

**WRITTEN TESTIMONY OF
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AND
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**LEGISLATIVE HEARING BEFORE THE
HOUSE NATURAL RESOURCES COMMITTEE, SUBCOMMITTEE ON
FISHERIES, WILDLIFE, AND OCEANS**

February 28, 2008

Good morning Madame Chairwoman and Members of the Subcommittee. I am Robert Stokes, Chairman of Restore America's Estuaries Board of Directors. I am also the President of the Galveston Bay Foundation, which is located in Galveston Bay, Texas. The mission of the Galveston Bay Foundation is to preserve, protect, and enhance the natural resources of the Galveston Bay estuarine system and its tributaries. I am pleased to be here today to discuss Restore America's Estuaries' comments regarding the legislation you are considering to amend the Coastal Zone Management Act (CZMA).

Before I present our recommendations, I would like to provide you with a little background about Restore America's Estuaries and discuss several issues of interest to our organization.

Restore America's Estuaries is a national alliance of 11 community-based organizations that protect and restore coastal and estuarine habitat. Our mission is to preserve the nation's network of estuaries by protecting and restoring the lands and waters essential to the richness and diversity of coastal life. Restore America's Estuaries has been working since 1995 to restore our nation's greatest estuaries and bring them back to life. We join with government agencies, corporations, civic organizations, scientists and local volunteers to conduct restoration projects with real impacts. We seek to achieve a return of abundant fisheries, strong local economies, and shorelines that are resilient to storms and flooding.

Restore America's Estuaries is results-oriented. Since its creation, Restore America's Estuaries and its 11 member organizations have:

- **INVESTED** more than \$28.5 million in local restoration projects;
- **BUILT** more than 300 oyster reefs and planted over 2.6 million oysters;
- **RESTORED** more than 56,000 acres of estuarine habitat;
- **MOBILIZED** more than 250,000 volunteers, including more than 80,000 young people in coastal restoration and education activities each year; and
- **CONVENED** the largest biennial national gathering for the coastal restoration community. Our next National Restoration Conference will be in Providence, Rhode Island, October 11-15 of this year. We expect over 1,200 restoration professionals from across the country to participate.

All this is done through partnerships and community involvement. My own organization, the Galveston Bay Foundation, typically hosts as many as 25-30 habitat restoration events each year, some with as few as a handful of Boy Scouts, or as many as 300 citizens and local business employees. Our annual signature restoration event is called Marsh Mania, a nationally recognized, community-based wetlands restoration and education event of the Galveston Bay area. The goal of Marsh Mania is to involve local citizens in hands-on wetlands restoration activities while increasing their awareness and appreciation of wetland habitats and functions. The first Marsh Mania was held in 1999, that year known as "Marsh Bash." This one-day event set a **national record** when 1,500 volunteers planted nearly 70,000 stems of smooth cordgrass to create 14.5 acres of new habitat at eight sites around the bay. In the nine years since it began, Marsh Mania has involved more than 4,700 community volunteers in the restoration of 107 acres of vital wetlands at 41 coastal sites around Galveston Bay.

At the national level, Restore America's Estuaries has been a leader in bringing all sectors of the restoration community together to advance the knowledge, science, policies, and best practices in coastal and estuarine habitat restoration. Restore America's Estuaries engaged in a 2-year initiative to create a multi-sector consensus document, *A National Strategy to Restore Coastal and Estuarine Habitat*, which outlines the objectives and methods for reaching the goal of restoring one million acres of our nation's coastal and estuarine habitats. In a previous effort, we worked closely with the Estuarine Research Federation to build a consensus framework for habitat restoration through a collaborative process between scientists and field practitioners to define scientifically sound and technically feasible principles of estuarine habitat restoration. These principles are delineated in the publication, *Principles of Estuarine Habitat Restoration*.

Importance of Estuaries

Estuaries are where fresh water rivers meet the salty sea in shallow protected bays. Native American Indians called these beautiful places "Between-Land", not quite land and not quite water. Estuaries and other coastal ecosystems are critically important to keeping the U.S. competitive, through their roles as centers of population growth, commerce, military activity, recreation, and ecosystem services (e.g., providing natural resources and shoreline protection). Many of the estuarine resources such as salt marshes, flats, and beaches are also important because they help stabilize shorelines and provide flood control.

In my home state of Texas, the coastal wetlands of our estuaries serve as nursery grounds for over 95 percent of the recreational and commercial fish species found in the Gulf of Mexico, and provide breeding, nesting, and feeding grounds for more than a third of all threatened and endangered animal species as well as supporting many endangered plant species, and provide permanent and seasonal habitat for a great variety of wildlife, including 75 percent of North America's bird species. Coastal wetlands also serve important functions ranging from reducing waterborne pollutants to providing natural buffers against flooding and erosion. Texas coastal wetlands are also extremely important

economically. In Galveston Bay alone, the recreational and commercial fishing industries combined are valued at over \$3 billion annually, and support over 40,000 jobs in the area.

Threats to Estuaries

Estuaries and their associated natural resources and important ecosystem services are in a perilous state due to an increasing level of stress. In addition to physical impacts (e.g., wetland loss, shoreline armoring, and sea-level rise) to these ecosystems, nutrient and other chemical pollution (e.g., pharmaceuticals and personal care products), invasive species, and over-harvesting of resources are major causes of declines in the productivity and health of these systems.

Along the Gulf coast habitat is still being lost, and in the estuary I know best, Galveston Bay, we've experience a significant loss of wetlands over the last 50 years. Between the 1950s and the 1990s, the Galveston Bay system experienced a net loss of nearly 35,000 acres of its wetlands, due to a variety of human and natural causes. Recent research indicates that wetland loss is continuing at rapid rates. Because of this loss, habitat degradation has been identified as the most critical of all the problems currently facing Galveston Bay. Although we have had many successes, the losses are great and they continue. These losses have dire consequences for our environment, our economy, our way of life, and our health.

Estuaries around the country have also lost varying degrees of habitat and biological function. For example, 70 percent of the eel grass beds and 50 percent of the salt marshes around Narragansett Bay in Rhode Island have been lost due to human activity, and the Raritan Bay area in lower New York Harbor has lost over 80 percent of its original wetlands. In New Jersey, only a mere 2 percent of the historic native oyster populations have survived after suffering from disease, over-harvesting, and habitat destruction. In the Chesapeake Bay over 16 million bushels of oysters were harvested in the early 1900's, but the harvest has collapsed to only 45,000 bushels in 2006. In Long Island Sound more than 40 percent of the original wetlands are gone. The story continues on the west coast as well. San Francisco Bay has lost 95 percent of its original marshland.

A growing threat to our nation's estuaries is climate change.

Climate change—caused by human greenhouse gas emissions—threatens the health of our nation's estuaries, the fish, and wildlife, as well as the surrounding communities. The impacts of climate change will exacerbate the already increasing stresses on our sensitive coastal resources. Estuary wildlife and the habitat they depend on are threatened by changes in rainfall, temperature, sea level, soil conditions and air pollution. For example, altered rain and snowfall patterns throughout the U.S. will affect the volume and timing of fresh water flowing into our estuaries, consequently changing salinity and sediment conditions, which will impact sensitive habitats and species. While no one knows how precipitation patterns might be altered, changing fresh water flows would affect the distribution and abundance of some shellfish such oysters, as well as rare species, that depend on high salinity salt marsh habitats.

Sea level rise is of particular concern. As sea level rises, the frequency and duration of coastal flooding and inundation will increase, severely impacting sensitive coastal resources and adjacent properties. For example, in San Francisco Bay, sea level rose about seven inches over the last century at the Golden Gate, and the Intergovernmental Panel on Climate Change and the 2006 California Climate Action Team project it could rise another two to three feet by 2100, which could cause coastal flooding of Bay wetlands and shoreline cities.

Reauthorization of the Coastal Zone Management Act

Support for the management and stewardship of our keystone coastal ecosystems that bridge land and sea has never been more important due to the accelerating pace of environmental change now occurring. While environmental degradation of the coastal area has continued in recent years, the Coastal Zone Management Act (CZMA) has been a valuable tool to policy makers and environmental managers in balancing human activities with environmental health to help reduce the rate of degradation. Establishment of the National Estuarine Research Reserve System through the CZMA has been particularly successful in setting aside valuable estuarine areas for long-term protection and supporting science-based coastal management through long-term research, monitoring, education, and stewardship.

But having said that, it has been almost forty years since the CZMA was first passed, and we desperately need to modernize and bring change to the CZMA by providing new tools to match today's critical needs. We also believe these tools can be far more action-oriented and involve a broader array of nongovernmental partnerships. I encourage you and the Members of this Subcommittee to think broadly, and boldly, as you consider reauthorization of the CZMA.

Our recommendation on the proposed legislation to amend the CZMA fall into three broad areas: 1) reauthorization of the CZMA is essential; 2) coastal habitat restoration is a viable tool to restore the health of estuaries and should be recognized as a national priority; and 3) nongovernmental organizations have the capacity to leverage state and Federal programs. Restore America's Estuaries respectfully request that you consider the following key recommendations.

H.R. 5451—Coastal Zone Reauthorization Act of 2008

Provide adequate funding to implement the CZMA.

As population and development pressure along the nation's coasts continues to rise, increased funding will be required to fully address the complex problems facing the coastal zone. It is crucial that Congress provide stable and adequate funding to implement the programs authorized under the CZMA to better address growing challenges to our nation's estuaries and coasts.

Conduct comprehensive ecological and socioeconomic assessments of our nation's coastal lands and waters.

Coastal management decision making needs to be based on the best information available. Hundreds of decisions are made every day throughout our nation's coastal zone that affects the health and sustainability of estuaries. Yet, in most cases, little is known about the estuarine resources involved, how they might be impacted, or how they are changing over time. Restore America's Estuaries believes it is absolutely critical that a comprehensive baseline condition of our nation's estuaries be established as soon as possible. These assessments should be ecosystem based, comprehensive, and include both ecological and socioeconomic parameters. Ecological parameters should include: habitat types and extent, condition of those habitats, causes and rates of habitat decline, services being provided by the habitat, and opportunities for habitat restoration within the ecosystem. Socioeconomic parameters should include human use indicators (i.e., fishing licenses, boat launchings, beach use, etc.), land uses, population migration rates, etc. It is also essential that these comprehensive assessments build on existing data and information. Much research and data collection has been done to determine the state of our coasts, and this information should be fully utilized in developing comprehensive assessments in order to achieve fast progress toward accomplishing the goals set forth by a new CZMA.

Establish coastal habitat restoration as a specific national priority.

Habitat restoration is a proven and viable tool for improving the health of our nation's estuaries. It is time for coastal management to recognize and embrace this tool on equal footing as our efforts to preserve and protect critical habitats. Habitat restoration was set forth as a national priority through the Estuary Restoration Act. We believe that the inclusion of coastal habitat restoration as a national priority in the CZMA will help provide a link between aligning national- and state-level restoration planning. Coastal habitat restoration should be included as a new Congressional Finding and Statement of Policy that highlights the need for adaptation to sea level rise and the important role of habitat restoration to reduce global warming from greenhouse gases.

Develop state habitat restoration strategies.

Having long-term habitat restoration strategies with specific goals and objectives is crucial for proper planning and prioritizing. In 2002, Restore America's Estuaries released a multi-sector consensus document, *A National Strategy to Restore Coastal and Estuarine Habitat*, which outlines the objectives and methods for developing comprehensive restoration plans. A copy of that document has been provided to you. Developing state restoration strategies that can be incorporated into broader comprehensive coastal management strategic plans provides planners and practitioners with a framework for comprehensive and inclusive planning to identify restoration needs and opportunities down to the estuary level. The development of these strategies should take into account other water resource requirements such as the Clean Water Act, Total Maximum Daily Loads analysis to help establish restoration needs and priorities. Currently, through the Coastal and Estuarine Land Conservation Program, states develop plans to address their priorities for land acquisition, and a similar focus on restoration

planning should be undertaken by states. Sound science must be an essential component of the planning process and implementation of the strategies.

Preserve critical coastal lands and waters now and into the future.

The CZMA should authorize the Coastal and Estuarine Land Conservation Program (CELCP), within NOAA's Office of Ocean and Coastal Resource Management, to secure the long-term protection of lands that have significant conservation, recreation, historic, economic, and aesthetic values to the residents of coastal communities. Protection of critical coastal and estuarine areas provides numerous public benefits by improving water quality, increasing access to shoreline areas, conserving wildlife habitat, and sustaining recreational and commercial fisheries.

We recommend that as lands are given priority rankings, those that can be restored to effectively enhance ecological function be given priority. While land conservation and protection is absolutely critical to *maintain* water quality and ecosystem functions, restoring a property will *improve* water quality and ecosystem functions. Many nongovernmental organizations have played an active role in this program and are poised to continue to provide support for land conservation. As Congress considers authorization of CELCP, we recommend that you allow land owned by nongovernmental organizations to be used as non-federal match. We also support having costs associated with habitat restoration of a property be eligible to be used as non-federal match.

Give nongovernmental organizations a meaningful role in planning and implementing restoration strategies.

Nongovernmental organizations have proven to be essential as convening bodies that can reach out and bridge government, private sector, and scientific community interests to collaboratively develop and implement habitat restoration strategies. Restore America's Estuaries has demonstrated the ability to facilitate action. Mobilizing this power across our country's coastal areas in a concerted way would provide additional support to Federal and state agencies in their efforts to restore the health of our estuaries. One way to recognize and strengthen the nongovernmental role in coastal habitat restoration is to provide the explicit authority to establish cooperative agreements between NOAA and nongovernmental organizations to carry out the purposes of the CZMA.

Strengthen the Federal role in coastal management.

The CZMA establishes and promotes a NOAA/state partnership. To date this partnership has worked with the states assuming, and appropriately so, most of the responsibility for the planning and implementation of their coastal plans. But this partnership equation is no longer sufficient to make progress against many stressors affecting the coastal zone. We need improvements in coordination *and* collaboration between Federal agencies involved in coastal management and between Federal, state, and local entities. This includes clarifying roles of the different Federal agencies working on coastal issues. Essentially, we need an effective network of communication that operates vertically and horizontally and provides for efficient information exchange that gives state and local entities the tools and information necessary to address local challenges. It is time for NOAA to step up and lead efforts to provide integrated and coordinated support to the states for

research, monitoring, science translation, education, training, capacity building for local officials, and technology. We strongly encourage you empower NOAA to lead these efforts.

H.R. 5453—Coastal State Climate Change Planning Act of 2008

Habitat restoration creates healthy estuaries to combat climate change.

Healthy estuaries help counter climate change by capturing carbon from of the atmosphere and providing natural flood protection. Scientists have found that tidal salt marshes are particularly effective in helping to counter climate change, and recommend tidal salt marsh restoration as an important strategy to capture and hold carbon from the air. According to scientists, every acre of restored, healthy salt marsh captures and converts at least 870 kilograms of carbon dioxide into plant material annually—equivalent to the greenhouse gas emissions from driving 2,280 miles. Restored tidal salt marshes also provide natural flood control and may reduce the need to build seawalls to protect developed shoreline areas against sea level rise.

Address climate change through adaptation planning.

A new CZMA must address climate change by providing assistance to coastal states to develop plans and implement projects to adapt to the impacts of climate change. HR 5453, the *Coastal State Climate Change Planning Act* provides a good start to developing an adaptation planning framework. We suggest that coastal state adaptation plans take into account disaster response and recovery programs to make sure that rebuilding is done in a way that reflects our need to adapt to climate change. Plans should consider relocation of infrastructure and people out of hazardous areas as a recovery response, and use these relocation strategies to facilitate habitat restoration since many of these locations were originally wetlands and vegetated buffers that provided for healthy environmental quality. Recognizing the key role that healthy estuarine habitat plays in combating climate change through carbon sequestration, we encourage Congress to specifically include development of strategies for habitat restoration to mitigate climate change as part of the adaptation plans.

Explicitly include coastal habitat restoration as an eligible activity for Coastal Adaptation Project Grants

Habitat restoration needs to be part of the solution to combating climate change. We strongly support the inclusion of habitat restoration as an eligible activity for the coastal adaptation project grants. HR 5453 does include several restoration-related activities that are eligible for the adaptation project grants, such as activities to address the loss, degradation, or fragmentation of wildlife habitat; however, we recommend the explicit inclusion of habitat restoration as an eligible activity. With the strong track record and accomplishments of nongovernmental organizations in implementing habitat restoration projects, we recommend that these organizations also be eligible for funding in addition to state agencies.

H.R. 3223—Keep Our Waterfronts Working Act of 2007

Restore America’s Estuaries recognizes the need to ensure coastal access and water-dependent coastal-related business. We particularly endorse the ability of nonprofit organizations to qualify to receive working waterfront grants to assist state or local governments and/or hold title to or interest in property. This clearly recognizes the new and demonstrated role that nonprofit organizations can play to help local coastal communities.

Thank you for the opportunity to address you today. I would be happy to answer any questions.