife, and human uses of these resources.

This program also supports NOAA-wide activities mandated by the Estuary Restoration Act of 2000. NOAA works with other partners to implement a national estuary habitat restoration strategy designed to ensure a comprehensive approach towards habitat restoration projects. NOAA's activities include the development of scientifically sound monitoring protocols and standards for coastal habitat restoration projects. In addition, NOAA is developing restoration databases that provide quick and easy access to accurate and up to date information regarding all projects funded under the Estuary Restoration Act of 2000, as well as information on projects throughout the country that meet the standards established as a part of the Act for monitoring and data collection to provide scientists and resource managers with information critical to successful estuary habitat restoration efforts.

PRIBILOF ISLANDS CLEANUP

Under The Fur Seal Act, The Pribilof Environmental Restoration Act, and the Pribilof Islands Transaction Act, NOAA is responsible for conducting environmental restoration on designated properties, and for transferring those properties to the native Aleuts when restoration is complete. NOAA performs site characterizations, assesses the magnitude and extent of the contamination, evaluates the risk to human health and the environment, and develops corrective action plans for environmental restoration. Site cleanup includes removal of debris, disposal of barrels containing hazardous materials, treatment of petroleum contaminated soils, and ground water monitoring.

PROPOSED LEGISLATION:

No legislation is proposed.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Ocean Resources Conservation and Assessment	FY 2005 ACTUALS	FY 2006 CURRENTLY AVAILABLE	FY 2007 BASE PROGRAM	FY 2007 ESTIMATE	INCREASE / DECREASE
Line Item: Response and Restoration					
Response and Restoration Base (ECO)	11,238	10,454	6,218	9,012	2,794
Response and Restoration Base (CT)	-	-	7,309	7,309	-
Coastal Protection and Restoration	395	-	-	-	-
Estuary Restoration Program	1,183	1,184	1,188	1,188	-
Damage Assessment Program	2,250	2,959	-	-	-
Mitigating Coastal Development Impacts/MS State Univ.	986	986	-	-	-
Marine Wildlife Noise Impacts/Univ of RI	98	493	-	-	-
Marine Debris	4,928	3,945	-	-	-
Marine Debris Removal-Alaska	1,183	1,233	-	-	-
Marine Debris Removal SC	197	-	-	-	-
Hazardous Materials Response Program	1,595	-	-	-	-
Aquatic Resources Environmental Initiative	4,928	4,438	-	-	-
Vieques	986	986	-	-	-
Center for Marine Spill Response Project	1,971	2,959	-	-	-
Pribilof Islands Cleanup and Economic Development	6,899	6,903	6,927	7,227	300
TOTAL	38,837	36,540	21,642	24,736	3,094
FTE	101	112	112	112	-

Note: The dollars in this table represent budget authority.

PROGRAM CHANGES FOR FY 2007:

Response and Restoration (0 FTE and +$2,794,000): NOAA requests an increase of $2,794,000, for a total of $16,321,000, to strengthen NOAA's ability to respond to oil and chemical spills and terror incidents; determine damage to natural resources from contaminant releases; protect and restore marine and coastal ecosystems at hazardous waste sites; and work with communities to address critical local and regional coastal challenges. This increase will restore NOAA's response and restoration capacity.

Statement of Need

NOAA responds to approximately 100 significant oil or chemical spills each year as scientific advisors to the U.S. Coast Guard under the National Contingency Plan. NOAA also provides solutions to cleanup agencies that protect and restore coastal resources at more than 200 hazardous waste sites each year along the nation's ocean and Great Lakes coasts. When oil or hazardous substances injure coastal and marine resources, NOAA and other state and federal natural resource trustees are responsible for ensuring that cleanup actions protect those resources from further injury; for assessing and recovering natural resource damages to restore the injured resources; and for seeking compensation on behalf of the public for the loss of services that the natural resources provided. NOAA's authorities for responding to threats to the nation's trust resources derive from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) and the Oil Pollution Act of 1990 (OPA). NOAA implements CERCLA and OPA requirements by providing scientific response to releases of oil, chemicals, and contaminants; protecting and restoring NOAA trust resources; and extending core expertise to address critical local and regional coastal challenges. NOAA also provides scientific support during incidents of national significance (i.e. Hurricanes Katrina and Rita) under the National Response Plan and Homeland Security Directives 5 and 8. At current funding levels, NOAA is unable to adequately respond to pollution incidents and incidents of national significance, and carryout NOAA's restoration mission.

Proposed Actions

The requested funds will increase NOAA's current capacity to respond to oil and chemical spills and incidents of national significance; conduct natural resources damage assessments from contaminant releases; protect and restore marine and coastal ecosystems at hazardous waste sites; and work with communities to address critical local and regional coastal challenges. The increase will rebuild NOAA's ability to apply its unique suite of response and restoration expertise, which has been diminished by two consecutive years of reduced funding. The requested funds will:

- Increase NOAA's current capacity to respond to oil and chemical releases and other hazards threatening coastal environments and communities. NOAA supports oil and chemical spill response operations with the timely and relevant scientific recommendations required to reduce the environmental harm and economic cost of emergencies. OR&R forecasts the movement of pollution events, evaluates the risk to natural and public resources, and recommends cleanup actions to expedite cost-effective response that reduces the environmental harm and economic costs. This increase will allow NOAA to fund critical response and restoration contracts, restoring NOAA's ability to effectively respond to emergency pollution accidents and terrorist attacks involving chemical contaminants.

- Increase NOAA's current capacity to protect and restore marine and coastal ecosystems at hazardous waste sites. NOAA protects and restores NOAA trust resources at hazardous waste sites by providing technical assistance and solutions that protect and enhance recovery of coastal resources, their supporting habitats, and human health. This increase will allow NOAA to provide technical support to state, tribal and federal co-trustees, investigate the risk and potential injury to NOAA trust resources, and develop strategies to protect and restore coastal and marine resources at 130 - 150 hazardous waste sites (NOAA currently provides technical support at approximately 100 hazardous waste sites).

- Increase NOAA's current capacity to carry out natural resource assessments of coastal and marine habitats impacted from releases of oil or other hazardous materials. These damage assessments allow NOAA to address the most significant threats to NOAA trust resources, and work with those responsible for the harm to restore the resources or obtain compensation to pay for the restoration. NOAA has restored thousands of acres of wetlands, streams that support anadromous fish, mangroves, and other vital habitat and the services they provide to the public and ecosystem. NOAA currently has significant participation in 25-30 priority natural resource damage assessment cases. This increase will allow NOAA to achieve significant progress toward completing 5 more natural resource damage assessments or cases settled to recover funds for restoration of coastal resources.

- Increase pre and post-spill planning and coordination and training for national preparedness and response. This increase will allow NOAA to provide training for emergency responders, conduct exercises across the country to promote preparedness by testing policies and plans and training personnel, and conduct research to develop tools and techniques to improve response efficiency, increase scientific accuracy, and decrease harm to life, property, and the environment.

- Develop tools and training for coastal managers and spill responders to improve the nation's ability to prepare for and respond to releases of oil, chemicals, and contaminants, and to restore degraded coastal resources. NOAA develops a wide range of tools, including Watershed Database and Mapping Projects, risk assessment guidelines, Habitat Equivalency Analysis, and Environmental Sensitivity Index maps. These tools and training transfer NOAA's technical expertise to other government agencies and the private sector to improve the nation's ability to protect and restore coastal and marine resources. Coastal managers and spill responders use these decision-support tools to improve emergency response and the overall protection and restoration of the nation's natural resources. Without this increase, NOAA will be unable to produce any Watershed Database or Environmental Sensitivity Index products or make improvements and incorporate new scientific developments into existing products.

- Increase NOAA's current capacity to conduct emergency response, resume training and participation in preparedness drills, clean up contaminated sites, and perform restoration work in the Great Lakes Region and Pacific Islands. Activities in these regions were curtailed due to constraints of the FY 2006 budget. The requested increase will allow NOAA to fulfill activities specified in the U.S. Ocean Action Plan and the Presidential Directive for the Great Lakes.

Benefits

Coastal, marine and Great Lakes habitats, including rivers and estuaries, are an indispensable part of our nation's natural resources and sustain a significant portion of the U.S. economy. These habitats are components of complex ecosystems beginning inland at the headwaters of streams and extending seaward. The degradation and loss of these habitats affects the viability of important natural resources valued by the Nation. NOAA plays a vital role in the protection and restoration of habitats that support NOAA trust resources, and are essential to the long-term health and sustainability of coastal and marine ecosystems and the communities that depend on them.

NOAA works with other state, tribal, and federal co-trustees to assess risk and harm to coastal resources from oil and chemical releases, evaluates and recommends actions to prevent further harm, and restores degraded trust resources and the services they provide. NOAA also provides coastal managers and decision makers with technical guidance and tools that promote the protection, restoration and stewardship of the nation's ocean, coastal and Great Lakes ecosystems.

Thousands of incidents occur each year in which oil or chemicals are released into the coastal environment. Oil and chemical spills into our coastal waters can harm people and the environment and cause substantial disruption of waterways with potential widespread economic impacts. The Nation's dependence on the Marine Transportation System (MTS) creates an ongoing need to efficiently develop preparedness and response actions that reduce the risks of spills and minimize the impact on commerce and the environment when spills do occur. Enhancing preparedness and response capabilities will help ensure that U.S. ports and waterways, and the people who live near them, are secure and economically viable.

Federal, State, and local agencies across the country call on and rely on NOAA's support in oil and chemical spills and other emergencies that threaten life, property and trust resources. NOAA's expertise is critical to prevent further harm, restore adverse effects on natural resources, aid planning and response decision-making. NOAA provides the required prevention, preparedness, response, and recovery actions associated with these events. As the nation focuses on preventing, preparing for, and responding to a broad array of emergencies and terrorist threat scenarios, NOAA works in collaboration with other NOAA offices, federal agencies, and community-level responders, to provide critical information and services for prevention, preparedness, response, and restoration.

Performance Goals and Measurement Data

This increase will support the objective, "Enhance conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs," under the Department of Commerce strategic goal to "Observe, protect, and manage the Earth's resources to promote environmental stewardship." This increase supports the NOAA Ecosystems GPRA performance measure "Number of acres of habitat restored" and the following performance measures.

Performance Goal: Ecosystem **Performance Measure:** Number of hazardous waste sites where assessments or cleanup plans address risks to NOAA trust resources (annual)	**FY 2005**	**FY 2006**	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**
Without increase	14	7	7	7	7	7
With increase	--	--	12	12	12	12
Performance Goal: Ecosystem **Performance Measure:** Technical guidance and assistance provided to NOAA partners, federal action agencies, and resource decision makers						
Without increase	170	100	100	100	100	100
With increase	--	--	150	150	150	150
Performance Goal: Commerce and Transportation **Performance Measure:** Capacity to Respond: Number of areas with acceptable capacity to respond to spills and other environmental hazard incidents in our national coastal areas						
Without increase	26	26	26	24	20	20
With increase	--	--	28	31	34	37

Pribilof Islands Environmental Cleanup, Long-term monitoring, and Property Transfer (0 FTE and +$300,000): NOAA requests an increase of $300,000 for a total of $7,227,000 to continue clean-up operations on the Pribilof Islands. Completion of the cleanup activities is approaching, with over 94% of the contaminated sites now addressed. The funds requested in FY 2007 are necessary for NOAA to fulfill the Federal government's obligation to decontaminate these islands, and transfer the land back to the native population. NOAA is responsible for performing environmental cleanup and restoration activities related to past commercial fur sealing on the Pribilof Islands in Alaska's Bering Sea. In addition, State of Alaska Public Law requires groundwater monitoring as long as the water is either above maximum contaminant levels, or risk-based levels previously agreed to via a risk assessment. While the State has no definitive rule defining the maximum period of groundwater monitoring, NOAA anticipates the State will require monitoring on both islands for up to 23 years (FY2008 - FY2030).

Statement of Need

Under The Fur Seal Act, The Pribilof Environmental Restoration Act, the Pribilof Islands Transaction Act, and a Two Party Agreement with the State of Alaska, NOAA is responsible for conducting environmental restoration on designated properties and for transferring those properties to the native Aleuts when restoration is complete. NOAA performs site characterizations, assesses the magnitude and extent of the contamination, evaluates the risk to human health and the environment, and develops corrective action plans for environmental restoration. Since 1999 the NOAA Office of Response and Restoration has made significant progress in restoring the contaminated sites for which NOAA is legally liable on the Pribilof Islands. Approximately 94% of the cleanup has been completed; yet several challenging sites on St. George Island remain to be remediated including the removal of fuel floating on the water table at certain sites.

Proposed Actions

To ensure the on time completion of remediation efforts, NOAA will continue progress towards remediating the remaining sites on St. George Island. NOAA will also continue to involve the local communities in the decision-making and environmental restoration process by holding quarterly Restoration Advisory Board (RAB) meetings during the FY 2007 field season. The RAB has become a significant component of the community involvement activities in the Environmental Restoration Program at the Islands as it serves a twofold purpose: 1) the RAB provides a forum through which representatives of the community, installation, and regulatory agencies discuss and exchange information regarding the Environmental Restoration Program at the Islands and 2) the RAB gives the stakeholders the opportunity to participate in the cleanup process and make their views known to decision-makers.

Benefits

These funds will assist NOAA in fulfilling its legal obligation to complete cleanup on the Pribilof Islands and subsequently transfer properties to the native Aleuts and further allow NOAA to continue holding much valued Restoration Advisory Board meetings. NOAA expects to complete cleanup activities on the islands by 2008 at the requested funding level.

Performance Goals and Measurement Data

This increase will support the NOAA strategic objective to “Provide critical support to NOAA’s mission” and the following performance measure.

Performance Goal: Facilities Mission Support **Performance Measure:** Percent completion of environmental restoration on the Pribilof Islands in cooperation with the Alaska Department of Environmental Conservation.	**FY 2005**	**FY2006**	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**
Without increase	94%	98%	98%	99%	100%	N/A
With increase	--	--	99%	100%	N/A	N/A

TERMINATIONS FOR 2007:

The following programs have been terminated in FY 2007: Marine Debris ($3,945,000); Aquatic Resources Environmental Initiative ($4,438,000); Center for Marine Spill Response ($2,959,000); Marine Debris Removal, AK ($1,233,000); Mitigating Coastal Development Impacts ($986,000); Marine Wildlife Noise Impacts ($493,000); Vieques ($986,000).

Subactivity: Ocean Resources Conservation and Assessment
Line Item: National Centers for Coastal Ocean Science

GOAL STATEMENT:

NOAA's National Ocean Service (NOS) will conduct and support monitoring, research, assessment, and assistance for the range of NOAA's coastal stewardship responsibilities. Through the National Centers for Coastal Ocean Science, NOS provides a sound scientific and applied basis for effective coastal management decisions and conducts the high-quality science needed to predict the potential impacts of multiple stressors on coastal ecosystems and living resources.

BASE DESCRIPTION:

NOAA's National Centers for Coastal Ocean Science (NCCOS) provide national leadership in ocean, coastal, and Great Lakes science by conducting research, monitoring, and assessments to build the strong scientific foundation essential for sustainable use of coastal resources. NCCOS supports NOAA's coastal mission and builds better linkages among coastal programs of NOS by developing and maintaining a broad base of scientific experts and science capabilities through both intramural and extramural research. Coastal ecosystems are subjected to a variety of stressors including climate change, extreme natural events, invasive species, land and resource use, and pollution. As a focal point for coastal resource research within NOAA, NCCOS' activities primarily support NOAA's Strategic Plan Mission Goal to Protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management. Through its research into the effects of climate change and freshwater inflow on coastal ecosystems, NCCOS also contributes to NOAA's goals to Understand climate variability and change to enhance society's ability to plan and respond, and Serve society's needs for weather and water information.

As part of NOS, NCCOS is governed by statutes defining the national oceans policy and much of NCCOS research responds to its legal mandates, including the new Oceans and Human Health Act, the reauthorized Harmful Algal Bloom and Hypoxia Research and Control Act, and the Great Lakes Task Force Executive Order. As part of NOAA's Ecosystem Goal Team and Ecosystem Research Program, NCCOS conducts integrated assessments and ecological forecasts at a regional scale to inform ecosystem-based management.

NCCOS is comprised of four research centers: The Center for Coastal Monitoring and Assessment (CCMA), the Center for Coastal Fisheries Habitat Research (CCFHR), the Center for Coastal Environmental Health and Biomolecular Research (CCEHBR), and the Center for Sponsored Coastal Ocean Research (CSCOR). Each center brings unique and complementary expertise and capabilities to address critical coastal resource issues. NCCOS also includes the Hollings Marine Laboratory, the Kasitsna Bay Laboratory, and the Cooperative Oxford Laboratory.

Base activities support the objective, "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

COASTAL MONITORING AND ASSESSMENT (Silver Spring, MD)

Through monitoring, applied research, and assessment programs, NCCOS' Center for Coastal Monitoring and Assessment (CCMA) evaluates the environmental quality of U.S. coastal, estuarine, and Great Lakes areas and the ecosystem consequences of current and potential anthropogenic stresses on these areas. CCMA monitors toxic contaminants, nutrients, and related properties in biota, water, and sediments at over 300 sites through the National Status and Trends program. The data are used to evaluate the environmental quality at each site, to detect changes, and to determine associated biological effects of chemical contaminants. CCMA also conducts programs in applied research, monitoring, biogeography, and assessment to determine: the distribution of anoxia/hypoxia; the occurrences and environmental relationships of harmful algal blooms (HABs); and the biodiversity, habitat and other ecological characteristics of U.S. estuarine, coastal, and Great Lakes areas.

COASTAL FISHERIES AND HABITAT RESEARCH (Beaufort, NC and Kasitsna Bay, AK)

NCCOS' Center for Coastal Fisheries Habitat Research (CCFHR) in Beaufort, North Carolina has been a focal point for coastal habitat and fisheries research for nearly a century. The Center's research efforts are focused on estuarine processes, nearshore ocean ecosystems, biological productivity, dynamics of reef fishery resources, harmful algal blooms, and the effects of anthropogenic influence on resource productivity. Results of the Center's research are utilized by coastal managers at the Federal, state, and local level to address important environmental issues, such as controversial permit applications, environmental litigation, and the development of effective management policies.

A new CCFHR facility in Kasitsna Bay, AK is improving the capacity of NCCOS researchers to identify the stressors affecting the condition of the sub-arctic ecosystem of Kachemak Bay, determine the processes by which they act, identify their short- and long-term impacts, and forecast future conditions with and without management intervention. Research priorities are based on management-driven information needs as identified by resource managers, scientists, and other key stakeholders.

COASTAL ENVIRONMENTAL HEALTH AND BIOMOLECULAR RESEARCH (Charleston, SC and Oxford, MD)

The Center for Environmental Health and Biomolecular Research (CCEHBR) in Charleston, South Carolina, conducts applied research programs to: develop methods to characterize and detect marine biotoxins and harmful algal blooms (e.g., *Pfiesteria*) and identify hazards to marine resources and seafood consumers; develop and implement new techniques for field assessment of environmental quality and marine ecosystem health; improve detection and measurement of contaminants and evaluation of their significance to marine species and their habitats; and understand the factors linking land use in the coastal zones with the distribution and effect of environmental contaminants on living marine resources and habitats. The CCEHBR Resources Forensics program supports law enforcement agencies by providing technical support and analyses for cases involving protected, threatened, or endangered species, consumer fraud, violation of fisheries closures, and illegal taking of game fish. Identification analyses are used to prosecute illegal activities such as importing and selling sea turtle eggs and meat, selling illegal game fish, and fishing during closure periods, as well as determination of wild versus cultured marine animals.

The Cooperative Oxford Lab in Oxford, MD is affiliated with CCEHBR and provides scientific information required to resolve important issues related to the health of coastal ecosystems. The Oxford Lab specializes in shellfish pathology and habitat restoration research. Scientists investigate the role of disease in the distribution, abundance, marketability, and edibility of marine animal resources, determine the influence of natural and man-made environmental factors on the occurrence and persistence of diseases, and explore the use of marine animal health as an indicator of environmental health. The Oxford laboratory is the only Federal aquatic research facility on the Chesapeake Bay.

HOLLINGS MARINE LAB (Charleston, SC)

The Hollings Marine Laboratory (HML), located in Charleston, SC, provides science and biotechnology applications to sustain, protect, and restore coastal ecosystems, emphasizing linkages between oceans and human health. HML was formed to integrate the knowledge of marine scientists with that of the medical community. Technologies developed for human health are being applied to better understand and assess the state of marine ecosystems, and to examine the interrelationships between human health and marine environmental health. By applying genomics techniques to define gene sequences that indicate immune responses and disease resistance in marine organisms to various stressors, scientists can make connections between biochemical changes, organism responses, and ecosystem alterations. HML scientists are also developing faster and cheaper indicators of physiological and ecosystem health for use in monitoring and evaluating the status of ecosystems and organisms of interest. Other studies examine the biomolecular effects of different chemical contaminants resulting from human activities. HML was established as a Joint Project Agreement between NOAA, the National Institute of Standards and Technology, the South Carolina Department of Natural Resources, the University of Charleston, SC, and the Medical University of South Carolina.

SPONSORED COASTAL OCEAN RESEARCH (Silver Spring, MD)

The Center for Sponsored Coastal Ocean Research (CSCOR) addresses emerging coastal ocean issues across NOAA's mission responsibilities. CSCOR supports competitive, peer-reviewed, interdisciplinary research investigations with finite life cycles conducted on a regional scale over a 3-5 year period. Funded subject areas, as well as corresponding funding levels, vary from year to year over these life cycles. These operating principles were incorporated into the design for the program to ensure the timeliness and relevance of its research in addressing coastal ocean mandates across the agency. The program relies upon established processes that reflect the requirements and advice of both the management and science communities in setting its priorities to ensure the utility and credibility of its research.

CSCOR coordinates NOAA's research efforts on a number of issues critical to effective coastal resource management. Research funded by CSCOR is designed to improve our ability to forecast the ecological effects of ecosystem stressors to support coastal management decisions. Major ecosystem studies on the joint impact of climate and harvesting on marine populations in the Gulf of Maine, the Pacific Northwest coastal waters, and the coastal Gulf of Alaska are being conducted as the United States component of the Global Ocean Ecosystems Dynamics initiative. The program also seeks to understand the biological, physical, and chemical processes that regulate HABs in major ecosystems like the Gulf of Maine, Chesapeake Bay, and Florida's Gulf Coast, while developing methods to prevent, control and mitigate the impacts of HABs. Land and resource use research focuses on the poorly understood impacts of population shifts to U.S. coastal regions, including habitat modification, nutrient and toxic chemical inputs, and fresh water diversions.

CSCOR funded research efforts were integral to the formulation of the Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico, and CSCOR research will aid in determining the impact of mitigation efforts proposed under the Action Plan.

PROPOSED LEGISLATION:

NOAA will continue to work with Congress to reauthorize the Nonindigenous Aquatic Nuisance Prevention and Control Act.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Ocean Resources Conservation and Assessment	FY 2005 ACTUALS	FY 2006 CURRENTLY AVAILABLE	FY 2007 BASE PROGRAM	FY 2007 ESTIMATE	INCREASE / DECREASE
Line Item: National Centers for Coastal Ocean Science					
National Center for Coastal Ocean Science (NCCOS)	-	-	31,231	31,231	-
Extramural Research	-	9,862	9,841	15,801	5,960
Extramural Research	3,942	-	-	-	-
Center for Coastal Environmental Health & Biomolecular Base	14,786	14,794	-	-	-
LUCES & high salinity estuaries (Baruch)	986	-	-	-	-
Oxford, MD	4,436	4,438	-	-	-
Oxford, MD Extramural Research	1,971	-	-	-	-
Subtotal: Center for Coastal Environmental Health & Biomolecular Rsch	26,121	19,232	-	-	-
CCFHR Base	5,667	5,921	-	-	-
Extramural Research	1,971	-	-	-	-
Subtotal: Center for Coastal Fisheries Habitat Research	7,638	5,921	-	-	-
CCMA Base	5,914	5,656	-	-	-
Extramural Research	1,971	-	-	-	-
Subtotal: Center for Coastal Monitoring & Assessment	7,885	5,656	-	-	-
Center for Sponsored Coastal Ocean Research	3,647	3,649	-	-	-
Coastal Ocean Research Grants (HAB/Pfisteria/GLOBEC)	5,421	-	-	-	-
NCCOS Headquarters	4,928	4,931	-	-	-
Marine Env Health Research Lab - MEHRL	3,942	3,945	-	-	-
TOTAL	59,582	53,196	41,072	47,032	5,960
FTE	174	239	241	241	-

Note: The dollars in this table represent budget authority.

PROGRAM CHANGES FOR FY 2007:

Extramural Research (0 FTE and +$5,960,000): NOAA requests an increase of $5,960,000 for a total of $15,801,000 for extramural coastal and ocean research grants. This request will allow NOAA to maintain its efforts to fulfill requirements of the recently reauthorized Harmful Algal Bloom Research and Control Act (HABHRCA). Implementation of the Act, which is specified in the President's Ocean Action Plan, authorizes appropriations to the Secretary of Commerce for research, education, and monitoring activities related to the prevention, reduction, and control of harmful algal blooms (HABs) and hypoxia. Additional funds would help support NOAA's large and longstanding regional research investments to develop harmful algal bloom and hypoxia forecasting and response capabilities. These efforts are largely supported through NOAA's competitive and extramural HAB and hypoxia research programs which have a proven track record of developing the understanding and tools necessary for managers to respond and predict HAB and hypoxia events such as those affecting the New England and Florida coasts this year.

Statement of Need

HAB and hypoxic events (severe oxygen depletion) are widely recognized as some of the most complex phenomena currently challenging management of aquatic and marine ecosystems. Virtually every coastal state has reported recurring blooms, and a recent national assessment revealed that over half of our Nation's estuaries experience hypoxic conditions. Impacts have included the devastation of critical coastal habitats, loss of economically and culturally vital shellfish resources, illness and death in populations of protected marine species, and serious threats to human health posed by algal toxins. Just one harmful algal bloom event can cost tens of millions of dollars to local coastal economies, and the total costs associated with HABs over the past few decades have been conservatively estimated at over $1 billion. This year has been particularity problematic with extreme harmful algal bloom events along the New England Coast (the largest recorded in New England waters since 1972 forcing shellfish closures from Maine to Rhode Island) and off the west coast of Florida (causing respiratory distress, marine mammal mortalities and widespread hypoxia in bottom waters killing vast areas of coral reefs), in addition to the recurring "dead zone" in the Gulf of Mexico with its nutrient management implications for 31 states and a watershed that encompasses greater than 40% of the conterminous U.S..

Proposed Actions

Scientific understanding of HAB and hypoxic events has progressed significantly since the early 1990's, but major impediments still remain for prediction, control and mitigation of these complex phenomena. The requested funds will 1) help to maintain and strengthen the suite of NOAA competitive, peer-reviewed programs focused on HAB and hypoxia research; 2) accelerate the development and transition to operations of tools and forecasts for the prediction, control, and mitigation of HABs and hypoxia; and 3) facilitate the assessment of and response to HAB and hypoxia events. Funding would support extramural efforts, conducted through the following programs, to address the needs specified above and mandated by HABHRCA:

- **Ecology and Oceanography of Harmful Algal Blooms** – ECOHAB seeks to understand the causes and dynamics of HABs; develop forecasts of HAB growth, movement, landfall, and toxicity; and develop new detection methodologies for HABs and their toxins. Projects selected for support must successfully compete in a rigorous external, peer-review process that ensures a high-level of scientific merit. This program has served as an international model that has fostered similar programs globally.
- **Monitoring and Event Response for Harmful Algal Blooms** – MERHAB assists States and Tribes in their response to current threats from harmful algal blooms by forging working partnerships between leading government, public, and private entities in an impacted region. Through MERHAB, researchers and managers are transferring technology for pro-active detection of algal cells and toxin to improve the efficiency and effectiveness of coastal monitoring programs. This competitive research program provides our nation's best attempt to help States and Tribes protect vital resources and safeguard human health from HABs.
- **Gulf of Mexico Ecosystems and Hypoxia Assessment** – NGOMEX, through its competitive, peer-reviewed monitoring, observational, experimental and modeling studies, is improving the understanding and predictions of the hypoxic "dead" zone over the Louisiana continental shelf, including impacts to commercially important species. These efforts are providing critical information by providing assessments and predictions of the hypoxic zone, information sought by the public and regional management entities.
- **Coastal Hypoxia Research Program** – CHRP seeks to build upon NOAA's long-term investment in understanding and predicting the causes and consequences of the large seasonal hypoxic zone over the Louisiana continental shelf and to expand efforts on hypoxia in other regions. Competitively funded research efforts will focus on development of predictive models, determination of estuary susceptibility to nutrient loading, retrospective analyses and assessing the impact of hypoxia on key living resources. This research will provide resource managers with new tools, techniques and information for making informed decisions and assessing alternative management strategies that have broad relevance nation-wide.
- **Ecological Forecasting Program** – ECOFORE focuses on the development and transition of forecasts from the research and development stage to routine operational forecasts for the management community in support of ecosystem-based management. This program provides a dedicated and competitive source of funding for ensuring the most promising research results, models and tools from ongoing programs take the final step toward providing sustained, accurate, and relevant forecasts for local, state, and federal resource managers. Funded projects are required to have end users of the developed products involved in the efforts from the beginning, thus helping to ensure user relevance.

Benefits

NOAA and our Federal, state, and academic partners have made considerable progress in the scientific understanding, detection, monitoring, assessment, and prediction of HABs and hypoxia in coastal ecosystems. These advances are helping coastal managers undertake short- and long-term efforts to prevent and mitigate the detrimental effects of these phenomena on human health and on valuable coastal resources. The recent reauthorization of HABHRCA will ensure continued development and delivery, through a suite of research programs, of regionally-specific detection and analysis methods, coupled biological-physical models, enhanced state and local government HAB monitoring capacity in both marine and freshwater environments and new methods for prevention, control and mitigation.

These truly interdisciplinary studies are helping to advance the state of the science and also lead to results with direct application to needs of state coastal resource and public health managers, a perfect example of the coordinated, holistic, ecosystem-based studies required to implement NOAA's strategic plan goal of ecosystem-based management. HABHRCA research activities are closely tied to the NOAA plan for successful expansion of operational HAB forecasting systems around the US coast to include the Pacific Northwest, California Coast, Gulf of Mexico, Chesapeake Bay, and Gulf of Maine. HABHRCA research is also developing and delivering the biological components key to making developing regional ocean observing systems relevant to coastal resource and public health managers.

NOAA's continued support of the extramural research community through the competitive and peer-reviewed research sponsored by the programs above will insure that NOAA is bringing the best scientific expertise to bear on these two high priority national issues. Federal and academic scientists compete on an equal footing for support, and collaborative programs between Federal and academic researchers are encouraged. Through these programs, NOAA is able to combine the best science in the agency with the best in the research community (including universities, non-profit laboratories, and institutions) to leverage resources and undertake ecosystem-scale research to improve predictions in the coastal ocean.

Performance Goals and Measurement Data

This increase will support the objective, "Enhance conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs," under the Department of Commerce strategic goal to "Observe, protect, and manage the Earth's resources to promote environmental stewardship."

TERMINATIONS FOR 2007:

Portions of the following programs have been terminated in FY 2007: Center for Coastal Environmental Health and Biomolecular Research ($7,140,000); Oxford, MD ($2,908,000); Center for Sponsored Coastal Ocean Research ($1,263,000); NCCOS Headquarters ($779,000), Marine Environmental Health Research Lab ($114,000).