

# GULF OF MEXICO ALLIANCE



## MIDCOURSE ACCOMPLISHMENTS REPORT

GOVERNORS' ACTION PLAN  
FOR HEALTHY AND RESILIENT COASTS

JANUARY 2008



# MIDCOURSE ACCOMPLISHMENTS REPORT

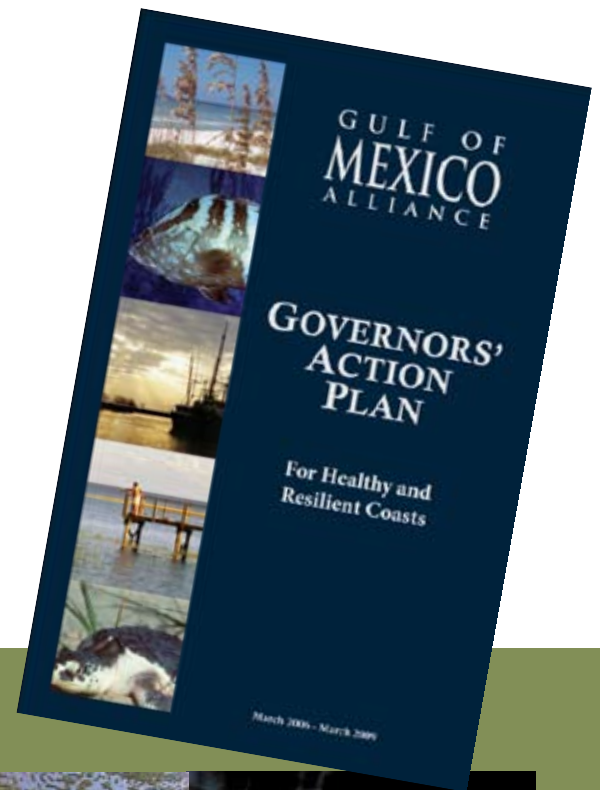
## GOVERNORS' ACTION PLAN FOR HEALTHY AND RESILIENT COASTS

The Gulf of Mexico region is experiencing the power of partnerships – the five U.S. Gulf States are committed to realizing the benefits of shared management successes by developing a common vision and strategy for enhancing the environmental and economic health of the Gulf of Mexico.

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*The Gulf Alliance is a partnership of the states of Alabama, Florida, Louisiana, Mississippi, and Texas.*

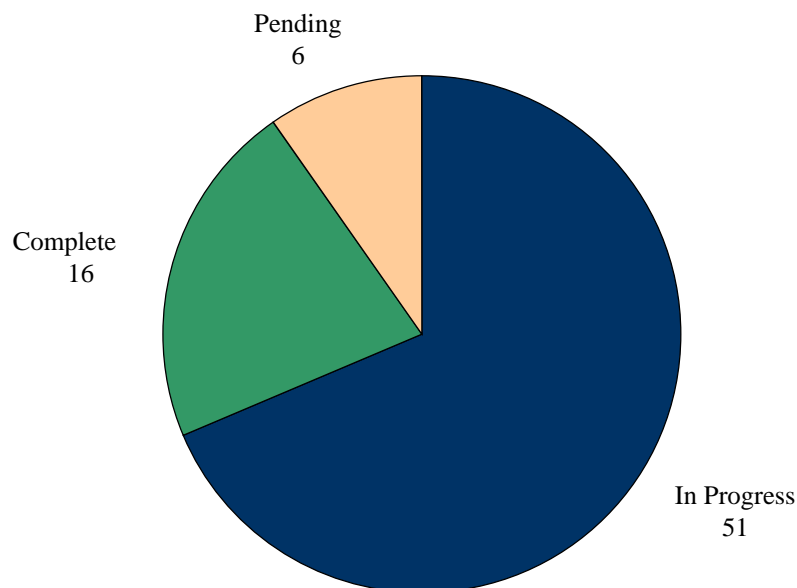
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## WHAT IS THE STATUS OF THE GOVERNORS' ACTION PLAN?

In March 2006, the five U.S. Gulf State Governors' put forward 73 Action Blueprint Steps to enhance the environmental and economic health of the Gulf of Mexico in their Governors' Action Plan for Healthy and Resilient Coasts. Under the leadership of the Gulf States, multi-stakeholder Priority Issue Teams developed strategies to advance and coordinate the implementation of these activities. Results have exceeded initial expectations – 22 percent (16 actions) of these activities are complete and 70 percent (51 actions) are in progress towards completion by March 2009. The remainder of this report is dedicated to highlighting regional successes that have been realized by the Alliance.

*Implementation Status of the 73 Action  
Blueprint Steps in the Governors' Action*



# RECENT UPDATES: WHAT'S NEW WITH THE GULF OF MEXICO ALLIANCE?

## EPA ISSUES GOVERNORS' ACTION PLAN NEW FUNDING OPPORTUNITY

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The EPA Gulf of Mexico Program Office recently announced a \$2 million Request for Proposals (RFP) to continue supporting implementation of the Governors' Action Plan, the second such RFP since the release of the plan. For more information, please review the announcement at: [www.epa.gov/gmpo](http://www.epa.gov/gmpo).

The first EPA Gulf of Mexico Program RFP funded a number of grants in 2007 to support the implementation of the Governors' Action Plan. A description of these projects can be found in the attached appendix.

## ALLIANCE ESTABLISHES COASTAL COMMUNITY RESILIENCY WORKING GROUP

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Alliance leadership established a regional working group with expertise in coastal community resilience and hazard mitigation. Under the leadership of co-chairs Tina Shumate of the Mississippi Department of Marine Resources and Dr. Rod Emmer of Louisiana Sea Grant, this group will direct and coordinate the implementation of resilience-related actions in the Governor's Action Plan; and identify and plan for future actions needed to enhance resilience across the Gulf region. For more information, please visit: [www2.nos.noaa.gov/gomex/coastal\\_resil](http://www2.nos.noaa.gov/gomex/coastal_resil).

## SECOND ANNUAL ACTION PLAN IMPLEMENTATION AND INTEGRATION WORKSHOP A HUGE SUCCESS!

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The second annual Alliance "all hands" workshop was held on July 10-12, 2007 in St. Petersburg, Florida, and drew over 230 participants. The Alliance Priority Issue Teams identified actions in the Governors' Action Plan that still needed work and developed plans for completing these remaining activities by March 2009. Five concurrent technical workshops were held: nutrients criteria development; Gulf-wide water quality monitoring standardization; habitat identification techniques; development and documentations of issues and recommendations related to habitat conservation and restoration; and regional sediment management planning.

## ENGAGING THE SIX MEXICAN GULF STATES

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The Alliance actively works to collaborate with the six Mexican Gulf States, and the Governors' Action Plan includes ongoing activities in Mexico. In addition, Gobernador Fidel Herrera Beltrán of the State of Veracruz is currently leading an effort to host a second State of the Gulf of Mexico Summit in Mexico in 2009.

On July 30-31, 2007, a Mexican delegation visited the Stennis Space Center in Mississippi. This meeting was to discuss the ongoing activities in Veracruz and how to promote these activities to other Mexican provinces. As a result, the Minister of Health from Campeche invited Alliance members to participate in the second Bi-national Workshop between the United States and Mexico. This workshop took place the week of October 15, 2007 in Campeche, Mexico. Representatives from all six Mexican states were present, as well as the Mexican Navy and Federal Commission for the Protection against Sanitary Risk (COFEPRIS).

# WHAT'S NEXT FOR THE GULF OF MEXICO ALLIANCE?

Halfway through the three year implementation period of the Governors' Action Plan, Mississippi Governor Haley Barbour convened state, federal, and private sector colleagues in August 2007 to celebrate the Alliance's initial successes with regional collaboration. When the Governors' Action Plan was released in March 2006, it was intended to set the stage for a longer-term regional partnership that could address an expanded suite of issues. The Gulf State Governors recognized that this has been realized beyond original expectations. Building upon the momentum created by the Governors' Action Plan, significant next steps for the Alliance have been identified:

## ENHANCE AND EXPAND ALLIANCE PARTNERSHIPS

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The Alliance will strengthen existing relationships with supporting federal partners and actively solicit direct involvement from non-governmental organizations and private industry, which will offer opportunities to develop and execute regional collaborative actions. In addition, the Alliance will continue to pursue regional collaboration opportunities with the six Mexican Gulf States, and support the creation of a parallel Mexican Gulf of Mexico Alliance.

## DEVELOP A FARTHER-REACHING, FIVE-YEAR REGIONAL ACTION PLAN AND ASSOCIATED LEGISLATIVE STRATEGY

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Building on the success of the targeted Governors' Action Plan, the Alliance will expand the breadth and scope of Gulf of Mexico regional collaboration activities. To this end, the Alliance will begin work on a Governors' Regional Collaboration Blueprint, planned for release in 2008. The Alliance will actively encourage broad participation and input into the planning process.

## FORMALIZE ALLIANCE GOVERNANCE

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The Alliance will adopt a partnership agreement and create a permanent governance structure, which will allow the Alliance to establish stronger partnerships, better leverage complementary activities, and seek additional sources of funding.

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## WHERE DO I GET MORE INFORMATION ABOUT THE GULF OF MEXICO ALLIANCE?

### ALLIANCE PUBLIC WEBSITE AND GOVERNORS' ACTION PLAN

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Please visit the Alliance's public website at:  
[www.gulfofmexicoalliance.org](http://www.gulfofmexicoalliance.org) and contact Terry Teague (teague.terry@epa.gov, 228-688-1172) at the EPA Gulf of Mexico Program to request hardcopies of the Governors' Action Plan, available in both English and Spanish.

### ALLIANCE WORKING WEBSITE

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The Alliance Working Website is a comprehensive resource for all implementation partners, providing current information about Alliance events, contact information, and an archive of past documents and presentations. Visit <http://www2.nos.noaa.gov/gomex>.

### GULF OF MEXICO REGIONAL NEWSLETTER

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A monthly regional newsletter, the Gulf of Mexico News, is available on the Alliance Working Website (please visit <http://www2.nos.noaa.gov/gomex>), or via email distribution list (please contact Laurie Rounds at [Laurie.Rounds@noaa.gov](mailto:Laurie.Rounds@noaa.gov)).





# WATER QUALITY FOR HEALTHY BEACHES & SHELLFISH BEDS

## THE REGIONAL ISSUE: HARMFUL ALGAL BOOMS (HABS)

### State of Research on Red Tide in the Gulf of Mexico Workshop and Public Forum

#### *Implementing Governors' Action WQ-1*

NOAA, Mote Marine Lab, and Florida's Fish and Wildlife Research Institute (FWRI) hosted a workshop and public forum in Sarasota, Florida, on July 17-20, 2006, to discuss current red tide research efforts and address areas that need further exploration. Fifty-five scientists and managers participated, including two red tide researchers from Mexico. The public played an integral role in the direction of future red tide research efforts by sharing opinions and concerns via an online survey and in three simultaneous public meetings along the southwest Florida coast on July 20, 2007.

### Harmful Algal Bloom Research Grant Awarded

#### *Implementing Governors' Action WQ-1*

In November 2006, NOAA awarded a \$4.7 million, five-year ECOHAB grant to the Florida Fish and Wildlife Conservation Commission (FFWCC) FWRI and collaborators at Mote Marine Laboratory, University of Miami, University of South Florida, Virginia Institute of Marine Science, Old Dominion University, and University of Maryland, to examine the causes of red tide [*Karenia brevis*] along Florida's Gulf Coast, especially how and what types of nutrients fuel the blooms. The new research, which will combine biological, chemical, and physical measurements with predictive modeling efforts, seeks to address a critical knowledge gap using both experimental and modeling approaches, as well as retrospective data analysis.

### New BreveBuster Gliders Deployed in Florida

#### *Implementing Governors' Action WQ-1*

The BreveBuster is a sensor that can detect the toxic algae, *Karenia brevis*, in coastal waters. With close collaboration between the State of Florida and NOAA, three such sensors were deployed on autonomous underwater gliders off the Southwest coast of Florida in April 2006. This effort greatly enhances the ability to identify the onset of blooms and better predict the transport of blooms.

### Harmful Algal Bloom Forecasts Continue for South Texas Coast

#### *Implementing Governors' Action WQ-1*

NOAA issued its first HAB Bulletin for the south Texas Coast in September 2006, providing managers at the Texas Parks and Wildlife Department (TPWD) with information regarding the location, extent, and potential impacts of the toxic algae, *Karenia brevis*. Forecasts have been provided weekly during non-bloom periods and bi-weekly during a HAB event. In addition, representatives from NOAA's Southeast Phytoplankton Monitoring Network conducted training to Texas volunteers along the entire coast on how to collect and process samples. These data are provided to the HAB Forecast System for comparison with imagery to provide information regarding the location and magnitude of blooms.

## U.S. and Mexico Continue Work to Expand Harmful Algal Bloom Detection Capabilities in Veracruz

### *Implementing Governors' Action WQ-1*

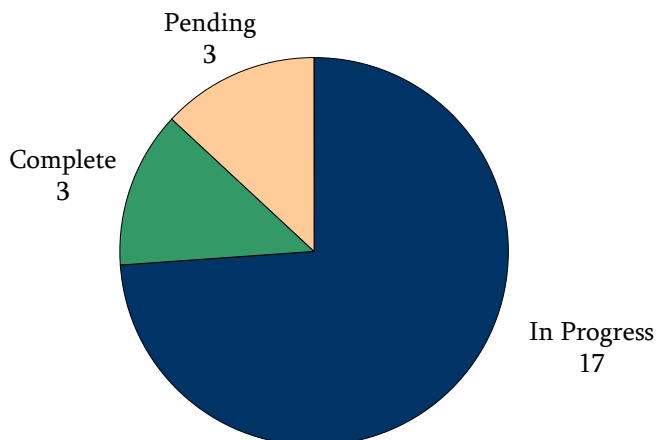
A second bi-national coordination meeting was held in Campeche, Mexico in October 2007 and the US delegation included experts from NOAA, EPA, Naval Research Laboratory and FWRI. In accordance with the Governors' Action Plan to advance HAB detection and remote sensing in the Mexican Gulf State of Veracruz, EPA and NOAA are working closely with local Mexican authorities to deploy two Coastal-Marine Automated Network (C-MAN) stations and three BreveBuster sensors off the coast of Veracruz. In addition, FWRI plans to hold a training session in the spring of 2008 on phytoplankton taxonomy and microscopic identification and assist in the development of a volunteer monitoring network.

## Gulf of Mexico Coastal Ocean Observing System (GCOOS) Hosts Workshop to Develop a Gulfwide HABs Monitoring Plan

### *Implementing Governors' Action WQ-1*

GCOOS held a workshop with 35 participants from state and federal public health, resource management, and operations and research communities in order to design a monitoring plan to specifically aid in reducing the public and ecosystem health impacts of HABs. The workshop participants reached consensus on a draft plan for the observing system that will provide critical improvements to the current state, federal, and regional systems for monitoring, response, and forecasting. The goal is for the plan to be completed by spring 2008. Details on the plan, workshop, and background documentation can be found at the GCOOS web site: <http://ocean.tamu.edu/GCOOS/Office/HAB.htm>.

*The Water Quality Priority Issue Team coordinates implementation of 23 Action Blueprint Steps in the Governors' Action Plan.*



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The following state agency representatives provide leadership to this multi-stakeholder team:

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# THE REGIONAL ISSUE: BACTERIAL CONTAMINATION OF COASTAL WATERS

## Gulf of Mexico Alliance Microbial Source Tracking Workshop a Success *Implementing Governors' Actions WQ-2*

Over 40 participants, including national scientific experts, state water quality managers, beach managers, and shellfish growing water managers, convened for a December 2006 workshop in Biloxi, Mississippi, entitled Microbial Source Tracking in the Gulf of Mexico: Implications for Health and Environmental Management. Participants discussed various multiple source tracking methods and the regulatory and management context for applying these methods, and identified the three most promising methods for field evaluation at Gulf beaches and shellfish growing waters. The agenda, presentations, list of participants, and summary report are available at: <http://www.usm.edu/bst/>.

## EPA Funds Alliance Project to Field Test Promising Microbial Source Tracking Methods for Routine Use by Regulatory Agencies *Implementing Governors' Actions WQ-2*

This project will be a collaborative effort between the University of South Florida (lead Principal Investigator), the University of Southern Mississippi, and the University of West Florida. Funding was awarded in August 2007, and the project will last approximately three years. Steps to improve beach water quality include laboratory studies and field investigations of several microbial source tracking methods with the aim of providing accurate methodologies that could be utilized by watershed and resource managers to determine the best strategies for controlling microbial inputs to Gulf of Mexico waters, as well as, identify potential sources for remediation.



# THE REGIONAL ISSUE: STANDARD REGIONAL APPROACHES FOR WATER QUALITY MONITORING

## Alliance Regional Monitoring Standardization Workshop *Implementing Governors' Action WQ-3 and N-1*

The Gulf of Mexico Alliance Nutrient Reduction and Water Quality teams held a workshop on July 11, 2007 in St. Petersburg, Florida to initiate planning for a pilot effort to standardize monitoring methods for a core set of nutrient and water quality parameters across Gulf coastal ecosystems. The purpose for the pilot effort is to:

1. Adopt standardized methods for a core set of parameters by all Gulf States.
2. Develop a model in support of nutrient criteria development to understand causal and response variables consistently across the region.
3. Inform our understanding of individual system responses and monitoring design
4. Provide information for Gulf systems to reach a simplified methodology for nutrient monitoring/assessment to support establishing nutrient criteria.

## Regional Monitoring Standardization “Round Robin for Data Comparability” Under Development

### *Implementing Governors' Action WQ-3 and N-1*

The Gulf of Mexico Alliance Water Quality and Nutrient teams held a workshop to discuss methods to standardize monitoring for nutrient-based, water quality parameters on September 24-26 in Mobile, Alabama. Over 20 state and federal representatives discussed current issues related to sampling and analysis methodologies and began designing a regional round robin to improve comparability of water quality data. Phase I of the round robin is on track to be executed in spring of 2008. The EPA Gulf of Mexico Program will release an RFP in early 2008 soliciting proposals for a grant recipient to execute future phases of the round robin series beyond Phase I. Regional monitoring standardization will assist states in the development of nutrient criteria and better coordinate regional water quality monitoring efforts.



# WETLAND AND COASTAL CONSERVATION AND RESTORATION

## THE REGIONAL ISSUE: COORDINATE COASTAL RESTORATION AND CONSERVATION EFFORTS

### Series of State-Led Restoration Team Workshops Completed

#### *Implementing Governors' Action R-1*

The five Gulf States hosted a series of workshops from November 2006 to September 2007 to share successful strategies and common roadblocks for restoration projects in the Gulf region, as well as develop an inventory of best practices and future regional restoration priorities. Over the coming year, the Regional Restoration Coordination Team (RRCT) will draft regional policy recommendations derived from these workshops, specifically addressing (1) environmental compliance issues affecting habitat restoration/conservation, (2) streamlined federal permitting requirements restoration/conservation projects, (3) administrative and legal processes in granting agencies that facilitate or impede restoration/conservation projects, and (4) public-private partnership development to benefit restoration/conservation efforts.

### Gulf of Mexico Regional Sediment Management Master Plan Under Development

#### *Implementing Governors' Action R-1*

The five Gulf States, in partnership with the U.S. Army Corps of Engineers and other federal agencies, continue development of the Gulf of Mexico Regional Sediment Management Master Plan. Workshops were held in December 2006 and March 2007 to identify scientific and technical information currently available to support development of the master plan, and to begin evaluating regional sediment resources versus sediment needs.

### Regional Freshwater Inflows Workshop Under Development

#### *Implementing Governors' Action R-1*

The Texas Parks and Wildlife Department is organizing a May 2008 interstate workshop on the importance of freshwater inflows to coastal ecosystem health. The workshop is anticipated to focus on best management practices, and will draw on regional, national, and international expertise for technical presentations.

# THE REGIONAL ISSUE: COASTAL COMMUNITY RESILIENCE TO STORMS AND HURRICANES

## New Resilience and Hazard Mitigation Working Group Formed

### *Implementing Governors' Action R-2*

The RRCT initiated the call for a new five Gulf State working group with expertise in coastal community resilience and hazard mitigation. The Coastal Community Resiliency Working Group has since convened and met twice – in July and September 2007 – to coordinate the implementation of resilience-related actions in the Governor's Action Plan and identify and plan for future actions needed to enhance resilience across the Gulf region.

## Height Modernization for South Louisiana

### *Implementing Governors' Action R-2*

NOAA's National Geodetic Survey, FEMA, and the Louisiana Spatial Reference Center (LSRC) of Louisiana State University (LSU) have officially released the results of elevation surveys in Southern Louisiana. These new heights support ongoing restoration and protection efforts of coastal Louisiana and the release of new heights for the southern 27 Parishes. The updated heights released for the southern Louisiana parishes consist of over 340 bench marks with additional Continuously Operating Reference Stations (CORS) installed. This new network of vertical control for Southern Louisiana is critical for recovery and construction projects, as well as future activities such as evacuation route planning and levee projects.

## Coastal Storm Program Gulf of Mexico Pilot

### *Implementing Governors' Action R-2*

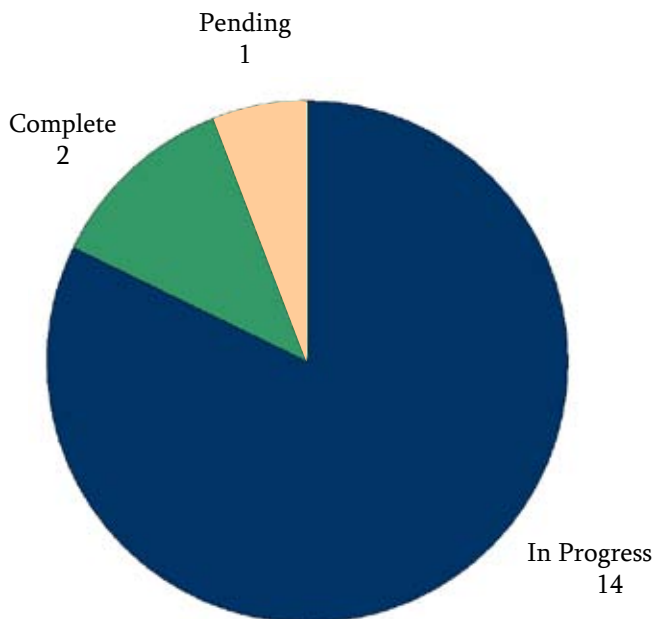
The cross-NOAA Coastal Storms Program (CSP), in conjunction with the Gulf Coast Services Center and the Gulf of Mexico Sea Grant Programs, is creating a pilot in the Gulf of Mexico focused on mitigating the impacts of coastal hazards along the Alabama and Mississippi coasts. NOAA's CSP will inform local leaders on issues surrounding land-use, (re)development and how different decisions affect a community's hazard resilience. This includes knowledge of what tools are available to assess and identify hazard and development impacts, how to use the tools, the work being conducted by various organizations, and expert points of contact. CSP held a scoping meeting on March 14-15, 2007 in Biloxi, MS where over 60 private, federal, state, county, and local representatives discussed what gaps exist in the pilot area for improving community resilience to hazards.



## Planning and Resilience Project for Mobile Bay *Implementing Governors' Action R-2*

Alabama's Mobile Bay region is experiencing tremendous growth and is also vulnerable to hurricanes and other natural hazards. In late November 2007, the Mobile Area Chamber of Commerce hosted four community planning and resilience meetings with business leaders and local and regional officials. The meetings, part of a larger planning and resilience project, addressed the area's infrastructure, transportation, environment, and economic development. This project is supported by NOAA's regional collaboration team for the Gulf of Mexico. The NOAA Coastal Services Center and Mississippi-Alabama Sea Grant Consortium are providing financial and technical support.

*The Regional Restoration Coordination Team coordinates implementation of 17 Action Blueprint Steps in the Governors' Action Plan.*



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The following state agency representatives provide leadership to this multi-stakeholder team:

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# ENVIRONMENTAL EDUCATION



## THE REGIONAL ISSUE: INCREASED REGIONAL COLLABORATION IN BUILDING AWARENESS AND STEWARDSHIP

### Environmental Education Network Works Gulfwide

#### *Implementing Governors' Action ED-1*

In 2006, a regional body of educators and outreach practitioners was organized as the Gulf of Mexico Alliance Environmental Education Network (EEN), to provide strong leadership in coordinating regional education and outreach activities. Supported by a full time Alliance staff member hosted by the Dauphin Island Sea Lab, the EEN has active working groups focusing on under-served and under-represented populations in the Gulf region; implementing an education and outreach website and clearinghouse; and developing a Gulf-wide public awareness campaign, along with other initiatives. The EEN membership has met for two annual working meetings in Florida (2006) and Alabama (2007), the later meeting was held as a joint workshop with the GCOOS Education and Outreach Council.

### Rookery Bay National Estuary Research Reserve (NERR) Hosts

#### Alliance Educational Workshops

#### *Implementing Governor's Action ED-1*

From January to March 2007, the Rookery Bay NERR conducted a series of three Alliance educational workshops in South Florida, bringing together scientists, local decision makers, and interested citizens for informative day and evening programs. The workshops focused on (1) red tide issues; (2) sustainable growth strategies; and (3) how climate change impacts flood control and storm water management, water supply for natural systems, and water for human use. To read more about these workshops see [www.supportthegulf.org](http://www.supportthegulf.org).

## Coastal Ecosystem Learning Center (CELC) Designations at Aquarium of Veracruz, Mexico, and the J.L. Scott Marine Education Center, Mississippi

### *Implementing Governors' Action ED-1*

With existing CELCs in Florida, Alabama, and Texas, the Governors' Action Plan calls for the designation of at least one CELC in each of the five U.S. Gulf States and one in Mexico. With considerable fanfare, the designation ceremony for the first CELC in Mexico was held for the Aquarium of Veracruz in June 2007. The First Lady of the United States, Laura Bush, helped to designate the J.L. Scott Marine Education Center – destroyed in Hurricane Katrina but re-established in temporary residence at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi – as a CELC in November 2007.

## Educational Materials Clearinghouse Available Soon

### *Implementing Governors' Action ED-1*

The USGS National Wetlands Research Center in Lafayette, Louisiana, has developed a searchable clearinghouse of Gulf region educational materials. This online resource will go live in January 2008.

## Pilot Programs for Underserved and Underrepresented Populations

### *Implementing Governors' Action ED-1*

One of the key Alliance goals is conducting pilot projects for underserved and underrepresented populations in the region. Several partnerships are underway through the Florida Department of Environmental Protection, Texas State Aquarium, Louisiana University Marine Consortium, Barataria Terrebonne National Estuary Program, and Gulf of Mexico Foundation. These organizations are working outside their normal boundaries to develop creative ways to teach environmental education to diverse audiences.

## New Environmental Education Partnership with National Environmental Education Foundation (NEEF)

### *Implementing Governors' Action ED-2*

The NEEF's Earth Gauge™ is a free weekly environmental information service for local broadcast meteorologists in major US media markets, which is designed to make it easy to talk about the links between weather and the environment on-air with simple “factoids” and viewer action tips. In a new NOAA-funded partnership on behalf of the Alliance, Earth Gauge will develop 500 targeted Gulf coast environmental messages and disseminate these messages in twelve Gulf Coast media markets through their Earth Gauge™ service.

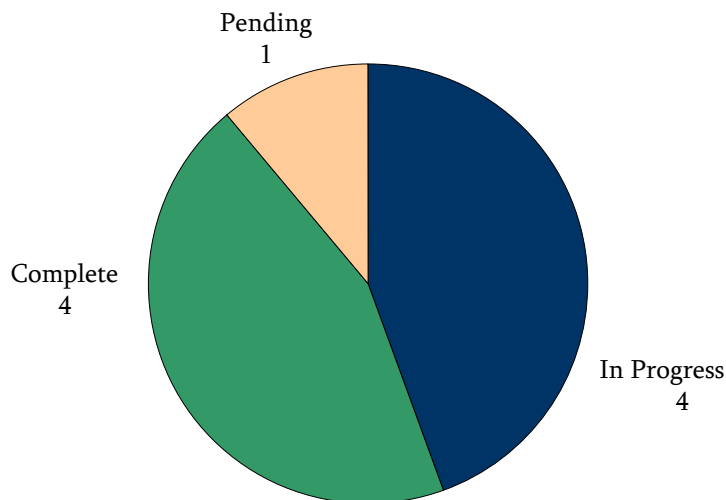
## Gulf Region Public Awareness Campaign Underway

### *Implementing Governors' Action ED-2*

Gulf wide public awareness of Alliance issues is critical to the future success of hazard resilient coastal communities. Efforts are underway to develop campaigns to change attitudes and behaviors for selected target audiences. This includes a phased media campaign to pilot populations through social marketing for sustainable communities. This approach will look at novel approaches for behavior change which could ultimately have a positive societal and environmental benefit.

The Rookery Bay and the Apalachicola Reserves received funding from the EPA Gulf of Mexico Program to conduct a public awareness campaign and increase community involvement in the Gulf of Mexico Alliance. Funding will allow the Reserves and Florida Department of Environmental Protection to hire two Gulf Alliance Coordinators to educate the media about Alliance activities and link Alliance priorities with the needs of coastal communities in Florida and throughout the Gulf.

*The Environmental Education Network coordinates implementation of 9 Action Blueprint Steps in the Governors' Action Plan.*



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TBD

# IDENTIFICATION AND CHARACTERIZATION OF GULF HABITATS



## THE REGIONAL ISSUE: IDENTIFY AND PROVIDE ACCESS TO MAPS FOR PRIORITY GULF OF MEXICO HABITATS

### Priority Habitat Information System (PHINS) Released for Public Comment *Implementing Governors' Action ID-1*

The PHINS is a state/federal partnership project to provide state and local users with access to habitat information and foundation geospatial datasets. PHINS consists of two main components: the Digital Library and the Map Viewer. The Digital Library, developed by USGS, provides web-based access and delivery of data, reports, imagery, posters, presentations, and synthesis products about Gulf habitats. The Map Viewer, developed by USACOE, generates online maps from data stored at participating agencies, and includes tools for navigating data, viewing and querying data attributes, overlaying layers, and printing maps. Workshops to present a beta version of PHINS and to specify state user needs were conducted in each of the five Gulf States in 2006 and 2007. PHINS is available for comment at: [http://ecowatch.ncddc.noaa.gov/habid\\_public](http://ecowatch.ncddc.noaa.gov/habid_public).

### Developing Environmental Data and Decision Support for the Gulf of Mexico *Implementing Governors' Action ID-1*

The Gulf of Mexico Regional Collaborative (GoMRC) provides an information technology platform for resource managers and policy makers in the U.S. and Mexico to better understand the Gulf of Mexico's marine and coastal environments through the use of an integrated earth observation system. During its first year, GoMRC delivered a restoration priority setting tool for submerged aquatic vegetation, or SAVs, in Mobile Bay. The associated technology platform is intended to support a range of natural resource issues in the Gulf region.

## Gulf Geospatial Assessment of Marine Ecosystems (GAME) Project Launched Gulfwide

*Implementing Governors' Action ID-1*

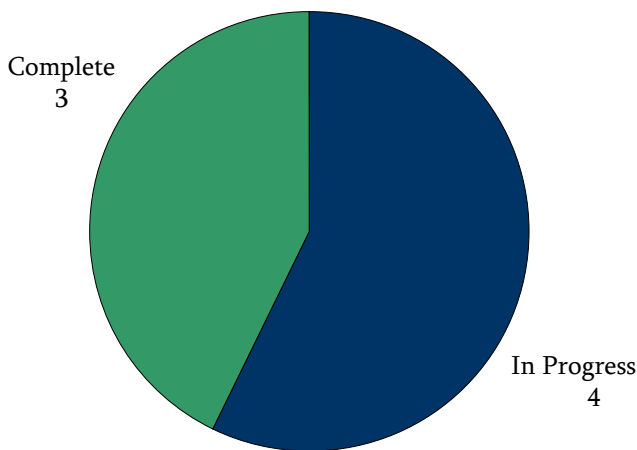
EPA funded a State of Florida-led effort to identify, inventory, and catalog existing geospatial data sets and information related to coastal and marine habitats of the Gulf of Mexico, both in U.S. and Mexican waters. Identification of this data will support the Governors' Action Plan call to develop a comprehensive, integrated habitat map for the region.

## Geographic Information System (GIS) and Metadata Training Provided to Gulf States

*Implementing Governors' Action ID-1*

Since the release of the Governors' Action Plan in March 2006, NOAA has offered coastal resource managers and technical staff in Florida and Alabama four introductory courses in the basic use of GIS and two courses in applications of GIS to coastal management issues, including metadata training.

*The Habitat Identification Priority Issue Team coordinates implementation of 7 Action Blueprint Steps in the Governors' Action Plan.*



## Habitat ID State Leadership

The following state agency representatives provide leadership to this multi-stakeholder team:

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# REDUCING NUTRIENT INPUTS TO COASTAL ECOSYSTEMS

## THE REGIONAL ISSUE: REGIONAL COLLABORATION ON COASTAL/ ESTUARINE NUTRIENT CRITERIA DEVELOPMENT

### Gulfwide Coordination for Nutrient Criteria Development

#### *Implementing Governors' Action N-1*

The Gulf of Mexico Nutrient Criteria Development Coordination Team held a technical conference in January 2007 to assess the state of nutrient criteria development in the region, share information, and identify common needs. The conference provided the framework for regional coordination plans to address nutrient related water quality monitoring needs, fill important gaps in knowledge about regional monitoring programs, and identify approaches to ecosystem classification and management.

## THE REGIONAL ISSUE: NUTRIENT IMPACTS TO COASTAL WATERS IN THE POST-HURRICANE REBUILDING OF THE GULF COAST

### Mississippi Water Infrastructure Master Plan Under Development

#### *Implementing Governors' Action N-2*

The Mississippi Department of Environmental Quality is developing a 5-county wide master plan for the building of new drinking water, wastewater, and storm water infrastructure, and has secured \$625 million for the effort. EPA has provided financial, logistical and technical support for five newly created County-wide Utility Authorities in coastal Mississippi.

### Decentralized Wastewater Treatment Options: Technologies and Management Strategy

#### *Implementing Governors' Action N-2*

EPA, along with state, regional and local sponsors, hosted a successful decentralized wastewater treatment conference in December 2006. With over 100 attendees, the conference focused on state of the art technology, successful management and governance models, obstacles to implementation, as well as needed next steps.

## Identification of 100 Priority Sensitive Watersheds

### *Implementing Governors' Action N-2*

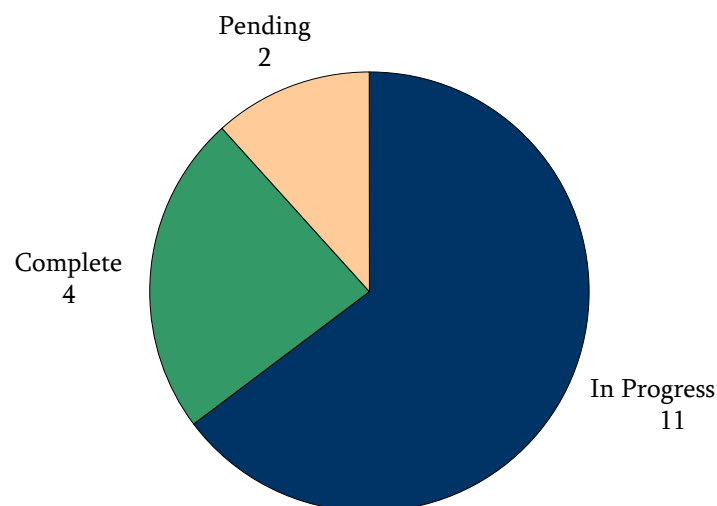
USGS, with funding from EPA, is reworking their 1992 SPARROW Model to determine which watersheds are contributing the most to northern Gulf hypoxia. This effort will estimate nutrient and suspended sediment loads to the Mississippi River basin and sub-basins. The revised model will indicate where on the landscape ("Top 100 Watersheds") the major sources of nitrogen and phosphorus are located and thus where to target reduction efforts. This effort will also allow for reassessment of the loadings based on changes in the percentage of the major agricultural crops and will give the resource agencies the information necessary to target limited resources on where reductions are most needed.

## Wastewater to Wetlands Initiative

### *Implementing Governors' Action N-2*

The first Wastewater to Wetlands Workshop was conducted July 24-25, 2007. The workshop centered around discussions of opportunity and approaches for lower cost wastewater treatment systems with secondarily treated wastewater discharged in wetland areas that are currently starved for freshwater inflow and nutrients. The Gulf of Mexico Program is diligently working with the State of Mississippi, developers, builders and regulators to recognize and promote a pilot program in several locations in Mississippi. A second Wastewater to Wetlands Workshop was conducted in November 2007.

*The Nutrients Priority Issue Team coordinates implementation of 17 Action Blueprint Steps in the Governors' Action Plan.*



# THE REGIONAL ISSUE: COASTAL HYPOXIA AND THE “DEAD ZONE”

## Five Projects Researching Hypoxia Impacts on the Northern Gulf Ecosystem

### *Implementing Governors’ Action N-3*

Through the Northern Gulf of Mexico Ecosystems and Hypoxia Assessment Program, NOAA supported five multiyear interdisciplinary research projects in FY06 to study hypoxia impacts on the northern Gulf ecosystem. Research efforts focus on developing quantitative models to predict the spatial and temporal extent of the Gulf hypoxic zone given varying levels of nutrient inputs, physical forcing, and any other key anthropogenic or natural factors that control hypoxia.

## Summit on Long-Term Monitoring of the Gulf Hypoxic Zone Held

### *Implementing Governors’ Action N-3*

The Northern Gulf Cooperative Institute convened key officials, researchers, and the user community in January 2007 at the Summit on Long-Term Monitoring of the Gulf of Mexico Hypoxic Zone: Developing the Implementation Plan for an Operational Observation System. Participants developed the institutional constructs for a long-term sustainable and integrative monitoring plan for the “dead zone” that would link closely with the Integrated Ocean Observing System (IOOS) and Gulf of Mexico Coastal Ocean Observing System (GCOOS). The goals of the planned monitoring program are to improve characterization of the “dead zone” and to provide critical data for ongoing research programs to refine our understanding of both causes and impacts to better inform management of the problem.

## Workshop on Ecological Impacts of Hypoxia on Living Resources

### *Implementing Governors’ Action N-3*

The Northern Gulf Cooperative Institute convened a workshop in March 2007 to assess the current state-of-knowledge of the ecological impacts of hypoxia on living resources with a focus on application of the science to coastal decision-making. The effectiveness of existing approaches for evaluating the impacts of hypoxia on ecologically, commercially, and recreationally important fish and shellfish populations were compared in three coastal systems noted for seasonally recurring and persistent hypoxic zones – Chesapeake Bay, the Gulf of Mexico, and Lake Erie.

## Nutrients State Leadership

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## EPA GULF OF MEXICO PROGRAM GRANTS AWARDED IN FY 2007

### WATER QUALITY

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#### Microbial source tracking method validation

*Awarded to University of South Florida, Tampa*

This project is a multi-year effort to conduct collaborative laboratory studies and field validations of several microbial source tracking methods (MST) with the aim of providing accurate methodologies. This will allow watershed and resource managers to determine the best strategies for controlling microbial inputs to Gulf of Mexico waters; and, to identify potential source(s) for remediation. The project is a collaborative partnership among scientists, academic institutions, state and federal agencies to support and increase “effective regional interaction” thereby improving the current state of the science knowledge and application of real-time, field-tested methods.

#### Improve government efficiency in water quality monitoring

*Awarded to Florida Department of Environmental Protection*

This project focuses on working with each of the Gulf States and their federal and local partners to encourage monitoring and analytical consistency for a key set of water quality parameters.

#### Harmful Algal Bloom research

*Awarded to University of South Florida, Tampa*

This project will enable improved integration of existing human scientific and resource management infrastructure in the U.S. and Mexico focusing on Harmful Algal Bloom (HAB) research and monitoring in the Gulf of Mexico. The objective is to establish a bi-national risk assessment and communications partnership to improve the state of the science and develop common approaches for detecting and monitoring HABs in the Gulf of Mexico.

### CONSERVATION AND RESTORATION

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#### Expansion and improvement of infrastructure

*Awarded to Jackson County, Pearl River County, Harrison County, and Hancock County*

These grant projects were awarded and support four (4) Coastal Mississippi county Utility Authority’s for their expansion and improvement of infrastructure, as well as the consolidation of water, wastewater and storm water services post Hurricane Katrina.

#### Coordinate the Wetland and Coastal Habitat Conservation and Restoration Committee

*Awarded to the Gulf of Mexico Foundation*

From the date of the project award to March 2009, the project team will coordinate the Wetland and Coastal Habitat Conservation and Restoration committee established by the Governors’ Action Plan of the Gulf of Mexico Alliance. A series of workshops will be held in the Gulf States. The resulting output will include descriptions of the habitat issues of the Gulf States, recommendations of “priority” conservation and restoration needs, and suggested solutions to permitting and funding challenges that may exist. The project team will work with potential collaborators to leverage funding, develop and distribute educational outreach efforts and materials, and build a strong habitat conservation stewardship ethic within the Gulf States and the Gulf of Mexico watershed states.

## Hold an interstate workshop on Freshwater Inflow issues in the Gulf of Mexico coastal region

*Awarded to Texas Parks & Wildlife*

The conference will identify water management questions on providing freshwater inflows to estuaries, update participants on the current scientific knowledge regarding the role of freshwater inflows in protecting estuaries, and identify management approaches and scientific work that the Gulf States should undertake to address the relevant water management questions.

## ENVIRONMENTAL EDUCATION

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### Ocean literacy project

*Awarded to Florida Department of Environmental Protection*

This grant entitled “Gulf of Mexico Ocean Literacy Project” will focus on successful strategies for reaching underserved and underrepresented audiences through the provision of field-based activities for middle school teachers and students. The project will use the other Gulf Alliance Priorities such as water quality monitoring, wetland conservation, and nutrient issues in coastal watershed as the context for learning science and building ocean literacy.

### Inform the public of the existence and cause of hypoxic zones in the Gulf of Mexico

*Awarded to the Dubuque County Historical Society*

The project will develop two interactive displays that will connect the user community to the health of the Gulf and improve the environmental literacy of the people who live in the Mississippi watershed. These two self-contained units will each contain a 42-inch monitor and trackball navigation device. One unit will travel extensively throughout the Mississippi River Valley, and a second unit will be permanently installed at the National Mississippi River Museum and Aquarium.

### Improve water quality in Gulf of Mexico waters through education, outreach, and public awareness

*Awarded to Florida Department of Environmental Protection*

This project will assist the Gulf of Mexico Alliance by providing financial assistance to engage a Florida Gulf Alliance Coordinator and an Assistant to partner with the media on a Gulf wide public awareness campaign. Also, the coordinator and assistant will support Florida related education and community involvement aspects of the five Alliance Priority Issue Action Plans.

### Public awareness campaign

*Awarded to Dauphin Island Sea Lab*

The purpose of this project is to: (1) design and conduct a strategic public awareness campaign that will encourage Gulf stewardship and coastal hazard identification and prevention, (2) coordinate funding sources to sustain the public awareness campaign in the short-term and longer-term, and (3) develop and implement a comprehensive, 36-month public awareness campaign to promote stewardship messages associated with the other four Alliance priority issues and community hurricane preparedness.

### Provide access to environmental information to under-served and under-represented populations

*Awarded to the Barataria-Terrebonne National Estuary Program*

This grant was awarded to the Barataria-Terrebonne National Estuary Program and will allow under-served and under-represented populations more access to environmental information and opportunities related to water quality, eutrophication, coastal habitats, and wetland loss through a series of seminars and the creation of an inter-active web site.

## IDENTIFICATION AND CHARACTERIZATION OF GULF HABITATS

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### Develop and implement a standard habitat classification

*Awarded to Nature Serve*

The project will support the development of the Priority Habitat Information Network System (PHINS) by developing and implementing a standard habitat classification. Outputs will include a documented classification of Gulf of Mexico Habitats, a metadata standard, and demonstration for integrating existing habitat data into PHINS.

### Identify, inventory and catalog existing data sets and information related to coastal and marine habitats in the U.S. and Mexican waters of the Gulf of Mexico

*Awarded to Florida Fish and Wildlife Research Institute*

This effort will supply the means for the identification of data information gaps in marine habitats in the U.S. and Mexican waters of the Gulf of Mexico.

## REDUCING NUTRIENTS

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### Nutrient Conference Support

*Awarded to Mississippi Department of Environmental Quality*

The project's primary goal is to reduce nutrient loading in Gulf of Mexico waters by supporting State staff travel to technical workshops and conferences. Over the next several years, Gulf States will be establishing numerical criteria for nutrients in coastal ecosystems that will guide regulatory, land use and water quality protection decisions. Because the five States face similar nutrient management challenges at both the estuary level and as the receiving water for the entire Mississippi River watershed, the Gulf of Mexico Alliance is an important venue to build and test management tools to reduce nutrients in Gulf waters and achieve healthy and resilient coastal ecosystems. The MDEQ project supports the Alliance and the Clean Water Act by hosting a workshop in Late Spring/Early Summer of 2007. The objectives of this workshop are to 1) Identify and evaluate nutrient monitoring methodologies including both field and laboratory work; 2) Identify and evaluate nutrient models appropriate for the Gulf of Mexico Hypoxia issue; and 3) Work to identify a common approach for the five Gulf

# GULF OF MEXICO ALLIANCE



State of Alabama



State of Florida



State of Louisiana



State of Mississippi



State of Texas