

**TESTIMONY OF
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ON

**FISHING INDUSTRIES AND COMMUNITY REBUILDING
IN THE WAKE OF HURRICANES KATRINA AND RITA
IN THE GULF OF MEXICO**

**BEFORE THE
SUBCOMMITTEE ON FISHERIES AND OCEANS
COMMITTEE ON RESOURCES
U.S. HOUSE OF REPRESENTATIVES**

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Gretna, Louisiana

Introduction

Thank you, Mr. Chairman and members of the Committee, for the opportunity to present testimony on rebuilding efforts in the Gulf of Mexico following Hurricanes Katrina and Rita. I am Vice Admiral Conrad Lautenbacher, Administrator of the National Oceanic and Atmospheric Administration (NOAA) within the Department of Commerce. In December, NOAA testified before this Committee on the amount and extent of damage from the hurricanes to the commercial and recreational fisheries in the Gulf. My testimony today will focus on efforts supporting Gulf fisheries and coastal communities. Specifically, I will discuss four areas: NOAA's contribution to the Gulf states after the hurricanes, current status of several fishery recovery efforts; plans for initial rebuilding of Gulf fisheries; and assessments of additional resources needed in the Gulf to continue rebuilding.

NOAA's Contribution to the Gulf States after the Hurricanes

As the Committee knows, coastal hazards are one area where all pieces of NOAA's mission come together. NOAA performed well before, during, and after the 2005 hurricanes. From initial observations, to hurricane prediction, to warnings, to immediate and ongoing response in the aftermath, and now to fisheries rebuilding, NOAA employees—some of them suffering great personal loss themselves—represent the best aspects of federal government disaster response. I am proud to lead this agency.

During both Hurricanes Katrina and Rita, NOAA Navigation Response Teams were among the first responders on the waterways. They were often deployed in advance of any logistical support, and they coordinated the collection of environmental impact information, assessment of environmental risk, and development of cleanup options for marine debris and oil spills. NOAA assisted in mitigating over 8 million gallons of spilled oil from the storms.

NOAA immediately worked with affected Gulf States to prepare Declarations of Fisheries Disasters. Within days of Hurricanes Katrina and Rita, NOAA contacted Gulf state resources directors to work cooperatively to initiate an assessment and recovery strategy. Response included short-term contracts with local experts. Testing seafood commenced within weeks with a small amount of redirected funds and, through modeling efforts, NOAA was able to calm fears about contaminants making their way from New Orleans to points south. We also transferred \$4.3 million to the states to assist with environmental enforcement and search-and-rescue activities conducted by state fish and game agencies immediately following the storms.

NOAA flew missions to acquire high-resolution digital imagery of coastal areas affected by the landfalling hurricanes. Nineteen imagery acquisition flights conducted over 9 days captured more than 8,000 images of damage from Hurricane Katrina, which allowed people to see their homes and businesses. Over 3,000 digital images were collected after Hurricane Rita covering areas from Galveston, Texas, to just west of Lake Charles, Louisiana.

NOAA continues to provide water level measurements and information critical to the Army Corps of Engineers for establishing baseline vertical reference systems. Accurate tidal and geodetic data are essential in determining levee heights for performance assessment and future design for levees and rebuilding of infrastructure.

These are just a few examples of NOAA's work in the Gulf.

Although NOAA provides these and other services that support industry and that save lives and property, it is important to note that NOAA is not a disaster relief agency. These ferocious storms left entire industries in their wake, and without significant outside support many will never operate again. People who make their living fishing look to NOAA to provide leadership, but NOAA cannot rebuild Gulf fisheries alone. We need the support of Congress and the federal agencies whose core missions are to remove debris, support small business, and provide capital and expertise in community development to collaborate with us and with the states to move forward on fisheries. It is my understanding that the Federal Emergency Management Agency (FEMA) has received approximately \$37 billion in emergency supplemental funds related to the disasters and has requested an additional \$9.4 billion, and other agencies have received \$33 billion in additional funds.

Updates on Assessments and Current Status of Efforts

The Gulf of Mexico is home to a significant share of the U.S. fishing industry, contributing 20 percent of commercial landings and roughly 30 percent of saltwater recreational fishing trips. Major commercial fisheries in the Gulf of Mexico include shrimp, finfish, and oysters, with an estimated value of almost \$700 million per year. Four of the top 10 commercial fishing ports in the Nation were directly impacted by these storms. Further, the recreational and for-hire

fisheries in the Gulf are unmatched anywhere in the United States, with 26 million fishing trips taken during 2004. Hurricanes Katrina, Rita, and Wilma had a major impact on both of these sectors, as well as on the supporting fishery infrastructure that commercial harvesters rely on to operate (e.g., seafood dealers, processors, and suppliers) and anglers require to fish (e.g., bait shops, marinas, etc.).

Although much of the commercial, recreational, and for-hire industries was severely impacted by the damage caused by these storms, our assessments indicate that many of the most valuable fish stocks in the region remain at or above last year's abundance levels, and seafood samples continue to indicate that toxic substances in seafood are well below the FDA guidelines. This indicates that the industry can harvest shrimp and fish if the infrastructure supporting fisheries is functional. The lack of infrastructure is one of the biggest obstacles to recovery.

Each month, new information is compiled on the status of fisheries in the Gulf. Our reporting capacity was severely damaged by the storms, and many of the current estimates remain preliminary and subject to change as more information becomes available. However, through weekly and monthly data collection we are making progress in determining the impact of the hurricanes on infrastructure, resources, and habitat. A clearer picture of exactly what was damaged and destroyed has now emerged, and I will focus on these findings.

Fishery Infrastructure

Infrastructure is key to the local fishers' ability to make a profit. In December, we reported initial estimates of fishery infrastructure losses. More rigorous state-by-state investigations have now been conducted and preliminary data from those studies are available.

In Louisiana, based on preliminary data, the combined total of infrastructure loss in both the commercial and recreational sectors is projected at \$200 million. Southeastern Louisiana was particularly hard hit by Hurricane Katrina. In Mississippi, combined loss of commercial and recreational sector infrastructure is projected to be comparable, at \$195 million. The extent of the uninsured losses is unclear. In the Biloxi area, it is estimated that over 80 percent of the pre-Katrina fishing infrastructure and facilities were destroyed and, of those remaining, a high percentage experienced damage. Those in the fishing industry who are beginning to operate are sharing processing facilities on a rotational basis. Direct commercial and recreational infrastructure losses in Alabama are estimated by the State at \$112 million. Housing is a major problem everywhere; fishermen and processor employees are being pushed further inland, away from job sites and docks.

Fishery Industry and Resources

NOAA, as well as state and federal agencies, continues to evaluate the effects of the storms on the abundance, distribution, and quality of seafood in the northern Gulf. We estimated the impacts of the hurricanes on fishing activity by comparing fishery landings in October 2005 (after Katrina) with comparable October 2004 catches. Shrimp are the most valuable species of the region affected by the hurricanes, followed by oysters and various finfish and shellfish species. In 2004, the October catches of shrimp and oysters in Louisiana were valued at \$23 million and \$3.8 million, respectively. Based on our updated figures, shrimp landings were

valued at \$15 million and oysters at \$900,000 in October 2005, reductions of 35 percent and 76 percent, respectively, from October 2004.

Annual surveys of the shrimp and bottom fish populations of the northern Gulf have been conducted by NOAA's Pascagoula Laboratory. Although the laboratory was destroyed by Hurricane Katrina, NOAA staff were still able to conduct the October 2005 survey. Results indicate that post-hurricane shrimp and bottom fish abundance was the same or slightly higher than in the fall of 2004. Accordingly, the latest commercial landings data for November 2005 are actually showing a remarkable story for shrimp revenue. Landings revenue in Louisiana is up 3.9 percent over November 2004. We are examining the data; however, one possible explanation for this is that the number of pounds per day fished has increased. These data are encouraging because they show how decreasing effort in the region can lead to a more profitable shrimp fishery—a point I will come back to later. Because traditional shrimp processing facilities and vessels in southeastern Louisiana were destroyed, the central Louisiana coast has become the area of primary shrimp activity.

As we knew in December, oyster resources were the most severely impacted fishery species. According to the Mississippi Department of Marine Resources, approximately 90 percent of Mississippi oyster beds were damaged and disrupted by Hurricane Katrina. Currently, nearly all of Mississippi's oyster fishers remain out of work because of Hurricane Katrina. Working with the U.S. Department of Agriculture, NOAA is helping to plan efforts to begin rehabilitating damaged public and private oyster grounds.

The landings statistics for Mississippi continue to show an industry challenged by infrastructure losses. Oyster landings remained at zero for November 2005, compared to over \$1 million in November 2004. Revenues for shrimp were down 72 percent, and finfish landing values were down 13 percent from November 2004.

Hurricanes Katrina and Rita disrupted recreational fishing from the Florida panhandle through southeast Texas, with additional impacts in southern Florida, particularly in the Keys. The region's annual recreational fishing industry is valued at over \$6.3 billion. Our statistics on recreational fish landings in November and December, although preliminary, show that charter vessel economic activity has increased since the storms, but in November it remained almost 30 percent below 2004 levels in Mississippi, and 50 percent below 2004 levels in Louisiana.

Seafood Quality

Ongoing NOAA surveys of the shrimp and fish populations of the Gulf show that the resource is abundant and relatively free of the "toxic gumbo" feared by many in the aftermath of the hurricanes. Recent analyses of white shrimp samples from the northern Gulf of Mexico, conducted by our National Marine Fisheries Service, showed very low or nondetectable levels of persistent organic pollutants (e.g., PCBs, pesticides, fire retardants, and similar compounds). The Food and Drug Administration (FDA) has promulgated guidelines for seafood consumption for PCBs, DDTs, and chlordanes, and all samples tested were well below these guidance values. Levels of polycyclic aromatic compounds (PAC), which indicate petroleum exposure, were also very low, but there are no FDA guidelines for these compounds in seafood. NOAA will continue

its testing program, because some of these compounds may take months to work their way up the food chain.

Preliminary oyster testing conducted by NOAA, U.S. Environmental Protection Agency (EPA), U.S. Geological Survey (USGS), FDA, and the impacted coastal states is also showing that contamination levels of pesticides (e.g., DDT), PCBs, and chemicals were low. A number of trace metals and major elements were found to be somewhat elevated compared to concentrations found during historical monitoring collections. These metals probably will be expelled as waters become less turbid. Water samples taken by NOAA and EPA and tested for the presence of *E. coli* and Enterococcus bacteria—indicators of human or other animal waste—showed that concentrations for both types of bacteria were found to be higher in the coastal habitats than in off-shore areas. Levels of these indicators would be expected to be higher near shore than offshore because of human and animal habitation. These elevated levels returned quickly to below standard levels in the wake of the storm.

Because some elevated concentrations of contaminants are expected due to bioaccumulation over time, NOAA will continue to sample fish, shellfish, shrimp, and water to monitor for potential delayed releases of toxic chemicals as a result of the Gulf hurricanes. To date no significant health risks have been determined to exist for fish, shrimp, and shellfish sampled during these programs. NOAA is working with FDA, EPA, and the states of Louisiana, Mississippi, and Alabama to assure that seafood from the northern Gulf of Mexico meets applicable state and federal standards.

Effects on Coastal Wetlands and Habitats

Coastal wetland habitats are critical to virtually every commercial and recreationally important living marine resource in the northern Gulf, since estuaries and brackish marshes are breeding and nursery grounds for most species. USGS has estimated total wetlands loss from these storms at 118 square miles in eastern Louisiana alone—more than a four-fold increase over the estimated annual average for wetlands loss.

NOAA, the Army Corps of Engineers, the Department of the Interior, EPA, the Department of Agriculture, and the State of Louisiana have participated in programs funded under the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA). CWPPRA sponsors projects to stabilize and rebuild wetlands by water diversions, control structures, and physical rebuilding of the Louisiana marshes to protect the shoreline from erosion and supply vital fisheries habitat. Using remote sensing imagery and on-site inspections, NOAA determined that all nine projects performed as designed and that eight of the nine projects suffered almost no damage from the hurricanes.

In addition, the U.S. Coast Guard estimates about 8 million gallons of oil were released in the Louisiana Delta, where large oil storage tanks were breached during Hurricane Katrina. Although some oil has been recovered, much still remains in the environment, including 5,000–6,000 acres of wetland marsh habitat. NOAA continues to conduct assessments at the largest spill sites to examine impacts to natural resources in pursuit of resource restoration. Clean-up activities in these areas are ongoing, and NOAA continues to monitor for the potential uptake of hydrocarbons in seafood species.

Initial Rebuilding Efforts

Investments in initial rebuilding activities are being made. Nearly \$200 million was recently appropriated to the U.S. Department of Agriculture to assist several industries, including oyster growers. As I previously stated, NOAA is working with the U.S. Department of Agriculture and the states to ensure funds go where they are needed as quickly as possible. We must recognize that the states are the primary authorities on oysters, and their expertise is essential to oyster bed recovery.

The Administration has also requested supplemental funding from Congress to address some immediate needs related to fisheries rebuilding in the Gulf. The request seeks \$11.8 million for repair and reconstruction of the damaged NOAA laboratory at Pascagoula, which provides vital scientific support for fisheries management and seafood quality monitoring in the Gulf (this is in addition to the \$13.2 million Congress provided in December). In addition, NOAA has requested \$4 million to work with the states to conduct assessment of fishery resources and contaminant level monitoring, \$8 million for mapping to assist with debris removal from fishing grounds and assess risks, \$8 million to accelerate development of limited access and other market-based management approaches to promote economically sustainable Gulf fisheries, and \$1 million to create multi-hazard maps in the Gulf. NOAA will work with state and federal partner agencies to plan for and expedite these activities should Congress approve these funds.

Long-Term Rebuilding of Fisheries

Beyond initial investments, Gulf fisheries will more rapidly recover with a federal effort coordinated among several agencies. It is clear that the initial response is just the first step on the road to fixing a much more profound problem, and that the federal government must take a big-picture view of rebuilding. Financial assistance, such as private insurance or SBA loans can help get small firms back in business. Rebuilding shoreside fisheries infrastructure to its pre-hurricane condition will only leave these businesses vulnerable to the next round of hurricanes. Smarter rebuilding would cluster vulnerable processing and distribution facilities away from the immediate coast in areas more resilient to storms. Rebuilding coastal wetlands will act in concert with levees to reduce impacts of storm surge and flooding, as well as improve the nursery habitat so important to Gulf species.

Several governmental and nongovernmental bodies are examining the issue of long-term Gulf coast rebuilding, wetlands, coastal development, and fisheries in the Gulf of Mexico. A study released in January, led by the University of Maryland's Center for Environmental Science, calls for hurricane protection both from levees and from a "sustainable coastal landscape." It points to the need for integrated assessment and evaluation of Gulf wetlands restoration projects.

A soon-to-be-released study by the National Research Council on addressing land loss in coastal Louisiana concludes that greater emphasis on reducing the rate of wetlands loss will help make these communities better able to cope with recurring storms and will ensure the long-term health of living resources.

The Gulf fishing industry must be rebuilt through the combined efforts of industry, private insurance, and state and federal assistance. All parties responsible for Gulf fisheries management have called for comprehensive rebuilding plans and strategic investments to guide the effort,

including the state marine fisheries agencies, Gulf States Marine Fisheries Commission, Gulf of Mexico Fishery Management Council, and NOAA. The most important factor to consider in developing these plans is the need to rationally rebuild fishery infrastructure (e.g., processing facilities, docks, and vessels) so that we build sustainable fisheries rather than repeat our current challenges of overcapitalized fisheries.

The example of the Gulf shrimp fishery cited in the December testimony is worth mentioning again. The Gulf shrimp fishery was marginally profitable due to overcapitalization and the effects of vast shrimp imports. Efforts to rebuild and restructure the shrimp fisheries should aim to make them more profitable and able to compete in the international market for shrimp by marketing superior product of locally caught shrimp. In addition, less shrimp fishing effort overall will improve the conservation of currently overfished stocks such as red snapper. We are already seeing the effects of reduced effort in the Gulf shrimp fishery: with fewer working vessels, abundance has increased and the number of pounds of shrimp caught per day has grown, making for higher-quality product and greater revenues. We believe that a strategic long-term reduction of fishing effort will turn the shrimp industry around so that it is a profitable and sustainable business, unlike its pre-storm status.

NOAA is a key agency involved with rebuilding fisheries and partnering with coastal communities to encourage sustainable development. Our jurisdiction over federal fisheries, our vision for a rebuilt industry, and our connections in the region make us the critical partner in identifying and communicating the many needs of the fishing industry. In recent weeks we have worked with our federal partners to coordinate and identify appropriate agencies for their assistance. Some federal assistance programs are available that can help those who sustained losses, such as programs offered through the U.S. Department of Agriculture, the Small Business Administration, the Department of Housing and Urban Development, and FEMA; however, these programs do not offer assistance specifically to fishers. NOAA is working with our federal partners to clarify and communicate the impacts on the fishing industry, and to ensure the federal government does its part to help these small businesses get back on their feet.

Any plan for rebuilding should contain four key elements. First, near term efforts are needed to remove huge amounts of marine debris from the storm surge that clogs the nearshore environment. At least two vessels have sunk after striking debris. Our partners at FEMA, the Army Corps of Engineers, and the Coast Guard are currently undertaking major marine debris removal in navigable waters. NOAA would support expanding this to include major marine debris removal in the nearshore environment. NOAA has requested \$8 million in supplemental funding to survey and map debris fields in order to help prioritize future debris removal needs.

Second, investments in private and public infrastructure are needed, including public docks, marinas, and fishery cooperatives. In addition to the public assistance available through FEMA, the Department of Housing and Urban Development has received \$11.5 billion in Community Development Block Grant funding to aid recovery of the affected States, part of which can address these needs. Through this program state and local authorities can prioritize rebuilding needs and consider innovative long-term approaches to fishing infrastructure. To rebuild private infrastructure, commercial fishery operations are eligible for low cost, long term financial assistance from SBA for working capital and the repair or replacement of uninsured property that

was lost or damaged as a result of the disaster. Eligible businesses may borrow up to \$1.5 million with terms up to 30 years. Congress can help with these efforts by encouraging interagency collaborations.

Third, fisheries need to be restructured to permanently eliminate overcapitalization, as I noted in the shrimp example, and make the remaining vessels profitable and competitive in the worldwide seafood economy. Restructuring the fishery will take significant coordination among local communities, state marine fisheries agencies, Gulf States Marine Fisheries Commission, Gulf of Mexico Fishery Management Council, and NOAA—a step we are already taking. The Administration has requested \$8 million in supplemental appropriations to accelerate this work with the state and regional fishery managers to address these concerns for the long term.

Fourth, wetlands restoration needs to be accelerated. Post-hurricane evaluations showed that restoration projects in Louisiana's coastal marshes survived the hurricanes far better than did degraded marshes, proof that these are true investments in the future. The Administration has requested \$100 million for wetlands restoration in the most recent supplemental. The Secretary of the Army would direct this effort and would consult the CWPPRA Task Force over the use of these funds. NOAA supports this approach and is working to identify high-priority areas that could act in concert with levee reconstruction as barriers for the nearshore areas.

Rebuilding the Gulf's fisheries requires a comprehensive effort integrated with coastal community development and reconstruction of flood protection systems. NOAA has provided a variety of essential services, from forecasting the storms to oil spill response to rebuilding fisheries. As we head toward the 2006 hurricane season, NOAA and DOC will continue to provide all of these capabilities as directed by Congress. We can and we will rebuild sustainable fisheries in the Gulf.

Thank you, Mr. Chairman, for holding this important hearing. I would be pleased to answer questions posed by you and members of the Committee.