WRITTEN TESTIMONY OF

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Mr. Chairman, and Members of the Subcommittee, thank you for inviting me to appear today to discuss Fiscal Year 2003 actions and Fiscal Year 2004 plans and priorities for NOAA programs that fall under the subcommittee's jurisdiction. My name is Jamison S. Hawkins and I am the Acting Assistant Administrator for NOAA's National Ocean Service. My testimony today will focus on programs that help fulfill NOAA's responsibilities for protecting and restoring coastal and marine resources. These programs, operating under several authorities, help maintain environmental and economic prosperity along the Nation's coasts, improving the quality of life for Americans both living and visiting there.

Office of Response & Restoration

First, I will speak to NOAA's responsibilities under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) and the Oil Pollution Act of 1990 (OPA). Under these specific directives, NOAA protects and restores coastal resources when they are threatened or injured by releases of oil or hazardous substances.

NOAA responds to approximately 100 significant oil or chemical spills each year as scientific advisors to the U.S. Coast Guard. When oil or hazardous substances threaten or injure coastal and marine resources, NOAA and other natural resource trustees are responsible for:

- ensuring that cleanup actions protect those resources from further injury; and
- assessing and recovering natural resource damages to restore the injured resources, and to compensate for the loss of services that the natural resources provided.

Three NOAA programs fulfill the mandate to protect and restore coastal and marine resources threatened or injured by oil or hazardous materials: the Hazardous Materials Response Program (Hazmat), the Coastal Protection and Restoration (CPR) Program and the Damage Assessment and Restoration Program (DARP). Hazmat, the CPR program and part of the DARP program are

located in the Office of Response and Restoration (OR&R) within NOAA's National Ocean Service (NOS). The DARP program is a collaborative effort involving NOS, NOAA Fisheries, and the NOAA Office of General Counsel.

Hazardous Materials Response Program

One of NOAA's responsibilities under OPA is to provide scientific support to the Federal On-Scene Coordinator during the response to oil or hazardous materials spills in the Nation's coastal areas. NOAA's Hazmat program fulfills this responsibility by providing experts, information and tools to support response efforts. This includes:

- 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;
- fulfilling trustee responsibilities as the Department of Commerce Regional Response Team representative;
- serving as the Department of Commerce's representative on the National Response Team (NRT); and,
- chairing the NRT's Science and Technology committee.

The transfer of technology and knowledge to first responders on how best to address spills and other threats is an essential aspect of our trustee role. To that end, NOAA's Hazmat program develops products and provides training to assist in response planning, drills, actual responses to oil or hazardous material spills or other threats, and disseminates information to improve public understanding. We also conduct research on methods to improve the protection and recovery of coastal resources and communities from spills and other hazards.

In FY 2003, the Hazmat program is working with the U.S. Coast Guard to provide trajectory information on the response to the *LUCKENBACH*, a leaking sunken tanker off the coast of California, and has sent staff to assist Spain with the *PRESTIGE* oil spill. In addition, we seek to utilize these regrettable incidents as learning and training experiences, as well as opportunities to share our knowledge to better protect the United States. Priority areas in FY03 are maintaining our state of readiness within homeland security directives, focusing our research and development efforts, and providing grants to investigate spill fates and effects.

The Coastal Protection and Restoration Program

NOAA's Coastal Protection and Restoration (CPR) program works with the Environmental Protection Agency (EPA), the Department of Defense, states, and other lead cleanup agencies at hazardous waste and contaminated sediment sites to:

- protect fish, wildlife, and coastal habitat by recommending cost-effective assessment, cleanup, and monitoring strategies;
- restore natural resources through cooperative settlements with responsible parties;

- provide database and mapping tools and training to states and coastal communities to improve the efficiency of environmental assessment, cleanup, and restoration actions.

Since 1985, the NOAA CPR program has worked with cleanup agencies to resolve natural resource concerns during remediation efforts for hazardous waste sites. While remedial efforts are designed to eliminate or reduce the risks to human health, welfare, and the environment associated with hazardous substances, they may not fully address injuries to natural resources. NOAA's CPR program works to reduce the threat to natural resources and ensure that cleanup actions at hundreds of coastal hazardous waste sites protect and restore coastal and marine resources. Annually, CPR staff helps improve habitat at 250 coastal waste sites.

In addition to improving cleanup of hazardous waste sites, NOAA's CPR program works with responsible parties to cooperatively resolve their liability for injury to natural resources by implementing restoration projects. NOAA's CPR program is involved in restoration activities that improve hundreds of acres of valuable wetland and stream habitat at more than 40 coastal waste sites. In FY03, for example, 70 additional acres of estuarine wetland will be restored in Texas at the Bailey Waste site; wetlands will be restored, fish passage will be established, and herring will be stocked on the Concord River in Massachusetts; and several miles of the Saugautucket River in Rhode Island, near Rose Hill landfill, will be opened to migratory fish.

NOAA has successfully delivered integrated watershed database and mapping tools using Geographic Information Systems (GIS) for ten coastal watersheds. These tools improve decision-making for contamination and restoration issues at local and national levels. Coastal communities and coastal management agencies use these various tools to map contamination, to evaluate and communicate ecological risk issues for contaminated aquatic areas, and to pursue restoration planning.

NOAA's CPR program is supporting regional restoration planning efforts by building consensus on restoration priorities, leveraging ongoing restoration projects, and expediting restoration project implementation in order to more effectively restore habitat on a regional scale. Working with industry, local communities, and state and Federal agencies, the CPR program is linking mitigation and improvement projects with larger regional and watershed restoration plans.

During FY03, CPR is expanding restoration partnerships at both the local and regional levels. Partnerships with industry, states, coastal communities, and others will be used to leverage restoration activities. NOAA is helping communities, like New Bedford, Massachusetts, address contamination, mitigation, and restoration issues related to port development, dredging and "Brownfields" redevelopment. NOAA is also providing technical assistance, training, and support to states and communities to strengthen local and regional capabilities to restore or redevelop contaminated sites. These partnerships will increase restoration of coastal resources in key areas.

The Damage Assessment and Restoration Program
NOAA's Damage Assessment and Restoration Program (DARP) conducts natural resource damage assessments and restoration for oil spills and discharges of hazardous substances. Restoration programs are underway all along the Nation's coast as a result of NOAA's successes with state, tribal, and federal partners. Examples include:

- removal of abandoned fishing nets off Kauai, Hawaii as partial compensation for a spill of 4,900 gallons of oil into the ocean near Honolulu, Hawaii;
- restoration of coastal wetlands, riverine habitats and oyster reefs injured by the release of approximately 50 million gallons of acidic waste water into the Alafia River in Florida; and
- mitigation of the impacts to birds, shoreline vegetation, fish and shellfishing, intertidal species and recreational lakes and beaches impaired by the release of around 39,000 gallons of oil into Dutch Harbor, Alaska.

These results have been accomplished through the efforts of DARP scientists, economists and lawyers working together to evaluate natural resource injuries, identify and evaluate restoration options, and implement restoration projects. DARP's accomplishments depend upon strong partnerships among the Damage Assessment Center (DAC) in NOS, the Restoration Center within NOAA Fisheries, and the Office of General Counsel for Natural Resources. The expertise provided by these offices makes DARP an essential part of NOAA's stewardship mission by supporting the restoration of coastal and marine resources.

It should be noted that DARP's considerable successes have been realized through a relatively modest investment of resources that leverages monies provided by responsible parties. Since its inception in 1990, the DARP program and its partners have secured almost $300 million from those responsible for the harm for restoring natural resource injuries.

In FY 2003, DARP continues to develop its natural resource damage assessment capabilities and support ongoing damage assessments. These include: assisting state trustees for sites such as Commencement Bay in Washington and the Hudson River in New York; restoring natural resources injured by historical DDT and PCB contamination in the southern California marine environment; promoting cooperation between industry and government to restore natural resources; studying the value of coral reef protection and management in Hawaii; and completing the regulations for conducting natural resource damage assessments under OPA.

FY 2004 Budget Request for NOAA's Response and Restoration Programs
In FY 2004, the President is requesting $16.703 million for Response and Restoration activities that will fund, in part, the Hazmat, CPR and DAC programs. In partnership with industry, states, tribes, and coastal communities, these funds will allow NOAA to continue to protect the integrity of coastal ecosystems through its natural resource protection and restoration efforts.

This FY 2004 funding request will ensure that the agency continues to meet its responsibilities under CERCLA and OPA to protect and restore injured coastal and marine resources.

In FY 2004, the Hazmat program will continue to: develop modeling capabilities, particularly in the area of dispersed oil plumes; conduct training exercises; and publish environmental sensitivity index atlases. All efforts will be directed to increasing the U.S.'s capability to respond to oil and hazardous materials spills through the most scientifically sound and effective methods.

The FY 2004 funding request will allow the CPR program to improve and expand its partnerships and restoration activities. Support and technical assistance will continue to be provided directly to states and local communities to accelerate restoration and redevelopment of waste sites, port areas, and coastal communities. The funding will strengthen existing partnerships and coordination with states, industry, coastal communities, and non-governmental groups to expand regional restoration planning. NOAA will continue to provide technical assistance, training, and support to states and communities to strengthen local and regional capabilities to restore or redevelop contaminated sites and port areas. For example, we will continue to build and improve products in several watersheds, including the Hudson River in New York, the Elizabeth River in Virginia, New Bedford Harbor in Massachusetts, Charleston Harbor in South Carolina, and Puget Sound in Washington.

NOAA's FY 2004 funding request for the components of DARP are contained in both the Response and Restoration line item and the Fisheries Habitat Restoration line item. The budget request under Response and Restoration will support DARP efforts to work cooperatively with responsible parties and expedite restoration of coastal resources injured by hazardous substances. This FY04 funding will continue to support damage assessment and restoration efforts for sites such as the Hudson River in New York, Commencement Bay in Washington, and LCP hazardous waste site in Georgia.

Benefits of NOAA Natural Resource Trustee Efforts

Over the past fifteen years, numerous benefits have accrued as a result of NOAA's Hazmat, CPR and DARP programs. These include:

- Internationally-recognized expertise in the area of oil spill response;
- Spill response actions that protect and aid in the restoration of NOAA trust resources;
- Remedial actions that better protect the Nation's coastal natural resources and that enhance recovery of coastal resources and communities;
- More timely and effective restoration of injured coastal resources in partnership with states;
- Incentives for environmentally responsible practices;
- Significant assets for restoring coastal and marine resources;
- Advances in environmental science, law and economics beneficial to NOAA and the Nation;
- Transfer of technology, decision-making tools, and guidance to build response, cleanup, and restoration capabilities of other federal, state and tribal programs.

Coastal Nonpoint Pollution Control Program

The second area I would like to focus on today is section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 and the Coastal Nonpoint Pollution Control Program.

Polluted runoff remains one of the greatest threats and most vexing problems in protecting coastal waters. Recent reports from the National Research Council (*Clean Coastal Waters: Understanding and Reducing the Effects of Nutrient Pollution*), and leading academic institutions identify the widespread introduction of pollutants, especially excess nutrients, from land-based sources as the leading cause of coastal water quality degradation. *Clean Coastal Waters* says that nutrient over-enrichment "has real impacts, from economic losses associated with reduced fisheries to potential human health impacts, and is likely to increase in severity as nutrient loading from upstream sources increases as a result of continuing urbanization, deforestation, agriculture and atmospheric deposition."

Working with our coastal state partners, we have strengthened the ability of coastal jurisdictions to implement programs that will address major categories of nonpoint pollution in the coastal zone.

NOAA has worked closely with EPA to ensure that coastal states have the tools necessary to effectively manage nonpoint sources of pollution. The effort to develop comprehensive coastal nonpoint pollution control programs is largely complete. Of the twenty-nine state coastal nonpoint programs that were originally submitted in accordance with a July 1995 deadline, all programs received conditional approval by June 1998. Since then, eleven states have received full approval, representing one third of all programs. Of the remaining eighteen states, all are working to address conditions remaining on their programs, with significant progress made in the past few years. Although the exact number is uncertain, several states (estimated at 5 to 7) are expected to receive approval in FY03. NOAA and EPA are working with these states as expeditiously as possible to examine how their progress addresses program conditions, which will move more states across the finish line. Since 1995, five additional states (Texas, Georgia, Indiana, Ohio, and Minnesota) have joined NOAA's Coastal Zone Management Program. NOAA and EPA have conditionally approved Texas, Georgia and Ohio. The Minnesota program conditional approval is pending. Indiana's program submission is under active development.

Supporting Coastal State Efforts to Implement Coastal Nonpoint Programs

The development of state coastal nonpoint programs has provided coastal states with a comprehensive plan for using a wide range of capabilities to manage polluted runoff. Congress has supported the efforts of coastal states to implement their coastal nonpoint programs through appropriations of approximately $10 million per year in fiscal years 2001 through 2003 in NOAA. The Administration recognizes the important role that state coastal management programs can play in addressing coastal nonpoint pollution problems and the President is requesting $10 million in fiscal year 2004 to continue these efforts. NOAA continues to work

with the coastal states to ensure effective use of funds appropriated for implementation of state coastal nonpoint pollution control programs.

Specifically, NOAA's forthcoming 2003 funding guidance will stress the need for state projects to have a coastal focus and include accountability for results – documenting real and measurable results that make a difference in solving coastal polluted runoff problems. We expect results to include changes in land use and pollution control policies, adoption of new practices to prevent polluted runoff, and evaluations of the extent and success of management practices. NOAA has in the past and will continue to use the implementation funds as an incentive to achieve full program approval by rewarding states that have reached this milestone with bonuses.

From the national perspective, NOAA will continue to promote three common areas of investment across all of the states:

- *Improved management of septic systems* - working with state health agencies and local governments to ensure proper design, installation and maintenance of onsite sewage disposal systems (septic systems) to better protect water quality, public health, and coastal shellfisheries. The coastal nonpoint program is the primary federal program encouraging states to fortify their efforts to effectively manage coastal septic systems.
- *Clean or green marinas programs* - supporting the implementation of programs designed to improve the management of marina and recreational boating facilities through practices such as environmentally sound vessel maintenance, prevention of spills, and proper disposal of sewage.
- *Capacity building for state and local government* - improving the available tools and decision-making capabilities of state and local institutions to plan for and manage expanding growth and development in the coastal zone. (Example: Nonpoint Education for Municipal Officials, NEMO)

The total of $20 million in funding, summing fiscal years 2001 and 2002, has helped accelerate the implementation of on-the-ground management measures and leverage other state and local resources working to control the flow of polluted runoff into coastal waters. NOAA views these resources as critical for state coastal management programs to participate in the efforts necessary to control coastal nonpoint pollution. Our joint priorities (with EPA) for FY03 include hosting an "Implementation Workshop" (April 2003) to help states and territories transition from program development to program implementation, and to refine our ability to effectively evaluate state and territory coastal nonpoint programs. NOAA and EPA are also working hard to improve program development support for those states still working on conditions. We are doing this by clarifying and simplifying policies, actively interfacing with state staff, and improving the efficiency of internal processes.

In FY2004, NOAA intends to assist states with the implementation aspects of their approved programs and will continue to provide support to those programs that have yet to be approved. In the future, one aspect of improving nonpoint implementation will be to look at the integration

of NOAA's science capabilities with the management of coastal polluted runoff. This could be achieved by facilitating the development of watershed-specific integrated assessments that would provide stakeholders with a roadmap for addressing impairments caused by nonpoint source pollution through implementing the most cost-effective management actions.

NOAA Aquatic Nuisance Species Programs

The third and last area I will speak to today is NOAA's programs and activities under the Nonindigenous Aquatic Nuisance Prevention and Control Act and the National Invasive Species Act of 1996.

Due to the Committee's interest in transportation issues, my primary focus today will be on ballast water as it is a major vector for nonindigenous species introductions. Ballast water, as well as lesser-known vectors such as recreational boating, semi-submersible oil platforms, aquarium releases, and live-bait introductions, provide the means by which aquatic invasive species invade. Ballast water is the most significant vector of introduction for aquatic invasive species worldwide. Over two-thirds of recent, non-native species introductions in marine and coastal areas are likely due to ship-borne vectors, of which ballast water is the primary vector. The rate of introduction continues to increase with expansion of trade and the speed of transportation. Aquatic invasive species can severely affect marine and coastal resources. Millions of dollars are spent each year to mitigate the effects of aquatic invasive species that have invaded our coasts and Great Lakes and to prevent new invasions.

Mid-ocean exchange of ballast water was the only practical means of reducing the number of potentially invasive species in ballast water when the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 became law. In order to address the serious limitations to mid-ocean ballast water exchange, Congress initiated a competitive research program by adding §1104 of the National Invasive Species Act of 1996. This program was designed to encourage the development of new technologies for managing ballast water.

The Ballast Water Technology Demonstration Program has funded projects covering all stages of technology development and demonstration, from bench-scale investigations through pilot scale demonstrations, to full-scale field tests on ships engaged in commercial activity. Under this program, NOAA and the U.S. Fish and Wildlife Service jointly invite proposals annually to develop and demonstrate new ballast water technologies. To date, NOAA has funded 22 ballast water technology demonstration projects under this joint program involving total expenditures of $4.7 million since FY 1998.

Eight out of the nine types of shipboard ballast treatment techniques discussed in the 1996 National Research Council report, *Stemming the Tide: Controlling Introductions of Nonindigenous Species by Ships' Ballast Water*, as "promising" or "with possible limited application" have had at least one shipboard test sponsored by the joint NOAA and U.S. Fish and Wildlife Service program, or similar state, federal, international or private programs. Research on newly developed technologies that have arisen since the report was published has also been

conducted. Since 1998, the technologies being investigated have matured so that more projects involve full-scale tests of ballast water treatment. These shipboard tests have brought us closer to the development of mature ballast water treatment technologies, but none of these technologies are ready for widespread use by the maritime fleets of the world.

NOAA has funded seven additional ballast water technology research projects at a cost of $1.1 million through the more general Aquatic Nuisance Species competitive grants program administered by the National Sea Grant College Program under §1202(f) of the National Invasive Species Act. Additionally, the NOAA Great Lakes Environmental Research Laboratory is in the final year of a three-year, multi-institutional research program to assess the invasion risk posed by No-ballast-on-board ("NOBOB") vessels in the Great Lakes. NOBOB vessels are those that do not carry pumpable ballast water as they enter the Lakes fully loaded with cargo. However, residual ballast in their tanks can mix with lake waters as they offload cargo which may eventually be discharged in other ports. The results of the NOBOB research will assist the shipping industry with best management practices for reducing the amount of residual sediment and live organisms in ballast tanks and provide information for improving the effectiveness of mid-ocean ballast water exchange as a barrier to potential invasions.

Shipboard test results have revealed some gaps in relatively basic science that must be addressed before new technologies can be fully utilized. Despite these gaps, significant technology advancements have been made as a result of NOAA work. This success is due in large part to the cooperative effort among a number of Federal agencies on the whole range of ballast water issues. Other Federal agencies that are involved include the U.S. Coast Guard, the Environmental Protection Agency, the Maritime Administration, and the U.S. Geological Survey. Further, NOAA provides leadership on the National Invasive Species Council (NISC), an interagency coordinating group which is charged with pursuing a comprehensive national approach to invasive species. With the encouragement of the Office of Management and Budget, the members of the Council developed a crosscutting budget proposal for FY 2004 which includes specific strategic goals and performance measures agreed upon by all of the Federal agencies involved. As part of this process, the President's budget contains an invasive species initiative for NOAA.

NOAA Invasive Species Initiative: FY 2004 Request

Following from the growing environmental need and the mandate for NOAA to address the growing problem of aquatic invasive species, the NOAA FY 2004 initiative will tackle the most pressing issues for invasive species control and prevention. The FY 2004 President's budget request to Congress of $3.8M includes a $1M increase from FY03 for NOAA to address the problem of aquatic nuisance species. Roughly one third of the total requested increase will support each of the following areas:

1. Develop alternative technologies for the treatment of ships' ballast water to eliminate the potential for invasions of non-indigenous marine species in U.S. and other waters;

2. Set up a nationally coordinated monitoring system for aquatic invasive species focusing on marine protected areas, particularly National Marine Sanctuaries, Estuarine Research Reserves, and areas vulnerable to invasion such as ports, harbors, and embayments; and,

3. Implement an Invasive Species Control and Habitat Restoration initiative through testing of control mechanisms and restoring native species and habitat conditions in invaded ecosystems.

As part of the initiative, NOAA Research will continue the competitive grants program managed by the National Sea Grant College Program to develop alternative technologies for the treatment of ships' ballast water. Research and testing is coordinated with the Maritime Administration, U.S. Coast Guard, Environmental Protection Agency, Fish and Wildlife Service, and the Office of Naval Research. Annual training workshops will help track the progress of this research as Principal Investigators are invited to present their findings and suggestions for future research directions. A second workshop each year will target more focused issues related to ballast water technology development.

The National Ocean Service will set up a nationally coordinated monitoring system for aquatic nuisance species focusing on marine protected areas. As a first step in developing this program, NOAA will establish a common protocol to monitor habitats ensuring standardization, archiving, and quality assurance of data. Initial surveys will establish the baseline data. Future surveys will allow for analysis of observed changes.

The National Marine Fisheries Service will address the habitat effects of invasive species, specifically invasive species control and habitat restoration. A combination of control methods and restoration, in conjunction with persistent monitoring and prevention measures, will result in effective habitat restoration in most cases. The NOAA Restoration Center will implement an Invasive Species Control and Habitat Restoration initiative through testing of control mechanisms and restoration of native species and habitat conditions in ecosystems that have been invaded.

NOAA Invasive Species Initiative: Benefits

Overall, this effort will enable NOAA to provide a combination of control methods and restoration in conjunction with persistent monitoring and prevention measures. In many cases, this will result in effective restoration of habitats in invaded ecosystems to the direct benefit of the aquatic resources that depend on those habitats, as well as a reduction in the number and impacts of future invasions.

Development of new ballast water management technologies to prevent invasions is also likely to benefit the shipping industry and those whose livelihoods are tied to maritime commerce. The Great Lakes region and several western states have laws requiring ballast water management for ships entering their waters. Last June, the Secretary of Transportation reported to the Congress

that voluntary guidelines for ballast water management have not worked and that the Coast Guard would be issuing regulations making ballast water management mandatory.

Mr. Chairman, thank you again for inviting NOAA to participate in today's hearing. At this time, I would be pleased to respond to any questions.