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NOAA Gulf of Mexico News

Hurricane Ike Still Front and Center for Flower Banks Staff

Sanctuaries staff continue efforts to help the Flower Garden Banks office recover from the effects of Hurricane Ike. The team has been busy with drywall demolition, cabinetry extraction, debris removal, and cleanup in homes flooded during the storm. While there are signs of improvement three weeks after the storm hit, the impact of the storm is still visible everywhere. Staff of the National Marine Fisheries Service Galveston Lab have also provided substantial recovery assistance, helping to rapidly bring the Flower Garden Banks offices back into operation and arranging accommodation for those displaced by the storm. For more information, contact [Sarah Fangman](#).

Continued Support for Gulf Marine Transportation after September Hurricanes

The Office of Coast Survey's (OCS) Navigation Response Teams and survey assets continue to support the U.S. Coast Guard (USCG) and Gulf ports in locating and removing hurricane debris that impede safe navigation and resumption of commercial operations. For example, OCS assisted a Port Fourchon, LA, dive team with hydrographic analysis of side scan imagery for underwater obstructions and surveyed in Port Iberia, LA, after receiving reports of vessels striking objects in the waterway. Ports Fourchon and Iberia are both critical links in the nation's energy supply, serving as supply and maintenance ports for offshore oil platforms. Also in response to a USCG request for assistance, OCS tasked a contractor to locate a missing oil rig sheared off by Hurricane Ike that is a significant hazard to navigation in the Gulf of Mexico. For more information, contact [Howard Danley](#).

New Current Meter Aids Navigation Through Hazardous Bridge

On October 15, the Center for Operational Oceanographic Products and Services (CO-OPS) installed a new current meter that will improve navigational safety through the Galveston Causeway Railroad Bridge in Texas, the most hazardous bridge along the Intracoastal Waterway (ICWW). The meter provides pilots with real-time data on strong cross-channel currents through the narrow bridge passage. In the aftermath of Hurricane Ike, navigation along this stretch of the ICWW grew even more difficult given changes in bathymetry and resultant hydrodynamic changes between Galveston Island and the Texas coast. CO-OPS sent a field team to install the meter in response to a U.S. Coast Guard request for current data to address safety concerns with increased groundings. To access real-time current data, visit the [CO-OPS Web site](#). For more information, contact [Christopher Paternostro](#).

High-Resolution, High-Accuracy Elevation Data Provided for Hurricane Ike Response

Organizations currently working on Hurricane Ike recovery projects received high-resolution and high-accuracy topographic LIDAR data for 10 Texas counties. The data were collected by the Texas Water Development Board and were quickly made available online by the NOAA Coastal Services Center to more than 20 individual groups working in Texas. These data are also being used in the cleanup efforts associated with Hurricane Gustav. Visit <http://www.csc.noaa.gov/digitalcoast/> to access the data. For more information, contact [Brian Hadley](#) or [Keil Schmid](#).

Hurricane Recovery Support Provided to Texas Coastal Management Program

The Office of Ocean and Coastal Resource Management's (OCRM) Coastal Programs Division (CPD) continues to provide support to the Texas Coastal Management Program (CMP) in the aftermath of Hurricane Ike, an example of the federal-state partnerships established by the National Coastal Zone Management Program. CPD developed a report about Federal Emergency Management Agency (FEMA) mitigation grant programs that fund the acquisition and relocation/demolition of structures in hazardous areas. CPD also facilitated an exchange between the Texas CMP and other state coastal management programs to discuss the conflict between personal property rights and the public trust and ways to mitigate future damage from erosion. CPD is working with the Texas CMP and NOAA Gulf Coast Services Center to develop a more recovery-focused agenda for the Southern and Caribbean Regional Coastal Zone Management Meeting. For more information, contact [Josh Lott](#).

PORTS[®] Expansion in the Gulf of Mexico

Ensuring Navigation Safety and Promoting Economic Vitality in our Nations Ports

The Importance of Marine Transportation to the Nation



The Gulfport PORTS' environmental sensors gather real-time data from four current profilers and two meteorological measurement systems. [High resolution](#) (Credit: NOAA)

Marine transportation affects virtually everyone and works on the national, regional, and local levels. Two-thirds of all the goods purchased in the U.S. are shipped via the Marine Transportation System. Maritime commerce is a vital part of our transportation infrastructure, provides the majority of our exports and imports, and supports America's vibrant domestic commerce. Today, the U.S. Marine Transportation System conveys 95 percent of U.S. foreign trade by volume, moves two billion tons of freight, transports more than 130 million ferry passengers, contributes over \$700 billion to the U.S. gross domestic product, and provides more than 13 million jobs.

Due to the importance of the Marine Transportation System, ensuring marine transportation safety and efficiency should be a concern for every American. NOAA recognized this need and developed the Physical Oceanographic Real-Time System (PORTS[®]), which are near-shore, "real-time", ocean observing

systems tailored to the specific needs of local communities. PORTS® measures and provides observations of water levels, currents, salinity, wind, atmospheric pressure, air and water temperatures, and most recently an air gap, or bridge clearance. PORTS information is collected from each sensor in “real-time”, at six-minute intervals, all of which help mariners successfully guide ships into and out of the Nation's busiest ports.

PORTS® Expansion in Mississippi

Recently, NOAA's PORTS® program expanded to two new locations at Pascagoula, MS and Gulfport, MS. The Port of Pascagoula is Mississippi's largest seaport and the Port of Gulfport is the third busiest container port in the U.S. Gulf of Mexico. Both observation systems will assist the state with safely and efficiently moving commodities through its waterways contributing to \$1.4 billion to the State economy, representing almost three percent of the Gross State Product and including some 34,000 direct and indirect jobs paying \$765 million in wages and salaries. With PORTS® the Port of Gulfport and the Port of Pascagoula will be better equipped to safely and efficiently move commodities through their waterways facilitating the economic growth of the State of Mississippi through international trade and the creation of employment. Mississippi Senator Thad Cochran commented on the importance of PORTS® to the State's mariners, “The real-time oceanographic and meteorological information provided by PORTS® will not only provide commercial and recreational mariners with reliable navigational information for safe and efficient travel, but will also enhance local weather and coastal marine forecasting. I am proud to have this important technology located in the Port of Gulfport.”

Why Does PORTS® Matter to You?

The information made available by PORTS® results in economic benefits essential for the movement of goods, services, and people throughout the 25,000 miles of waterways, ports, and other navigable waters, as well as over 3,700 marine terminals that consist of the U.S. Marine Transportation System. A 2005 Tampa Bay economic study showed a \$7 million quantifiable economic benefit from avoided accidents and damage to the environment. Similarly, a 2007 study of the Houston/Galveston PORTS® identified \$18 million in benefits to the Gulf Region. The cost to operate this system is only a fraction of this benefit. Regardless of where you live, along the coast or in the midwest, the entire country relies on marine transportation.

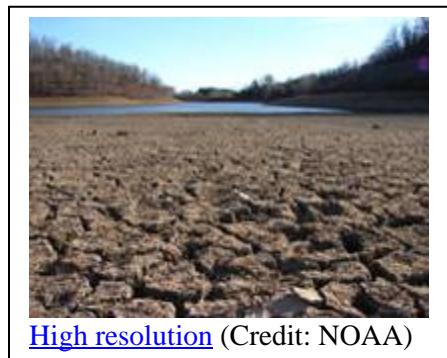
For More Information

PORTS® are near-shore ocean observing systems that provide accurate oceanographic and meteorological data to mariners, significantly reducing the risk of vessel groundings and increasing the amount of cargo that can move safely through a port. An additional two U.S. PORTS® locations are planned to be operational by 2009, for a total of 20 PORTS® installations nationwide. PORTS® measures, integrates, and disseminates real-time observations of currents, water and air temperature, barometric pressure, and wind speed, direction, and gusts. PORTS® data are available online at <http://www.tidesandcurrents.noaa.gov/ports>.



NOAA Awards \$3.8 Million to Louisiana, Oklahoma Universities for Climate, Drought Assessment, Planning Tools

October 7, 2008



Research funding totaling \$3.85 million over five years has been awarded to the University of Oklahoma and Louisiana State University by [NOAA's Regional Integrated Sciences and Assessments Program](#). The funding will be used to assess the risks of climate and drought impacts in their regions, and to develop tools and resources for use by local and regional community managers in their long-range planning.

"This effort will provide significant research and leadership for developing decision support tools and information services key to assessing, reducing and managing drought risks," said Roger S. Pulwarty, director of the National Integrated [Drought Information](#)

[System](#), established by [NOAA's Climate Program Office](#). "Not only will this region benefit but so could other parts of the United States."

Drought is a major issue in the southern United States. Community planners often focus on more dramatic, damaging and life-threatening events, like hurricanes, yet droughts can affect a much larger area, last much longer, displace as many people, and cause long-lasting damage to the environment. The Oklahoma Climatological Survey, a research unit of the College of Atmospheric and Geographic Sciences at the University of Oklahoma, and Louisiana State University's Department of Geography and Anthropology have been awarded first-year funding totaling \$700,000 to establish the ninth and newest RISA project, the Southern Climate Impacts Planning Program.

SCIPP will focus on climate and drought risk assessment, forecasting, and management as it relates to other climate-related hazards in the six-state region of, Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee and Texas. SCIPP is an integral part of the evolution of the NOAA-led National Integrated Drought Information System.

SCIPP will work closely with community managers to develop climate-risk profiles of communities, including risks related to drought, and assessment of how climate change might affect those communities. Community planners will gain access to a unified hazards assessment Web site for drought and climate hazards information to help them assess their risk and adaptation options. SCIPP's approach promotes adaptive behavior so that communities may be better prepared for current and future hazards.

NOAA understands and predicts changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and conserves and manages our coastal and marine resources.

Gulf Research Reserves Share Grant for Coastal Training Programs

The Coastal Training Program (CTP) coordinators at the five Gulf of Mexico National Estuarine Research Reserves will share a subgrant from the Gulf of Mexico Alliance to increase regional technical training opportunities. The collaborative approach will assist priority issue workgroups with outreach and training initiatives. The proposal includes funding for three years to support a Gulf Regional Coastal Training Program coordinator. This position will help the Gulf Coast programs connect the needs of the Alliance Priority Issue Teams, the Gulf States and local communities.

Additionally, this position will assist with the development and delivery of practical training opportunities that meet the information needs of target audiences. These activities will raise awareness of the Alliance and critical Gulf issues, increase the application of technology and tools that are products of the Alliance priority issue teams, and provide professional technical forums to disseminate Alliance outcomes and initiatives. Partners in this effort include Rookery Bay NERR, Apalachicola NERR, Weeks Bay NERR, Grand Bay NERR, Mission-Aransas NERR, and the Weeks Bay Foundation. It is anticipated that some workshops will require coordination with NOAA partners including the Coastal Services Center, Gulf Coast Service Center, Coastal Restoration Center, Sea Grant Programs and other state and federal programs that are involved with the Gulf of Mexico Alliance.

People Asked to Comment on Gulf of Mexico Research Plan

The Gulf of Mexico Research Plan (GMRP) is available for public comment through Dec. 7. This plan outlines the regional research priorities for the Gulf of Mexico based on constituent input, including survey responses from more than 1,200 people and priorities identified by almost 300 people who attended workshops held around the Gulf of Mexico. The GMRP identifies research priorities for the Gulf of Mexico. Research-based organizations that fund or conduct research in the Gulf of Mexico are using the GMRP and research priorities outlined within the plan as they address regional needs. The draft version of the plan and instructions on how to submit comments are available on the Web at <http://masgc.org/gmrp/report.htm>. The Florida, Mississippi-Alabama, Louisiana and Texas Sea Grant college programs are coordinating the Gulf of Mexico Research Prioritization and Information Needs project and engaging local, state, federal, university, non-governmental, and international organizations. The project is funded through the National Oceanic and Atmospheric Administration's National Sea Grant Program. For more information, contact Steve Sempier, Gulf of Mexico research planning coordinator, at stephen.sempier@usm.edu.

Benthic Habitat Data Available for Lower Laguna Madre, Texas

The condition of submerged aquatic vegetation (SAV) can serve as an important environmental indicator of marine organism health. As part of Texas' recently adopted seagrass monitoring program, SAV and other shallow-water benthic habitats were mapped for Lower Laguna Madre, TX. The resulting geographic information system map layer can be downloaded at the NOAA Coastal Services Center's (CSC) [benthic mapping Web site](#). To support this program, the Center worked with the Texas Parks and Wildlife Department, the Texas A&M University Center for Coastal Studies, and a team of private-sector vendors. Seagrasses in the bays and lagoons of the Texas Coastal Bend region are vital to the success of marine organisms such as small invertebrates and fish. For more information, contact [Mark Finkbeiner](#).

Other NOAA News

New Estuaries.gov Site Offers Curricula, Videos

Estuaries 101, the new on-line science curriculum from NOAA's National Estuarine Research Reserve System, provides powerful ways for students to learn fundamental concepts in science and develop scientific thinking skills, as well as explore the nation's biologically rich and economically important estuaries.



From flying over an estuary with “Google Maps” to tracking the path and impact of a hurricane, Estuaries 101 modules feature hands-on learning, experiments, field-based activities and data explorations.

Estuaries 101 is the central feature of the Reserve System's newly designed estuaries.gov Website, officially launched in September to help mark National Estuaries Day (Saturday, Sept. 27). Estuaries.gov was originally created to host the annual EstuaryLive Webcasts, virtual field trips to

estuaries around the country led by scientists and educators at the reserves. The success of that series led to increased requests from teachers for more estuarine educational materials.

The Estuaries 101 curriculum comprises four two- to three-week modules. Each module tells the estuary story through one of three domains - earth, life or physical science. With the emphasis on these domains, teachers can weave the study of estuaries into existing earth, life, or physical science courses, all of which can be used together or separately, according to Atziri Ibañez, national education coordinator for the Reserve System.

Designed for 9th–12th grade classrooms – with the flexibility to adapt to higher or lower grades – Estuaries 101 meets key National Science Education Standards and can be readily aligned to all state standards. “Our goal was to create a product that would make it meaningful to a student to explore and discover our nation's estuaries and at the same time learn how to use real data to support their investigations,” said Ibanez.

The new estuaries.gov site is a hub for exploration and discovery, Ibanez said. In addition to Estuaries 101, students and educators can access:

- Videos: A series of complementary videos will bring to life the different concepts taught in the Estuaries 101 Curriculum.
- Animated interpretations of live water quality and weather data from the NERRS System-Wide Monitoring Program to help students understand concepts and visualize processes and changes in an estuarine system.
- A database of teacher training opportunities offered at the National Estuarine Research Reserves.
- Fish fact sheets which provide useful information on species, including: a picture of the species, a map of the species' range, quick facts about the species, conservation notes and life history information.
- News section featuring current events and activities in the reserve system.

- A new Estuaries Professional Development section with links to resources that have been evaluated and aligned to the National Science Education Standards.

In coming months, additional features will be added, including the ability to query the reserve system's real time and archived data for water quality and weather from throughout the system, and pre-packaged virtual field trips, including archives of past EstuaryLive shows.

Development of the Estuaries 101 Curriculum and new estuaries.gov site is the result of extensive partnerships between NOAA's Estuarine Reserves Division and TERC, MarineGrafics, Tellus Applied Sciences, NOAA's Chesapeake Bay Office, NOS Outreach and Education Division, NOAA's National Marine Fisheries Service, Office of Protected Resources, Environmental Protection Agency, NOAA's Office of Education, Reserve Educators and the National Estuarine Research Reserve Association.

Coastal Journal Special Issue Features NERRS Research



The Coastal Education and Research Foundation (CERF) has released a special summer 2008 issue of its journal devoted entirely to research conducted in the National Estuarine Research Reserve System. The Journal of Coastal Research (JCR) contains 19 articles, most of which were written by NERRS researchers and Graduate Research Fellows.

Entitled “Research and Monitoring of NERRS Aquatic Ecosystems,” the special issue focuses on biological monitoring at the National Estuarine Research Reserves, as well as studies of the linkages between physical and biological components of estuarine ecosystems. The published papers, peer-reviewed by a group of more than 40 individuals, represent research conducted in 12 of the 27 reserves. Topics include water quality changes associated with hurricanes; concurrent assessments of eelgrass beds and salt marsh communities; effects of removing invasive Australian pines on incubation temperatures in loggerhead turtle nests; and environmental factors affecting summertime eelgrass diebacks in

the lower Chesapeake Bay.

Michael J. Kennish, research coordinator at the Jacques Cousteau Reserve in New Jersey, served as editor for the journal. Kennish noted that some of the articles are based entirely on data collected at the reserves by the System-Wide Monitoring Program (SWMP), while others pair SWMP data with data collected from other sources.

The 13-year-old System-Wide Monitoring Program uses common protocols and standards for collecting water quality, meteorological and biological data at each of the 27 reserves. The data are collected and disseminated by the Centralized Data Management Office (CDMO). Water quality and weather data are available in real-time through a variety of sources, including the CDMO and NOAA's National Data Buoy Center. Because of this capability, NERRS data are considered a backbone component of the Integrated Ocean Observing System. Contributors included seven Graduate Research Fellows, including two who are currently serving their fellowships. The full journal is available online at:

<http://www.jcronline.org/perlserv/?request=get-toc&issn=1551-5036&volume=55&issue=sp1>.

New Model Improves Prediction of Near-shore Environmental Production

NCCOS-funded researchers have completed the first step in developing a model to assess and forecast effects of multiple ecological stressors such as sea level rise, excess nutrients, and urbanization on near-shore estuarine habitat health. By integrating outputs for physical, biogeochemical, and biological variables, the model will determine different scenarios for how the ecosystem will respond to these stressors. The model will also determine how different shoreline management strategies will affect productivity of offshore habitats. This simulation-modeling framework evaluates how multiple stressors affect the entire ecosystem, from organisms that live in the water column to smaller organisms such as worms and snails that live in sediment. For more information, contact Carol Auer at Carol.Auer@noaa.gov.

Imaging Sonar Detects Threatened Sea Turtles

The first use of sonar imagery to investigate sea turtle abundance and habitats in coastal waters near Cape Lookout, NC, illustrates that this technology could help managers protect threatened and endangered species. Researchers from the National Centers for Coastal Ocean Science (NCCOS) and NOAA Fisheries are using sonar imagery collected in May to evaluate the technology for assessing the highest documented number of turtles in a single location. This group of loggerhead turtles, a threatened species, likely includes individuals from a population currently under consideration for uplisting to endangered status. High-frequency imaging sonar documented distribution and sizes of turtles and may help verify visual counts of surfacing sea turtles. The [sonar](#) is on loan from NCCOS's Center for Coastal Environmental Health and Biomolecular Research as part of a partnership to advance the use of acoustic technologies in coastal research. For more information, contact [Chris Taylor](#) or [Larisa Avens](#).

NOS and NWS Sign Agreement for Coastal Modeling

This week, NOS and the National Weather Service (NWS) finalized a Memorandum of Agreement to "Enable a Partnership for Operational Hydrodynamic Modeling from the Ocean to the Coastal Waters." The purpose of this agreement is to expand on the foundation and intent of the NOAA Administrative Order (NAO) 216-110 and the NOAA Response to the NOAA Science Advisory Board National Centers for Environmental Prediction Ocean Modeling Review Panel and enable collaboration between NOS and NWS to establish a national "Backbone Capability" for hydrodynamic modeling from the ocean to the coastal waters. The hydrodynamic models provide mariners, port managers, and emergency response teams with present and future conditions of water levels, currents, temperature, and salinity. Currently, NOS has [operational models](#) in nine major water bodies. For more information, contact [Mark Vincent](#).

Interactive Response and Restoration Mapping Tool Launched

The Office of Response and Restoration (OR&R) recently launched a new [interactive collaborative mapping Web site](#) that presents current year Damage Assessment Remediation and Restoration Program priority cases (DARRP RePORT), Emergency Response Incidents, Marine Debris projects, and Coastal Resource Research Center projects on a map of the U.S. In addition to displaying OR&R activities, the site provides links to project information (including appropriate DARRP case pages, Incident News, or

program Web sites). Data for the interactive Google map comes from the OR&R activities database and includes information from the ResponseLink Hotline, Marine Debris Division, National Marine Fisheries Service Restoration Center Database, and quarterly and DARRP updates provided by NOAA staff. For more information, contact [Benjamin Shorr](#).

NOAA and NSF Commission National Study of Ocean Acidification

October 20, 2008



Minnows, the common name for a variety of very small silvery fish, can often be seen schooling around a reef.

[High resolution](#) (Credit: NOAA)

The first comprehensive national study of how carbon dioxide emissions absorbed into the oceans may be altering fisheries, marine mammals, coral reefs, and other natural resources has been commissioned by NOAA and the [National Science Foundation](#).

“Carbon dioxide released into the atmosphere through the burning of fossil fuels is not only contributing to atmospheric climate change,” said Dr. Steven A. Murawski, director of scientific programs and chief science advisor for [NOAA’s Fisheries Service](#). “These emissions are being absorbed into the oceans with potentially catastrophic effects on life in our oceans. Some of the most vulnerable species – clams, crabs, lobsters, mussels, shrimp, and scallops -are also some of the most important economically to the United States, representing half of the \$4 billion annual value of all fish harvested in U.S. waters.”

The need for this national study, to be conducted by the National Academy of Sciences, was outlined by Congress in the reauthorization of the [Magnuson-Stevens Fishery Conservation and Management Act](#) in 2007.

Since the beginning of the industrial era, the oceans have absorbed about a third of all manmade carbon dioxide emissions released into the air. The ability of the oceans to absorb carbon dioxide emissions has reduced some of the harmful effects of heat-trapping greenhouse gases in the atmosphere and on land. But scientists are finding that the continued, increased absorption of these gases is altering the biology and chemistry of oceans in fundamental ways.

Absorption of large amounts of carbon dioxide alters the chemistry of the oceans by reducing the pH of seawater. With increasing carbon dioxide in seawater, shellfish and corals cannot absorb enough calcium carbonate to build strong skeletons and shells. The greater acidity slows the growth and even dissolves ocean plant and animal shells. The decline of these valuable species would drastically harm U.S. fisheries.

Any decline of these species would also have profound effects on entire ecosystems where shellfish and crustaceans provide food for many other species and coral provides habitat for fish. The effects of ocean acidification will potentially extend to coral reefs, marine plankton, other animals and plants.

The National Research Council of the National Academy of Sciences is putting together a panel of 10 to 12 scientists to undertake the 18-month study. The committee will be made up of scientists with expertise in chemical oceanography, paleoceanography, biological oceanography, physiology, marine ecology, resource economics, geochemistry, resource management, and ocean-climate modeling.

In the Gulf States

Dr. George F. Crozier Returns as Executive Director of the Dauphin Island Sea Lab

At an open conference call of the Dauphin Island Sea Lab's Board of Directors this morning, Dr. George F. Crozier was appointed Executive Director of the Dauphin Island Sea Lab, with a two-year minimal contract. The position of Executive Director was vacant due to the October 12th death of Dr. L. Scott Quackenbush, who had assumed the directorship in July 2008.

Dr. Crozier had retired from the Sea Lab in December 2007, after having served as Executive Director for 30 years. "The Board of Directors of the Dauphin Island Sea Lab is pleased that Dr. George Crozier once again is willing to lend his expertise and leadership to the Sea Lab," stated University of South Alabama President and DISL Board Chair V. Gordon Moulton. "He has a unique perspective on the mission of the Sea Lab as it relates to research and education associated with our vital marine resources." "We are delighted to have him back with us," President Moulton said.

Dr. Crozier stated, "We are saddened by the loss of Dr. Scott Quackenbush; his family's welfare is our priority right now." "This is not an opportunity I could have anticipated, or wanted," he continued. "But I understand the need to keep the operations and programs of the Sea Lab moving forward as smoothly as possible." "The mission of the Lab in its role as educator and steward of our natural resources is crucial, and I feel honored by the Board to have been chosen to help increase our knowledge of our coast as we progress into the 21st century."

Among the projects Dr. Crozier will helm is the Richard C. Shelby Center for Ecosystem-based Fisheries Management, the only National Marine Fisheries Service outfit in Alabama. The Center is scheduled to open in mid-2009.

Multi-Agency Workshop on "Technologies and Methodologies for the Detection of Harmful Algae and their Toxins"

From October 22nd-24th in St. Petersburg, Florida, over 40 individuals from around the country, as well as Canada and Europe, participated in a workshop co-sponsored by the Alliance for Coastal Technologies (ACT, <http://act-us.info>), the Cooperative Institute for Coastal Environmental Technology (CICEET, <http://ciceet.unh.edu>), and the Florida Fish and Wildlife Conservation Commission (FFWCC, <http://myFWC.com>). Participants represented a diverse cross-section of user groups, including technology developers/manufacturers, research scientists, funding agencies, and natural resource managers.

Harmful algal blooms (HABs) in marine and freshwater systems are increasingly common worldwide and are known to cause extensive ecological and economic damage. In U.S. waters, HABs are found in a growing number of locations and are increasing in duration and severity. This expansion in HABs has led to elevated incidences of poisonous seafood, toxin-contaminated drinking water, mortality of fish and other animals (including protected species), public health and economic impacts in coastal and lakeside communities, losses to aquaculture enterprises, and long-term aquatic ecosystem changes.

To address this critical environmental issue, several technologies and methodologies have been, or are being, developed to detect and quantify various harmful algae and their associated toxins in coastal waters. The workshop was conducted as an initial step in an ACT-led Performance Demonstration of Harmful Algae Detection Technologies and Methodologies and will build off of several prior HAB-related meetings and conferences. Both the workshop and demonstration will focus specifically on technologies and methodologies developed to detect/quantify harmful algal species and their toxins found along the Pacific, Gulf of Mexico, and Northeast Atlantic coasts of the US.

Workshop goals included the following: (1) review the current state of technologies/methodologies and user needs (involving short presentations), (2) develop strategies for the commercialization and transition to operations of new technologies/ methodologies, and (3) build community consensus on approaches and foci of the Demonstration activities (from laboratory inter-calibrations to field testing of detection technologies).

For additional information on ACT programs and services, or for a full description of the ACT-led Performance Demonstration of Harmful Algae Detection Technologies and Methodologies, please visit www.act-us.info. The full report from this latest workshop is anticipated to be publicly available online by late 2008.

Public and Private Entities Join Forces to Connect Communities

ST. AUGUSTINE— Recognizing Florida Greenways and Trails Month, the Florida Department of Environmental Protection's (DEP) Office of Greenways and Trails today joined developers, consultants and planners from both public and private sectors to highlight the importance of connecting communities through a statewide system of greenways and trails. Presented in conjunction with American Trails, Florida's First Coast Developers Forum on Trails and Greenways at the World Golf Village in St. Augustine was designed to showcase trail and greenway projects in private developments and inform professionals about the planning, design and benefits of trail systems.

"This Forum is an excellent opportunity for private developers to join the public sector and in connecting Florida's communities," said Jena Brooks, Director of DEP's Office of Greenways and Trails.

"Expanding Florida's greenways and trails network through strong private and public partnerships not only benefits residents and environment, but also helps boost the state's economy through eco-tourism." The economic and environmental benefits of greenways and trails were two important event themes.

According to the National Association of Homebuilders, trails are the most desirable community amenity for prospective homebuyers when choosing a place to live. In addition, studies cited by the National Recreation and Parks Association have also shown that having homes with a closer proximity to greenways and conservation corridors increases property values. Many communities now demand trails and conservation greenways because of the growing desire for access to natural resources and a connected system of trails.

Building on the success of the Orlando Developers Forum coordinated by DEP's Office of Greenways and Trails in 2005, today's forum focused on the Northeast region of the state. Today's event, which was opened by St. Johns County Commissioner Cyndi Stevenson, included presentations from developers and planners, and a keynote by Joe Louis Barrow Jr., CEO for The First Tee and Chairman of the Board for the Rails to Trails Conservancy.

For more information on Florida's greenways and trails, visit www.floridagreenwaysandtrails.com. To view the Governor's Greenways and Trails Month proclamation, go to www.dep.state.fl.us/secretary/news/files/2008GWTproclamation.pdf.

"No Student Left Inside" During Earth Science Week

TALLAHASSEE – This week is Earth Science Week and in keeping tune with this year's theme, the Florida Department of Environmental Protection (DEP) has ensured no student is "left inside" by immersing Columbia County children in science and nature with a LIFE (Learning in Florida's Environment) lesson. DEP's Ichetucknee Springs State Park hosted approximately 165 students from Fort White High School over the past two days for a LIFE field lab centered on the carbon-oxygen cycle, studying how trees "breathe" in carbon dioxide and "breathe" out oxygen.

"The LIFE program's mission coincides with Earth Science Week in that they both aim to engage students in outdoor activity that promotes mental and physical well-being while also strengthening environmental stewardship," said DEP's LIFE Director Greg Ira. "This lab not only addresses the importance of environmental protection, but provides students with hands-on, outdoor learning experiences that stimulate learning as well as personal development."

During the LIFE field experience, students were split into two groups and asked to examine a log, analyze their observations and collect interesting items found in the logs, like insects and fungus, to observe under a microscope. After completing the field lab, the students were able to identify different decomposing tree habitats, identify how the activities of organisms affect soil formation and understand how the process of decomposition helps create rich soil.

This year's national theme for Earth Science Week is: No Child Left Inside! A nonprofit organization representing more than 120,000 earth scientists, the American Geological Institute established Earth Science Week in 1998 to promote understanding of the earth sciences. Last year, the Earth Science Week celebration included participants in all 50 states and more than four countries. For information on Earth Science Week and associated activities visit www.earthsciweek.org.

Since 2004, the LIFE Program has brought more than 4,000 future scientists and stewards outdoors and into Florida's award winning state parks by participating in the program. The LIFE initiative seeks to establish a series of field-based, environmental-science education programs around the state. Each of the nine existing programs is a partnership between DEP and a local school district. The goal of each LIFE program is increased student achievement and teacher professional development in science, with the content and delivery varying from site to site. For more information on the LIFE program, visit www.dep.state.fl.us/secretary/ed/.

The first two-time Gold Medal winner honoring the nation's best state park service, Florida's state park system is one of the largest in the country with 161 parks spanning nearly 700,000 acres and 100 miles of sandy white beach. From swimming and diving in Florida's rivers and springs to birding and fishing or hiking and riding on natural scenic trails, Florida's state parks offer year-around outdoor activities for all ages. Battle re-enactments and Native American festivals celebrate Florida's unique history, while art shows, museums and lighthouses offer a window into Florida's cultural heritage. Florida's state parks are also home to the 2008 Best Beach in the nation, Caladesi Island State Park, located off the coast of Southwest Florida in Pinellas County. For a list of the activities and events offered in Florida's state parks, visit www.FloridaStateParks.org.

Rookery Bay Staff Protecting Threatened Sea Turtles

By Renee Wilson

Three species of sea turtle are known to inhabit the waters of Southwest Florida. Kemp's ridley (*Lepidochelys kempii*) and Atlantic green (*Chelonia mydas*) turtles are both listed federally as endangered species, and the loggerhead (*Caretta caretta*) is listed as a threatened species.



Green Sea Turtle

Loggerhead turtles live in the warm waters of the Atlantic Ocean and Gulf of Mexico and are relatively common along southwest Florida beaches. They feed on mollusks, crabs and jellyfish, and can reach weights between 300 and 500 pounds. Female loggerheads come ashore to lay eggs on Florida beaches each summer (May through August). Loggerhead populations are decreasing worldwide due to loss of nesting habitat, predation of eggs by raccoons and other animals, ingestion of floating trash, and entanglement in fishing line or other marine debris. Rookery Bay National Estuarine Research Reserve works in cooperation with U.S. Fish & Wildlife Service, Collier County Environmental Services and the Conservancy of SW Florida to preserve threatened

sea turtles. Reserve staff and volunteers patrol the beaches of Sea Oat Island, Cape Romano, Kice Island, and other islands in the Ten Thousand Islands five days a week during nesting season to locate nests. Since 2005, monitoring efforts have been expanded to include placement of cages over nests to protect eggs from predation by raccoons.

“It’s amazing how quickly a nest can be destroyed,” said Greg Curry, an environmental specialist responsible for caging efforts in Rookery Bay Reserve. “If we don’t cage a nest the morning after the eggs are laid, a nearby raccoon will dig right in.”

Each nest contains between 80 and 120 eggs. After roughly 60 days, baby turtles emerge under the cover of darkness and crawl to the water, swimming until they reach relative safety in seaweed beds before being swept away on currents across the sea. Resource managers monitor each nest, documenting the date laid, date hatched, and number of hatchlings. Although cages cannot protect nests from inundation by storm events or fire ant predation, the incorporation of caging efforts has increased nesting success in the Reserve tremendously. As of August 1 this year, 77 nests were caged at the Cape Romano complex and 69 nests in the Ten Thousand Islands.

Prior to the arrival of a series of tropical storms and hurricanes, 21 nests hatched and 1,400 hatchlings had made their way into the Gulf. Of the remaining nests, many that would have succeeded were inundated by Tropical Storm Fay, which made landfall at Naples, and Hurricanes Gustav and Ike which passed nearby, creating significant waves and strong tides. Many cages were buried in sand or ripped out and washed up over the dune. Unfortunately, only five nests survived these events.

Renee Wilson is Research Translator for Rookery Bay National Estuarine Research Reserve and this story originally appeared in the NERRS News Summary, Fall 2008.

Harrison County to Receive \$1 Million Federal Grant for Debris Removal

[» More Information on Mississippi Hurricane Gustav](#)

LONG BEACH, Miss. -- Harrison County has been approved for a \$1,053,506 federal grant to help pay the cost of removing and disposing of vegetative debris strewn by Hurricane Gustav along Harrison County's beachfront, the Federal Emergency Management Agency and Mississippi Emergency Management Agency announced this week.

The grant, under FEMA's Public Assistance (PA) program, is to cover the eligible cost of removing an estimated 84,910 cubic yards of debris along the county-maintained beach. The grant will be on a cost-sharing basis with the federal share being 75 percent and the remaining 25 percent to be shared by the state and local governments. Total projected cost of the project is \$1,404,675.

The debris will be hauled to Pecan Grove Landfill, Advance/Firetower Landfill and Coastal Recycling/Advance Landfill.

FEMA's PA program awards grants to assist the state, local governments and certain private nonprofit organizations with their recovery from disasters. Specifically, PA provides assistance for debris removal, emergency protective measures and permanent restoration of public infrastructure. The federal share of these expenses typically cannot be less than 75 percent of eligible costs.

FEMA obligates funding for these projects; however, the state administers the Public Assistance program. Following the state's review of the project and upon receipt of appropriate documentation, the state will provide funds to the county on a reimbursable basis.

Mississippi DMR Signs Educate Public on Crab Trap Theft

Biloxi, Miss – Theft of crabs and crab traps is often a heavy monetary blow to Mississippi fishermen who make their living legally providing the public with delicious blue crabs. Theft can also be disheartening to the recreational crabber who looks forward to checking his or her crab traps after a long day at work or school.

With this in mind, the Mississippi Department of Marine Resources (DMR) Shrimp and Crab Bureau has been actively notifying boaters that crab trap theft will not be tolerated and is placing specially made signs at boat ramps along the coast to remind the public that it is illegal to disturb another person's crab trap. First offenders can be fined up to \$500 for taking crab traps or pots or removing crabs from traps or pots not specifically licensed or permitted to them.

“So far, we have placed a total of 37 signs at various public and private boat launches throughout the three coastal counties of Mississippi” said DMR Fisheries Scientist Rick Burris. “We are hopeful this will help reduce the number of incidents we have.”

The Mississippi Department of Marine Resources is dedicated to enhancing, protecting and conserving marine interests of the state by managing all marine life, public trust wetlands, adjacent uplands and waterfront areas to provide for the optimal commercial, recreational, educational and economic uses of these resources consistent with environmental concerns and social changes. Visit the DMR online at dmr.ms.gov.

Mississippi Coastal Cleanup Nets 2,625 Bags of Trash



Pat Davis manages a hardworking crew in front of Old Town. Photo: Ellis Anderson

Boaters and land-based volunteers scoured Mississippi's beaches, islands and waterways picking up marine debris at more than 50 designated cleanup sites during the 20th annual Mississippi Coastal Cleanup, part of the International Coastal Cleanup—the world's largest single-day volunteer effort to clean up the marine environment. In just three hours, more than 2,224 volunteers picked up 2,625 bags of trash along 173 miles of Coastal waterways in Hancock, Harrison and Jackson counties and the Barrier Islands during the Mississippi Coastal Cleanup. The cleanup is organized by the Mississippi Department of Marine Resources and Mississippi Marine Debris Task Force.

Volunteers collected 40,131 pounds of trash—that's more than 20 tons of marine debris—including five large rubbish trucks full of marine debris too large to fit in trash bags, such as the car door and chair at Hiller Park. Other items collected were: a vacuum, television, abandoned house boat, a toilet tank, tires, lawn mower, shards of Native American pottery, two tents, a boat door, thousands of cigarette butts, an unused military silhouette target, a tennis shoe with oysters growing on it, a plastic children's swimming pool and two \$20 bills.

There was a cat entangled in fishing line reported at Davis Bayou in Ocean Springs, which was released apparently unharmed. In addition, there were 10 reported animal entanglements including 4 blue crabs in a derelict trap, snake in netting, two birds, two turtles, and a fish. The most peculiar item reported was a Styrofoam leg found at the beach near Rodenberg Avenue in Biloxi. Although rough seas and a small craft advisory prevented many of the 400 boaters who had signed up to clean the barrier islands from participating on cleanup day, more than 70 volunteers cleaned West Ship and East Ship islands, including the DMR Fisheries Dive Team, who on Friday cleaned East Ship and conducted an underwater cleanup of the pier at West Ship Island.

The Mississippi Coastal Cleanup, which was originally scheduled for the third Saturday in September in conjunction with the International Coastal Cleanup (ICC), was postponed to Oct. 18 due to Hurricanes Gustav and Ike. During the ICC, hundreds of thousands of people across the world spend three hours combing the beaches and waterways to pick up trash that pollutes our waters, harms marine life, hampers tourism and poses health risks to beach-goers. During last year's ICC about 378,000 volunteers worldwide removed debris from more than 33,000 miles of shoreline spanning 76 different nations. They collected 6 million pounds of debris.

About 60 percent of the debris found during the 2007 Mississippi Coastal Cleanup came from shoreline and recreational activities such as beach picnics, festivals, sporting events, and general littering. The source of most debris is human activity.

"Man-made debris in our marine waters poses serious threats to marine wildlife, navigation and our communities," said Lauren Thompson, state coordinator of the Mississippi Coastal Cleanup and public relations director for the Mississippi Department of Marine Resources. "Most of the trash in our waterways in Mississippi and worldwide comes from land-based activities."

The mission of the International Coastal Cleanup is to remove debris from shorelines, bayous, bays, rivers, waterways and beaches; collect valuable information on the amount and types of debris collected; educate people on the issue of marine debris; and use the data collected to affect positive change. Volunteers clean beaches and collect information on what they find, using the International Coastal Cleanup Data Card, so that sources of marine debris can be targeted for education or pollution prevention campaigns. State coordinators mail the data cards to the Ocean Conservancy in Washington, D.C. where the data is tabulated. Over the years, data from the cleanups have been used to enact local, state, national, and even international legislation and agreements.

“Thousands of volunteers donated their time on a Saturday morning to come out and clean up the shoreline, islands and marine waters of South Mississippi, sharing in a worldwide effort to make our oceans and waterways safer and healthier for people and wildlife, and free from the hazards of marine debris,” Thompson said. “This was a massive team effort and its success was due to the hard work of the Department of Marine Resources staff, Mississippi Marine Debris Task Force members, cleanup coordinators, zone captains, volunteers and the generosity of our sponsors.”

Audubon Aquarium Designated a Coastal Ecosystem Learning Center

(New Orleans, LA) – Today the Audubon Aquarium of the Americas, one of the country’s pre-eminent Aquariums, was designated the 22nd Coastal Ecosystem Learning Center (CELC) by Coastal America, an office of the White House charged with protecting the Nation’s vulnerable coastal ecosystems. The designation was presented by the Honorable John Paul Woodley, Jr., the Assistant Secretary of the Army (Civil Works).

The Learning Centers are selected to serve as regional educational centers that work closely with the United States’ federal partners to educate the public about the value of coastal resources. The Audubon Aquarium of the Americas, located on the Mississippi River in downtown New Orleans, was devastated by Hurricane Katrina, with severe damage to the roof, and Entergy IMAX Theatre. Many of the animals were lost, and those that survived were evacuated to other aquariums until the facilities could be restored. With the help of other Aquariums around the country, and hundreds of volunteers, donations, and tremendous support from other marine centers around the country, it reopened on Memorial Day in 2006 as a world-class public attraction. In addition to its unique marine exhibits, the Aquarium offers education with a conservation message, encouraging the public to preserve and protect Louisiana’s – and the Nation’s – precious natural resources.

Bryon Griffith, Director, Gulf of Mexico Program, U.S. Environmental Protection Agency and Chair of the Gulf of Mexico Governors’ Alliance Federal Working Group led the effort to designate the Aquarium as a CELC. “As a Coastal Ecosystem Learning Center, the Audubon Aquarium of the Americas will join a network of aquariums delivering a strong public message about the importance of our coastal resources. The Coastal America Partnership created this innovative network so that younger citizens, as future stewards of our coasts, can better understand how human activities affect the environment along our shorelines,” stated Griffith.

The Gulf of Mexico Alliance is a collaboration among the Gulf Coast States and federal partners to take concerted action protecting Gulf ecosystems. In the Alliance Action Plan published in 2006, the Gulf State Governors committed to designating six CELCs across the Gulf and in the Mexican State of Veracruz, by 2008. With today’s event celebrating the CELC status of the Audubon Aquarium of the Americas, that goal is fulfilled, allowing for even greater collaboration in the region to work towards preserving the Gulf’s ecosystems through coastal marine education.

The Honorable John Paul Woodley, Jr., welcomed the Audubon Aquarium into the Coastal America family and applauded the work of the Gulf of Mexico Alliance. "Today marks a significant milestone in our joint efforts to preserve, protect and restore the coastal and marine environment of the Gulf of Mexico. I am pleased with the addition of the Audubon Aquarium of the Americas into the Coastal Ecosystem Learning Center network, and I appreciate the efforts of the Gulf of Mexico Alliance in achieving this important milestone," Woodley said. "Lifelong education remains an essential component to maintaining healthy ecosystems in the Gulf Region. Coastal America, through its CELC program, seeks to encourage and support community efforts that promote good stewardship of our coastal resources, and we are thrilled that the CELC network now includes the Audubon Aquarium of the Americas."

The Coastal Ecosystem Learning Centers network is committed to providing support for the Aquarium's new and existing programs. Representing the CELC network at the event was Tom Schmid, President and CEO of the Texas State Aquarium located in Corpus Christi, Texas. Mr. Schmid welcomed the Audubon Aquarium of the Americas into the Learning Center network, noting that "As key centers for education and conservation, aquariums in the Coastal Ecosystem Learning Center network serve to connect communities to the ocean and inspire respect and stewardship. We must all work together to protect our one ocean and one planet. We are especially excited that with the addition of the Audubon Aquarium of the Americas, we now have a Gulf-wide network that can work collaboratively to promote awareness of Gulf of Mexico issues."

Ron Forman, President and CEO of the Audubon Nature Institute, was very pleased to accept the official designation from Coastal America. "By engaging our visitors with animals and habitats that replicate coastal and ocean areas, and special programs focused on these areas, we open their eyes to the wonders of these ecosystems and help them understand that everyone, regardless of where they live, benefits from the vast resources they hold," says Audubon Nature Institute President and CEO Ron Forman. "By fostering appreciation and understanding in this way, we help power conservation."

Virginia K. Tippie, Director of Coastal America, stated, "The Coastal America partners look forward to working with the Audubon Aquarium of the Americas in sharing information and technical expertise about our coasts and oceans. The Learning Center network provides a tremendous opportunity for us to transform national and regional information into effective messages and programs which the aquariums and museum network do so adeptly."

Louisiana CPRA Chairman Highlights the Signing of 100-Year Flood Protection Agreement

BATON ROUGE - Today, Coastal Protection and Restoration Authority Chairman Garret Graves announced ongoing cooperative efforts between the state and the U.S. Army Corps of Engineers to build 100-year hurricane protection for the New Orleans area along with additional wetland restoration efforts. Graves highlighted the signing of a \$3.85 billion project partnership agreement with the U.S. Army Corps of Engineers to continue work on the Lake Pontchartrain and Vicinity (LPV) protection system, which comprises more than 120 miles of levees, floodwalls, pump stations and floodgates on the east bank of the Mississippi River.

According to the agreement, the federal government alone will provide \$1.59 of the \$3.85 billion. The state will pay 35 percent of the remaining \$2.26 billion as its cost share for the system, which provides protection to parts of Orleans, Jefferson and St. Bernard Parishes. Garret Graves also discussed the

ongoing efforts to build a system of flood gates and walls on the Inner Harbor Navigation Canal (IHNC) designed to protect eastern areas of New Orleans and St. Bernard Parish from storm surge flooding.

The IHNC project will block storm surges from threatening area homes and businesses by using floodgates on the Mississippi River Gulf Outlet (MRGO), Gulf Intracoastal Waterway (GIWW) and Bayou Bienvenue as well as a floodwall that spans the area between the gates. Surges from these waterways have been blamed for the inundation of eastern New Orleans and St. Bernard Parish during Hurricane Katrina.

The IHNC project is expected to cost in excess of \$675 million, making it the largest fully-funded civil works design-build project in the Corps' history. "This project is absolutely essential to providing flood protection to the city of New Orleans and St. Bernard Parish," Graves said. "The floodwalls along the IHNC are the weakest link in the chain of this storm protection system. We saw them threatened again this past summer, especially during Hurricane Gustav. We will do all we can to make sure this project is built as quickly, efficiently and effectively as possible."

The state signed a project partnership agreement with the Army Corps of Engineers, New Orleans District, in April of this year to help the federal government acquire the land necessary to build the project. Additionally, Graves highlighted five major coastal restoration projects designed to restore and build wetlands east, south and west of the New Orleans area, the bulk of which will be paid for by using state-only funds.

The projects discussed included:

- A \$49 million freshwater diversion at Violet in St. Bernard Parish designed to enhance the sustainability of wetlands near Lake Borgne and the MRGO.
- A \$42 million project to build approximately 50,000 feet of rock breakwaters in the area bounded by the MRGO, GIWW and Lake Borgne known as the Orleans Land Bridge.
- A \$22 million project to build and enhance the eastern shoreline of Lake Borgne near the Biloxi Marsh.
- A \$25.5 million project to dredge sediment from the Mississippi River in Plaquemines and Jefferson Parishes near Bayou Dupont to create nearly 500 acres of marsh with the equipment left in place to use for future marsh creation projects.
- A more than \$70 million effort to build a long-distance sediment-delivery pipeline from the Mississippi River to transport sediment to build marshes and enhance natural ridges in Plaquemines, Jefferson and Lafourche Parishes.

For more information, please contact CPRA Information Officer Chris Macaluso at (225) 342-3968 or by email at chris.macaluso@la.gov.

Louisiana CPRA and Corps of Engineers Sign Agreement on MRGO Closure

BATON ROUGE -- Coastal Protection and Restoration Authority and U.S. Army Corps of Engineers officials reached agreement on a memorandum of agreement (MOA) late Wednesday, October 29 to begin work on a structure designed to close the Mississippi River Gulf Outlet in St. Bernard Parish by the beginning of the 2009 hurricane season. The closure will consist of a rock dike spanning the width of the decommissioned shipping channel at the Bayou LaLoutre ridge near the town of Yscloskey in eastern St. Bernard Parish. Corps officials have vowed to have the closure built by June 2009.

"This agreement is extremely important to the effort to bring hurricane protection to vulnerable areas of St. Bernard and Orleans Parish," said Authority Chairman Garret Graves, who negotiated the document on behalf of the CPRA.

The MOA clearly defines the roles and responsibilities of both the CPRA and the corps during the construction phase of the project. According to the 2007 Water Resources Development Act, the closure of the MRGO is to be paid for at full federal expense. The CPRA has volunteered to use its resources to acquire adjacent lands to expedite the completion of the project, according to CPRA Chairman Garret Graves. "I want to be clear in saying that Louisiana is volunteering to use its money and resources to help the corps acquire lands and build this project because its closure is long-overdue," Graves said.

The MRGO is a controversial shipping channel that runs from the Inner Harbor Navigation Canal in New Orleans through St. Bernard Parish and into Breton Sound which is adjacent to the Gulf of Mexico. Its construction began in the 1950s and it was designed as an alternative route to the Mississippi River for deep draft navigation to reach New Orleans from the Gulf of Mexico.

However, the high volume of shipping traffic envisioned when it was designed was not realized and the channel has hastened wetland destruction in St. Bernard Parish by allowing saltwater intrusion into areas that were once fresh water and brackish marshes and swamps. Wetland scientists and local officials have blamed the MRGO for acting as a conduit for storm surges that contributed to the flooding of St. Bernard Parish and parts of eastern New Orleans during Hurricane Katrina in 2005.

For more information, please contact CPRA Information Officer Chris Macaluso at (225) 342-3968 or by email at chris.macaluso@la.gov.

Louisiana Gov Bobby Jindal Issues Order to Speed Construction of Key Hurricane Protection Project

BATON ROUGE -- Louisiana Governor Bobby Jindal issued an executive order Thursday, October 23 that will help to expedite the U.S. Army Corps of Engineers' effort to build an essential hurricane protection project for eastern New Orleans and St. Bernard Parish.

Executive Order No. BJ 2008-105 (please click here for a copy of the executive order) will allow the U.S. Army Corps of Engineers to access the necessary land to begin construction of the Inner Harbor Navigational Canal hurricane surge barrier in the area known as the "Golden Triangle," near the confluence of the Gulf Intracoastal Waterway and the Mississippi River Gulf Outlet.

Coastal Protection and Restoration Authority Chairman, Garret Graves said, "the completion of IHNC interim protection for 2009 and permanent surge barrier protection for 2011 will address the Achilles' Heel of the New Orleans area protection system. This executive order is critical to keeping this project on schedule and protecting the New Orleans area".

According to the Corps of Engineers, "the purpose of the project is to provide a comprehensive, integrated protection system that would reduce the imminent and continuing threat to life, health and property posed by flooding from hurricanes and other tropical storm events."

Advanced measures for the system of floodwalls and floodgates will be in place by the beginning of the 2009 hurricane season and will provide an increased level of hurricane protection while the final features of the project are being built, according to the Corps. The project is designed to block hurricane storm

surge from Lake Borgne from entering the Industrial Canal and threatening areas that were inundated during Hurricane Katrina in 2005 and threatened again by Hurricanes Gustav and Ike in September.

"Hurricane Katrina pushed 28 feet of water into this channel opening -- causing failure of the floodwalls. Storm surge from Hurricane Gustav threatened the IHNC walls once again. The money is in place, Congress has given the Corps the go-ahead, this project needs to be built," Graves said.

The CPRA signed a project partnership agreement with the Corps of Engineers April 1, 2008 that allows the project to move forward. Corps of Engineers officials provided detailed information on property acquisition to the CPRA on Wednesday, October 22. The Corps will need access to the land as early as Friday, October 24 to begin surveying and laying the groundwork for the project's construction.

"This executive order is of the utmost importance to the efforts by both the State of Louisiana and the Corps of Engineers to provide hurricane protection to the areas of New Orleans and St Bernard Parish that were devastated by Hurricane Katrina and threatened again this year," Graves said. "We cannot afford any delays in the building of this essential protection structure."

All landowners will be compensated for the use or acquisition of their property in accordance with Corps of Engineers' guidelines. For more information, please contact Coastal Protection and Restoration Authority Information Officer Chris Macaluso at 225-342-3968 or by email at chris.macaluso@la.gov.

Basin Program Online at DNR Has New Look and Info

The Louisiana Department of Natural Resources has overhauled and re-launched its Atchafalaya Basin Program website giving it a new look with new tools, making it a more valuable resource for using and learning about the Basin. The redesign of the site - available online at <http://dnr.louisiana.gov/atchafalaya> - was spurred in part by the new and proposed changes to the way Basin projects are developed, chosen, and funded.

The site design not only includes new visual elements that better reflect the unique character of the Basin, but has functions that make the site of good use to people working, fishing or exploring the Basin. One of the new features of the site is the inclusion of a link to the U.S. Geological Survey's web-based tracking of water levels in the basin. Along with water levels, the site also has up-to-date weather for points in and around the Basin area. The new look of the site also includes links to parishes and tourism groups with ties to the Basin area and links to sportsman's web sites.

As additional work is done to the web site, it will be the location to find notices of meetings important to the Basin, such as the Atchafalaya Basin Research and Promotion Board's regular meetings and the upcoming mid-October series of public meetings to allow citizens and groups to review existing projects and offer new project ideas to improve water quality and reduce sediment in the Atchafalaya Basin. The public meetings are part of the newly established process for ecosystem restoration in the Basin, including new elements of transparency in planning and efficiency in developing water quality improvement and sediment reduction projects.

The number and size of projects, as well as the length of time needed for completion, will depend on funding - which could be boosted if state voters approve Constitutional Amendment No. 4, re-directing up to \$10 million in funds from existing state severance taxes per year to basin projects. The amendment would neither create a new tax nor raise any existing taxes.

The Basin board will submit a draft of its annual plan to the Coastal Protection and Restoration Authority, which will check the plan for consistency with the state's Master Plan for Coastal Restoration. Constitutional Amendment No. 4 would, in part, re-direct up to \$10 million a year in existing severance tax dollars from state-owned land in the Basin to pay for projects through the Basin conservation fund. If passed, the amendment would require that 85 percent of that money go to pay for water quality and sediment reduction projects within the guide levees. The other 15 percent could be used for projects to enhance recreation, tourism and other projects consistent with the master plan for the Basin.

Louisiana Recovery Authority Moves Forward on Planning for Recovery Funding for Gustav, Ike

Board approves disposition plans for thousands of Louisiana Land Trust properties

BATON ROUGE, La. - The board of the Louisiana Recovery Authority today voted to approve a preliminary plan outlining the concept for spending anticipated federal funds for recovery from hurricanes Gustav and Ike, directing LRA and Office of Community Development staff to seek input from local leaders and write a full plan to take back to the board in November and for federally required public comment.

The plan would allocate pools of funds to parishes for infrastructure and housing repair programs to be administered with local discretion and state oversight.

"Today's action starts the ball rolling on Louisiana's plan for recovering from Gustav and Ike, one which focuses on letting local governments set priorities for housing and infrastructure repair," said David Voelker, chairman of the LRA's board. "The next few weeks will focus on discussions with local leaders and input from the public that will refine our approach to ensuring that Louisiana rebuilds safer and stronger than before."

[Click here](#) to view the preliminary draft of Louisiana's plan. The state of Louisiana will dedicate its allocation of federal Community Development Block Grant (CDBG) funds allocated for recovery from hurricanes Gustav and Ike to repair damaged housing and infrastructure, elevate and buy-out flooded homes and address unmet economic development, agriculture and fisheries needs. The plan will also include the possible use of funds for hurricane protection systems in coastal areas.

For infrastructure and housing programs, the state will allocate dollars to each affected parish based on its level of damage to housing and infrastructure according to data from federal, state and local agencies. Using this allocation, the parishes will determine which housing and infrastructure options they wish to pursue, based on local priorities for recovery, and then submit a plan to the state for approval.

"The state's top recovery priorities are repairing homes lost in the storms and rebuilding our damaged infrastructure to a safer standard," said LRA Deputy Director Robin Keegan. "But each of our parishes faces unique circumstances after the storms and our people will be best served by programs that account for these factors. So we will present a 'menu' of options for how parishes can address housing and infrastructure damage and allow local leaders to select a combination of programs and administer them locally, rather than out of central offices in Baton Rouge."

Preliminary damage estimates from Gustav and Ike in Louisiana show:

- Approximately 12,000 homes flooded;
- Agricultural losses total approximately \$750 million;
- Infrastructure damages total more than \$1 billion;

- Homes suffering some level of damage total 150,000 to 300,000;
- K-12 and secondary educational facilities received \$100-\$150 million in damages; and
- Business losses total approximately \$2.5-\$5 billion.

Louisiana anticipates that its damage level could garner the state as much as \$1 billion in CDBG funding for the disasters. Congress approved the funds last month in a disaster relief measure signed by President Bush on September 30, 2008. The bill gives HUD until November 30, 2008, to push one third of the money to the states. To use CDBG funds, the state first must publish an Action Plan outlining the use of the funds. The board's vote today allows LRA staff to design programs that fit within the preliminary plan, publish the Action Plan for public comment and then return it for approval by the LRA's board in November.

The board heard updates from officials from Cameron and Terrebonne parishes at its meeting today. In addition, LRA staff will meet with parish leaders to discuss the state's planned CDBG programs and incorporate this input into the Action Plan that is ultimately brought back to the board for approval. Staff will present the Action Plan to the board in November to go to public comment and then send it to HUD in December after legislative approval. Subsequent programs and programmatic changes that HUD deems major must be approved as "Action Plan Amendments" through the same process.

Louisiana Land Trust Plans

In other action, the board approved Louisiana Land Trust property disposition plans for Cameron, St. Bernard and Terrebonne parishes, which account for more than 3,500 of the properties owned by the organization. The LLT is the entity that temporarily holds, maintains and insures properties the state purchases through the Road Home when homeowners select "option 2" or "option 3" under the program. The LRA board must approve parish plans for using the properties before their titles can be transferred to the parishes for redevelopment.

As of the end of September, the LLT owned 8,701 such properties, including 89 in Cameron parish, 3,873 in St. Bernard parish and 36 in Terrebonne parish.

Cameron Parish has identified parcels of land it will use for the purpose "of enhancing economic development, providing housing, preserving recreation/open space and ancillary initiatives." The remaining properties the parish will offer the previous owners the right of first refusal. After the 10-day response period, properties will be offered to adjacent property owners through a "Lot Next Door" style program. If there is no interest by adjacent property owners the property will be sold by public auction.

St. Bernard Parish will dispose of properties using five strategies:

- meeting public purpose use related to green space, recreation and draining;
- sale to adjacent property owners (Lot Next Door);
- meeting community identified neighborhood development priorities;
- preserving the historic character of the Friscoville/Arabi area; and
- sale to private entity for the development of new and affordable housing.
- Terrebonne Parish is working to identify parcels whose reuse will address parish needs for:
 - public improvements and public facilities;
 - flood management;
 - workforce and elderly housing;
 - enhancing neighborhood;
 - stability (Lot Next Door); and
 - green space and spaces of ecological value.

The board had previously approved plans for Orleans and Jefferson parishes. The state received final approval on its plans from HUD in September. The state is completing federally required environmental reviews on LLT properties and signing cooperative endeavor agreements with the parishes in preparation for transferring titles for the properties to the parishes. To download documents and presentations from the meeting, [click here](#).

Texas Partners With Aidmatrix Network to Manage Disaster Relief

» [More Information on Texas Hurricane Ike](#)

AUSTIN, Texas -- The State of Texas and the Aidmatrix Network for Disaster Relief have partnered to better manage unsolicited donations and volunteers in response to Hurricane Ike. The Aidmatrix Network, a national disaster relief coordination system funded by the Federal Emergency Management Agency (FEMA), connects state and local governments with donors, State Voluntary Organizations Active in Disaster (VOADs), National VOAD, and FEMA through web-based tools that reduce paperwork and allow for easy information sharing.

This private/public partnership significantly reduces the waste and inefficiencies associated with spontaneous donations of goods, services and people's time. The Texas response web site, www.texasresponds.org, is the central site for information on how to make donations in support of Texas relief efforts. Donors can use the web site to determine exactly what is needed, by whom and where, and then respond with offers of goods, services or money.

Information is collected electronically which, in turn, allows the state to easily communicate with the members of the state's VOAD group. The end result is that more quality donations can be processed and delivered to the hurricane victims more efficiently. Examples of donations that have been accepted through the Texas portal in response to Hurricane Ike are:

- \$175,000 in cleaning supplies and 50 toilets accepted by Convoy of Hope; and
- \$41,000 of Quantum shirts accepted by Adventist Community Services.

In addition, donations of heater meals, sand bags, diesel fuel, house products and bottled water have not been accepted by any organization yet. The Aidmatrix Foundation, Inc. technology helps enhance participation, amplify contributions, and accelerate results for humanitarian relief. More than 35,000 corporate, nonprofit and government partners leverage its solutions to mobilize more than \$1.5 billion in aid annually worldwide. The donated goods, money and services impact the lives of more than 65 million people. Aidmatrix is a 501(c) 3 nonprofit organization with headquarters in Dallas. Its web site is www.aidmatrix.org.

Patterson Acts to Protect the Galveston Seawall

AUSTIN — Jerry Patterson, Commissioner of the Texas General Land Office, today announced an emergency beach renourishment project to protect the Galveston Seawall. “This emergency project will protect the city’s greatest asset,” Patterson said. “The Texas General Land Office is going to save what saved Galveston.”

The emergency project is expected to cost at least \$6 million. The Galveston Seawall has protected the city since 1904, but is supported by timber underpinnings that, if washed out by a storm surge, could collapse. Failure to act now could jeopardize the stability of the seawall, Patterson said.

“We’ve partnered with the Park Board of Trustees of the City of Galveston for this project and we’re moving fast,” Patterson said. “By next summer, the seawall will be protected.”

The emergency project will place sand on Galveston beaches from 10th Street to 61st Street. Work should begin by December, with trucks hauling in sand from a source adjacent to Apfel Park. The project should be completed before the next sea turtle nesting season begins in March. Patterson said the seawall project will protect hundreds of millions of dollars worth of public infrastructure; from roads, water and sewer systems to the homes and businesses that make up the Galveston tax base. “This project must begin now, to patch things up after Hurricane Ike, but there’s much work left to be done,” Patterson said.

Patterson Listens to Local Officials, Amends Post-Ike Emergency Rules

AUSTIN — Jerry Patterson, Commissioner of the Texas General Land Office, today amended post-Hurricane Ike emergency rules to address the concerns of local officials working to recover from the storm. “These changes come from the ground up,” Patterson said. “We’ve been on the coast, listening to both property owners and local authorities, and these changes to the emergency rules reflect their concerns.”

Patterson added new rules to allow coastal property owners to use clay or a sandy clay mixture to fill voids beneath the footprint of residential structures. Local governments may also use clay or sandy clay fill to protect exposed public infrastructure, such as roads and sewers.

“Property owners and local governments need to shore up their investments but beach-quality sand is in short supply,” Patterson said. “Allowing limited use of clay or sandy clay fill is needed to address an immanent threat to public health, welfare and safety.”

Patterson also added new emergency rules that allow property owners to enclose an area below their house if the house’s foundation is intact. This will allow property owners to better protect their property. Patterson also added new emergency rules to clarify authority on utilities reconnection procedures. The additions modify the provision of the post-Hurricane Ike emergency rules to clarify that emergency stabilization and repair does not include reconnection to sewer, water and electrical services. Reconnection to such utilities may be made in accordance with other applicable law or local ordinances.

The emergency rules are effective for 120 days and are only applicable in coastal counties with local dune protection and beach access plans within the counties of Nueces, Matagorda, Brazoria and Galveston. The new sections are adopted on an emergency basis under the Texas Natural Resources Code. The Texas General Land Office is the state agency responsible for overseeing the Texas coast, erosion control and response as well as oil spill prevention and recovery. The Land Office also oversees enforcement of the Texas Open Beaches Act, the Dune Protection Act and works to maintain healthy beaches.

Patterson authorized emergency orders the day Hurricane Ike struck the Texas coast allowing local governments to issue authorizations for emergency stabilization and repair of residential structures to eliminate threats to public health, safety and welfare. Under the rules, the normal permitting process will not apply. Emergency authorizations are valid for no more than 180 days after they are issued. Septic systems damaged by the storm may be authorized for repair by local governments under the emergency rules, as long as the system complies with all state and local on-site sewage storage facilities. To see the emergency rules, visit www.glo.state.tx.us.

Gov. Perry Requests Extension for Federal Assistance for Ike Recovery

Announces Texas Disaster Relief Fund Grants
October 21, 2008

AUSTIN – Gov. Rick Perry has requested that FEMA extend for 18 months its agreement to pay 100 percent of emergency protective measures and debris removal for Hurricane Ike. He also asked federal officials to adjust the federal cost share to 100 percent for all categories of public assistance and expand direct federal assistance and hazard mitigation for all counties included in the governor’s original emergency declaration. “Hurricane Ike did at least \$11 billion in damage to our state,” Gov. Perry said. “Texas deserves the same level of federal support and attention given to other states that have recently endured disasters.”

In his letter to President Bush, Gov. Perry noted that Hurricane Ike may be the costliest disaster in the history of Texas. To date, more than 700,000 households have registered for individual assistance and more than \$250 million has been disbursed to individuals.

In some cases regarding the local level costs of a disaster, the federal government will provide 75 percent reimbursement and the remaining 25 percent of costs must come from the pockets of the local jurisdictions. In his letter, Gov. Perry highlighted past instances where the federal cost share was adjusted to 100 percent reimbursement, including after the 2005 hurricane season in Louisiana and after Hurricane Andrew’s devastation in Florida. He emphasized that Texas be treated no differently in the case of Hurricane Ike as many communities will require time and assistance to recover from this devastating storm.

Gov. Perry also announced the initial disbursement of Texas Disaster Relief Fund grants totaling \$650,000. To date, the following funds have been distributed: Southeast Texas Food Bank (\$125,000); Catholic Charities of Southeast Texas (\$90,000); Houston Food Bank (\$75,000); Orange Christian Services (\$75,000); YMCA of Greater Houston (\$75,000); Catholic Charities of Houston (\$50,000); Southeast Texas Emergency Health Network (\$50,000); Texas Food Bank Network (\$50,000); Sabine Pass Emergency Organization for Disaster Relief (\$25,000); Some Other Place (\$25,000); Sam’s Club (\$10,000).

A definition of Public Assistance categories is as follows:

- Category A: Debris removal – clearance of trees and woody debris; building wreckage; sand, mud silt and gravel; vehicles; and other disaster-related material deposited on public and, in very limited cases, private property.
- Category B: Emergency Protective Measures – measures taken before, during and after a disaster to save lives, protect public health and safety, and protect improved public and private property.
- Category C: Roads and Bridges – Repair of roads, bridges, and associated features, such as shoulders, ditches, culverts, lighting and signs.
- Category D: Water Control Facilities – repair of irrigation systems, drainage channels and pumping facilities. Repair of levees, dams and channels. The US Army Corps of Engineers (USACE) and Natural Resources Conservation Service (NRCS) have primary authority for repair of flood control works.
- Category E: Buildings and Equipment – Repair or replacement of buildings, including their contents and systems; heavy equipment; and vehicles.
- Category F: Utilities – Repair of water treatment and delivery systems; power generation facilities and distribution lines; and sewage collection and treatment facilities.

- Category G: Parks, Recreational Facilities, and Other Items – Repair and restoration of parks, playgrounds, pools, cemeteries and beaches. This category also is used for any work or facility that cannot be characterized adequately by Categories A-F.

The governor issued his original reimbursement request on Sept. 13, noting that emergency work and recovery efforts had been impeded by flooding and power outages, and cleanup efforts were likely to be an ongoing effort. The reimbursement period is currently set to end on October 27. To view the governor's letter to President Bush and for more information on Texas' recovery efforts after Hurricane Ike, please visit <http://www.governor.state.tx.us>.

Gov. Perry Announces Eckels, Newby to Lead Hurricane Ike Recovery and Coordination Effort

October 15, 2008

AUSTIN – Gov. Rick Perry today announced that former Harris County Judge Robert Eckels and Brian Newby will lead a Hurricane Ike Recovery and Coordination Effort. Newby will step down from his current role as the governor's chief of staff to co-lead an effort involving residents, business leaders, and local and federal officials focused on ensuring Texas communities devastated by Hurricane Ike get the resources necessary to rebuild.

“There are a whole lot of moving parts involved in putting this area back together and it requires determined, focused leaders who can start immediately and guide the effort to a speedy conclusion,” Perry said. “Judge Eckels and Brian Newby have the right combination of experience, people skills and access to statewide leaders necessary to get the job done right and done quickly. I will miss having Brian as my chief of staff, but this job is that important to our state.”

While serving Harris County, Judge Eckels was instrumental in the area's preparation and recovery related to Hurricanes Katrina and Rita, working side-by-side with the state to get area residents the assistance they needed.

“Ensuring that the state fully recovers from the devastation of the storm is of paramount importance,” Perry said. “That is why I asked the highest ranking person on my staff and the former highest ranking official in Harris County to undertake this assignment—I want people to know that, when they raise a concern with Judge Eckels or Brian, they have my ear, too.”

Newby, Perry's former top lawyer for more than two years and chief of staff since July 2007, will work with Eckels to assemble working groups of county judges, mayors, business leaders and experts to fully assess and document the damage from Hurricane Ike, and to work with the Texas congressional delegation in seeking Texas' full share of federal aid.

The goal of this effort will be to gather input from all stakeholders in Southeast Texas, and make sure their voices are clearly heard in Washington with the ultimate goal of ensuring Texas is treated fairly when it comes to the rebuilding of the Gulf Coast.

“Texas learned a lot of helpful lessons from Rita that have helped us prepare for subsequent storms like Ike,” concluded Perry. “Unfortunately, one of those lessons came when the federal government promised to fund Texas' recovery from Rita at the same level as Louisiana after Hurricane Katrina, but delivered substantially less,” Perry added.

Biologists Assess Ike Impacts to Coastal Ecosystems

AUSTIN, Texas — Hurricane Ike's big storm surge caused hundreds of localized oil and hazardous materials spills that pose threats to fish and wildlife, and it pushed saltwater into upper coast freshwater wetlands that support migrating waterfowl and estuarine life. But ecological damage to coastal habitats may not be as widespread or severe as some had initially feared.

Texas Parks and Wildlife Department biologists and other experts have for days been assessing Ike impacts, starting with an aerial survey Sep. 15 when wildlife, coastal fisheries and state parks representatives made an airplane overflight of the upper coast. Since then, they've been assessing Ike's ecological effects in two main categories: pollution events and saltwater intrusion.

The week of Sep. 15, a Unified Command was set up in the Houston area to respond to the numerous spills caused by Hurricane Ike, comprised of the U.S. Environmental Protection Agency, U.S. Coast Guard, Texas General Land Office and Texas Commission on Environmental Quality. TPWD experts from the Natural Resource Trustee and Kills and Spills Programs worked to support the spill response effort by identifying threats to fish and wildlife and guiding cleanup activities.

So far, the spill Unified Command has assessed more than 230 pollution reports in affected coastal areas stretching from Houston-Galveston to Lake Charles, Louisiana. More than 100 of these sites are now being remediated, and the Unified Command has closed out another 121 of the total reported cases with no further action needed. The types of pollution involved include oil and diesel from boats and other sources, as well as a variety of industrial chemicals washed into waterways by flooding.

Most of the Ike-related spills turned out to be minor, according to Brandon Brewer, a Coast Guard public information officer with the Unified Command. "For those spills that are medium-sized, most have been contained," Brewer said. "Now the big thing is prioritizing the worst spots, and sending recovery teams out to start cleanup." He said the Unified Command would be continuing work for weeks at least.

Some of the worst spills caused by Ike are on the Bolivar Peninsula, where the brunt of the storm demolished houses and buildings, and game wardens worked search and rescue for days. Now, TPWD and other spill response team members are focused on sheens of oil coating the landscape in the High Island and Goat Island areas, where there is a significant concentration of oil and gas production facilities.

"We're evaluating multiple spills from two responsible parties in the High Island area," said Chip Wood, an assessment biologist with TPWD's Natural Resources Trustee Program. "About 3,000 acres there are affected by visible oil sheening and staining."

At High Island and other spill sites, authorities will first try to identify the "responsible party," the company or individual that operates the facility from which the spill came, and get them to pay for cleanup if possible. If that won't work, there are federal cleanup funding sources they can tap.

Wood said his team is coordinating with the TPWD Wildlife Division and the U.S. Fish and Wildlife Service to respond to other spills at the department's J.D. Murphree Wildlife Management Area and the Bessie Heights Marsh (Nelda Stark Unit) of the Lower Neches WMA, and also to spills at Anahuac, McFaddin and Sabine National Wildlife Refuges. He said close to 500 acres are affected by spills on the federal refuges, Bessie Heights is showing sheens and some oiling on about 2,000 acres, and about 1,200 acres are affected at Murphree WMA.

"We're getting concerned about these spills because migrating waterfowl will be arriving in late October," Wood said, referring to the millions of ducks and geese that return each fall from Canada to winter on the Texas coast. "We're working to monitor cleanup progress. If there's still black oil on the water as birds come in to roost, they can be oiled. Experience shows waterfowl will typically not avoid contaminated areas."

Authorities are advising people to call the National Response Center at (800) 424-8802 to report pollution or displaced hazardous materials. To report oiled or injured wildlife in areas affected by Ike, call the TPWD Law Enforcement communications dispatcher at (281) 842-8100.

But a more widespread problem than spills may face migrating waterbirds when they arrive in Southeast Texas. Saltwater from Ike's storm surge is threatening freshwater wetlands, one of Texas' most important wildlife habitats. "In the Galveston Bay area, Ike's long-term impacts to coastal marshes appears fairly negligible," said Jamie Schubert, a Coastal Fisheries Division marsh ecologist who is team leader for upper coast ecosystem assessment. "That area has mostly salt marshes, which all drained fairly quickly."

But it's another story for the Sabine Lake system marshes near Beaumont-Port Arthur, which are mostly freshwater and unused to high salinity. In recent decades, freshwater flow to these wetlands has already been reduced by industrialization along the Sabine River and the Intracoastal Waterway. At the storm's height, the tide gauge at the Neches River saltwater barrier showed water flowing upriver 30 times faster than the river was flowing downstream before the storm surge. Now, levees and other infrastructure built around area wetlands are slowing Ike's saltwater surge from draining.

"This hurricane may really be a pivotal factor that moves these freshwater marshes over to more saline type marsh," Schubert said. "Most plants here are used to freshwater, and once they die, that could affect the soil and lead to marsh loss. Increased marsh loss can affect the entire food chain. And that could have long-term impacts for fisheries production, including commercial and recreational species that use these marshes, such as red drum, white shrimp, and blue crab."

Elsewhere in Southeast Texas, the storm surge has also flooded tens of thousands of acres of coastal prairie. That saltwater "burn" is top-killing grasses and other plants. "What we really need is a good rain to flush out all the spill contaminants and saltwater," Schubert said. "The landscape is brown for miles around where storm surge has inundated all these plants that can't tolerate saltwater. Hopefully it will just top-kill plants and they'll come back from the roots, but that will depend on rainfall. If we get good rains this fall and winter, most of our southeastern coastal prairie ought to be able to come back strong."

For coastal habitats, there is at least one silver lining to Ike's storm clouds. The storm surge is also killing non-native plants that have invaded Texas and threatened native species in recent years, exotics like torpedo grass, water hyacinth, hydrilla, giant salvinia and common salvinia.

More than Half of Galveston Bay Boat Ramps Now Accessible

DICKINSON, Texas — For those anglers who have found a way onto Galveston Bay since Hurricane Ike passed through nearly a month ago, fishing reportedly has been better than average. "Our gill nets are still producing good catches of spotted seatrout and red drum, and the birds are working the bait schools in the bay," said Bill Balboa, Texas Parks and Wildlife Department's Galveston Bay ecosystem leader. "So fishing under the birds should be productive, too." The question is: how to get a boat on the water?

High winds, a powerful storm surge and tons of debris damaged or blocked almost all of the boat ramps around the Galveston Bay system in the days immediately following Hurricane Ike. Now, slightly more than half of those launch points are back in some semblance of working order.

"Approximately 67 of the 127 sites we have been regularly surveying are now accessible," Balboa said. "Some sites — especially bait camps — may take months to repair, and even for the sites we have listed as open, we recommend that anglers check with ramp owners and operators and exercise caution when launching, running the bay and fishing." Balboa said debris hazards are still a significant issue and that it is even possible that bay bottom topography has been altered by the hurricane. For a complete list of Galveston Bay-area boat ramps that are open or accessible as of Oct. 10, please visit the TPWD Web site.

Texans Welcome the 'Come-Back' Cranes

Mention great Texas comeback stories and some people will think of Staubach and Pearson and the Hail Mary pass that gave the Cowboys a victory over Minnesota in the 1975 play-offs. Texas Tech fans will cite the Red Raiders' record-breaking comeback win over the University of Minnesota in the 2006 Insight Bowl. But this fall Texans everywhere have a chance to be a part of what may be the most remarkable comeback story of all time.

In 1944 there were only 21 whooping cranes left in the world, with 18 of those spending that winter on the Texas coast. This fall, wildlife officials are hoping that as many as 285 whoopers will winter in Texas, bringing the worldwide population, including captive and experimental populations, to around 540. The Texas population, which winters in the coastal wetlands of Calhoun and Aransas counties near Aransas National Wildlife Refuge, should show an increase this year over the 266 whoopers wintering in 2007-08, thanks to a record 66 whooping crane nests in Canada this summer.

Rarely has any species experienced such a dramatic recovery, according to Lee Ann Linam, biologist in Texas Parks and Wildlife Department's Wildlife Diversity Program. "The outlook is often discouraging when any species reaches such a low population point, but whooping cranes had several things going for them," Linam says.

Linam notes that whooping cranes have a long life-span, up to 25 years, and, though they don't produce many young, the parental care that the adults provide ensures a fairly high survival of young. "These life history traits, combined with remote breeding grounds, protection from overharvest, and efforts by public and private landowners to conserve coastal wetlands in Texas have helped this magnificent bird to make a slow, but steady comeback," she says.

Texans can continue to play an important role in the return of the whooping crane. Starting in late October, whooping cranes will begin passing through Texas en route to their wintering grounds. The primary migratory path runs from north-central Texas southeast to the mid-coast region, often passing over areas such as Wichita Falls, Dallas-Fort Worth, Waco, Austin, Victoria, El Campo, Port Lavaca, and Rockport. Texans are asked to be on the lookout for whoopers and report their sightings.

Whooping cranes are the tallest birds in North America, standing over 4 feet tall. They are solid white in color except for black wing-tips that are visible only in flight and a small marking of black feathers and red skin on the head. They fly with necks and legs outstretched. During migration they often pause overnight to use wetlands for roosting and agricultural fields for feeding, but seldom remain more than one night.

They nearly always migrate in small groups of less than six birds, but they may be seen roosting and feeding with large flocks of the smaller and grayer sandhill crane. Whooping cranes are protected by federal and state endangered species laws, and Texans can help safeguard this national treasure by helping to prevent harm or harassment to whooping cranes. Anyone sighting a whooping crane is asked to report it to Texas Parks and Wildlife Department at 1-800-792-1112 x4644 or 1-512-847-9480. Sightings can also be reported via e-mail at leeann.linam@tpwd.state.tx.us.

Solar Power Makes Strides on Texas-Mexico Border

AUSTIN — Top state, federal and local officials gathered today in the South Texas town of San Benito to dedicate a solar project that may just be a vision of the future. “It’s about time we put this hot Texas sun to work for us,” said Jerry Patterson, Commissioner of the Texas General Land Office. “If this project works as well as we think it will, it will stand as a practical example of the potential of solar energy in Texas.”

The Texas General Land Office worked with the U.S. Environmental Protection Agency and San Benito city officials to build the biggest solar-powered project of its type in the region. The 45-kilowatt solar array, located at San Benito’s water treatment plant, is the largest on the Texas-Mexico border.

“Solar power pays off,” said EPA Regional Administrator Richard E. Greene. “These types of projects cut energy costs, save demand on the electricity grid and reduce the amount of greenhouse gases going into the environment.”

San Benito Mayor Joe H. Hernandez said he is proud his community was chosen for the visionary project. “In this day of skyrocketing energy costs, it is good to know that research and development of sustainable, renewable energy sources are being pursued,” Hernandez said. “It will take continued public interest and support to help this technology evolve into a more abundantly available clean energy source to serve all of our needs into the future.”

The \$325,000, 45-kilowatt-hour solar array will provide about 10 percent of the total power needed to filter up to 6 million gallons of water daily. The North American Development Bank, which finances water and wastewater projects in the border region of the United States and Mexico, will track the project to determine if similar sustainable energy systems will work in other border communities.

The EPA chose the Land Office’s Renewable Energy Program for the grant because of its expertise in renewable energy issues and long-experience with border energy issues. “Texas is rich with energy, be it oil and gas or wind, solar or geothermal,” Patterson said. “It just makes good sense to develop energy sources that aren’t imported.”

Energy

Minerals Management Service Awards Study Contract for Offshore Alternative Energy

Study looks at energy markets and infrastructure needs of future alternative energy development.

WASHINGTON — The U.S. Department of the Interior's Minerals Management Service (MMS) has awarded a two-year, \$443,000 contract to Eastern Research Group, Incorporated (ERG). Through this contract, ERG will conduct a study focusing on energy markets and infrastructure needs relating to alternative energy development on the Outer Continental Shelf (OCS). The findings of this study will contribute to the socioeconomic analyses for environmental assessments and other decision documents related to alternative energy development on the OCS.

“MMS is moving forward with offshore alternative energy as quickly as possible and we are seeking the information that will help us make the most informed decisions concerning this new energy supply for the country,” said Randall Luthi, MMS director.

The study's first part will present an overview of energy markets, considering such topics as regional energy markets, federal and state policies, emission and trading markets, and market trends. The study's second part focuses on energy infrastructure. ERG will work with state Coastal Zone Management programs to define the coastal areas and economic connections to alternative energy use (such as manufacture of blades and towers for wind energy, ports, and transport facilities). ERG will also examine infrastructure needed to develop alternative energy on the OCS. Examples of infrastructure include energy grid operations, substations and transmission lines, ports, manufacturing capabilities, shipyards and shipbuilding, and transportation.

The Energy Policy Act of 2005 (EPAct) gave MMS authority for alternative energy and related uses and activities on the OCS. MMS announced in November 2007 its interim policy to begin basic information gathering efforts relating to development of OCS alternative energy resources, such as wind, waves, and ocean currents. The study's final report is expected in late 2010.

MMS Awards \$5.5 Million to Study Gulf's Loop Current

NEW ORLEANS- The Department of the Interior's Minerals Management Service (MMS) has awarded a \$5.5 million contract to Science Applications International Corporation (SAIC) to conduct a major study of the Gulf of Mexico Loop Current. The Loop Current, which forms the upstream portion of the Gulf Stream, is the Gulf's principal ocean current which transports energy, mass, heat, momentum and salt from the eastern to the western half of the Gulf.

The five-year study will focus on learning more about the dynamics of the Loop Current in the Eastern Gulf of Mexico through observations and numerical modeling. The findings of the study will help MMS fulfill its regulatory mission by providing information on how energetic currents may interrupt oil production and change or affect the movement of oil spills, including natural seeps from the ocean floor. Human activities in the Gulf of Mexico and its coastal areas can also be made safer with an increased understanding of the Loop Current.

“We are very excited to have initiated this ground-breaking study,” said MMS Director Randall Luthi. “MMS has spent \$800 million over 25 years on environmental studies. The wealth of knowledge that MMS scientists will discover during this study will greatly aid MMS in securing our nation’s energy resources in an environmentally responsible manner for future generations.”

Nine moorings, or anchored lines, will be placed in the Gulf waters for approximately 30 months. The instruments attached to the moorings will measure current strength, water temperature and salinity levels. Scientists from the Atlantic Oceanographic and Meteorological Lab (AOML) will join SAIC to study the thermal structure of the Loop Current and hope to use this data to more accurately forecast the intensification of hurricanes entering the Gulf of Mexico. In addition, scientists from Princeton University, the University of Rhode Island, and the University of Colorado are part of the SAIC team to carry out the state of the art modeling, deep ocean circulation field observations and the remote sensing observations for this study.

All data from this study will be submitted to the National Oceanographic Data Center and made available to other agencies and research groups, including the National Hurricane Center, the U.S. Navy and the oil and gas industry.

Other News

Wildlife Refuges Severely Impacted by Hurricane Ike: Some Facilities Completely Lost, Remain Closed to Public

The U.S. Fish and Wildlife Service (Service) is reporting that due to impacts caused by Hurricane Ike, four National Wildlife Refuges (Refuge) on the Texas Gulf Coast remain closed to the public. The Texas Chenier Plains Complex, which includes Anahuac, Texas Point, Moody, and McFaddin Refuges, sustained a direct hit from the hurricane and almost total destruction of all facilities.

Until further notice, all public activities on these four refuges are being suspended. This includes public visitation, and all previously scheduled events and hunts. Anahuac National Wildlife Refuge received severe damage to all buildings within the refuge boundary. A significant storm surge swept through the buildings carrying with it equipment as it moved through. All that remains from these buildings are the cinder block walls and roof structure.

McFaddin and Texas Point Refuge’s received catastrophic damage due to Hurricane Ike. Some buildings were reduced to rubble. The refuge office has only 3 walls remaining. “While there has been significant damage to our facilities, our primary concern at this point is public safety,” said Shaun Sanchez, Manager of the Anahuac Refuge. “Risk to public safety is the main reason we remain closed. Our roads are impassible and boat canals and bayous contain storm debris that pose risks. Once roads are repaired and storm debris from navigable waterways has been removed we will begin to open units of the refuge.”

In addition to the extensive damage to facilities, the sensitive wildlife habitat these refuges manage and protect was damaged significantly. Debris from the storm litters the refuges and an oil spill on McFaddin Refuge is in cleanup stages.

Of greatest concern is the amount of saltwater intrusion into freshwater marshes, important habitat for birds along their winter migration. Traditionally, between October and March, visitors to these refuges are likely to see as many as 27 species of ducks, including green-winged teal, gadwall, shoveler and northern pintail. Huge flocks of snow geese, some times in excess of 80,000, feed in rice fields and moist soil units within Anahuac refuge. Due the impacts from U.S. Fish and Wildlife Service Hurricane Ike, impacts to migratory and resident wildlife will not be completely known for some time.

Trinity River Refuge in Liberty County, and the Brazoria Refuge in Brazoria County were also damaged by the storm. However, they sustained less damages and have reopened to the public. For updated information on the status of the Refuges and Hurricane recovery efforts as well as photos of the impacts visit www.fws.gov/southwest/refuges/.

MMS Report Details Excavation of Historic Shipwreck

Artifacts yield clues to colonial commerce in the Gulf of Mexico.

NEW ORLEANS — The archaeological excavation of a historic shipwreck, the deepest scientific recovery of artifacts ever attempted in the Gulf of Mexico, is the subject of a report published by the U.S. Department of the Interior's Minerals Management Service (MMS), the federal agency that regulates the development of the nation's offshore energy resources. The shipwreck lies 35 miles off the coast of Louisiana in 4,000 feet of water near the Okeanos Gas Gathering LLC gas pipeline, and was discovered as a result of the permitting process, required by MMS, for laying pipelines.

"When it became apparent that the shipwreck could be jeopardized by the construction of a deepwater pipeline, MMS worked with industry, the State of Louisiana, and the President's Advisory Council on Historic Preservation in Washington, D.C., to preserve this historic site," said MMS director Randall Luthi.

In 2004, MMS directed Okeanos to fund the recovery of shipwreck materials. Texas A&M University's Department of Oceanography and Nautical Archaeology Program, accompanied by MMS archaeologists, conducted the archaeological recovery of the shipwreck artifacts in 2007. Although the ship has yet to be identified, archaeologists refer to it as the Mardi Gras Shipwreck after the name of the pipeline near which it was found. A specially equipped, Remotely Operated Vehicle (ROV) was used to recover more than 500 artifacts which have been preserved and analyzed for the historical story they tell. The artifacts will be placed on public display in Louisiana following their restoration at Texas A&M's Conservation Research Laboratory.

The artifacts recovered from the seafloor indicate the wreck occurred between 1808 and 1820, and include glass bottles and tableware from France, creamware ceramics from England, British navigational equipment, personal items, a variety of European weapons, a Scottish cannon, and a rare ship's stove.

"We believe this shipwreck tells an important story about the role of the Gulf of Mexico during this period," said MMS archaeologist Dr. Jack Irion. "New Orleans was a crucial part of the global clash between European empires. This was a critical period, not only for Louisiana, but for both U.S. and world history," he added.

The final report written by Texas A&M staff entitled Archaeological Excavation of the Mardi Gras Shipwreck (16GM01), Gulf of Mexico Continental Slope (MMS Report 2008-037) is available on the MMS web site at <http://www.gomr.mms.gov/PDFs/2008/2008-037.pdf>. Additional information on the Mardi Gras Wreck can be found at the project web site at <http://www.fpublicarchaeology.org/mardigras/>

and at A&M's Center for Maritime Archaeology and Conservation website at <http://nautarch.tamu.edu/mardi gras/>.

The Mardi Gras shipwreck serves as the theme for the Louisiana Division of Archaeology's Archaeology Month celebrations this October. The wreck is featured on the official poster, and there will be showings of a film made about the excavation: Mystery Mardi Gras Shipwreck. For more information go to <http://www.crt.state.la.us/archaeology/homepage/arch.htm>.

Grant Opportunities

CICEET Announces FY2009 Funding for Land Use, Climate Change Projects

The University of New Hampshire/NOAA Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET) invites preliminary proposals to its pilot FY 2009 Place-based Solutions to Land Use and Climate Change Impacts Funding Opportunity. Approximately \$500,000 dollars will be available to fund between two and eight projects of one to two years in length. To be eligible for funding, proposals must name a National Estuarine Research Reserve System (NERRS) staff person as the project's principal investigator or co-investigator. Projects must address the dual impacts of land use and climate change on coastal resources and communities, as they relate to specific needs that have been identified as priorities by a NERR (or group of NERRS sites) and surrounding communities. Preliminary proposals are due on November 17, 2009. Learn more: http://ciceet.unh.edu/stats/rfp_2009.html

NOAA Seeks Applicants for the Ernest F. Hollings Undergraduate Scholarship

Up to \$29,050 Available Per Student for Studies and Internships

October 31, 2008

NOAA is accepting applications for a scholarship program in honor of retired South Carolina Sen. Ernest F. Hollings, who promoted oceanic and atmospheric research throughout his career. This is the fifth year this scholarship is being made available to students interested in pursuing degrees in ocean and atmospheric sciences and education.

In 2009, the NOAA Ernest F. Hollings Scholarship Program will provide approximately 100 college undergraduates up to \$29,050 to further academic studies related to NOAA science, research, technology, policy, management, and education activities. The program also offers a multi-disciplinary summer internship providing students the opportunity to work with NOAA scientists. Applications will be accepted through January 30, 2009.

Scholarship students will be eligible for up to \$8,000 of academic assistance per year for full-time study during their junior and senior years; a paid 10-week, full-time internship position during the summer at a NOAA facility (\$650 per week); a housing subsidy for scholars who do not reside at home during the summer internship; and travel expenses to attend and participate in a mandatory orientation and conference.

[Applications](#) for the Hollings Scholarship Program are available online, by e-mail at studentscholarshipprograms@noaa.gov, by telephone to 301-713-9437 x150, or by mail to:

NOAA Hollings Scholarship Program
1315 East-West Highway, Room 10703
Silver Spring, MD 20910

The Hollings Scholarship Program expands and supports NOAA's 35-year commitment to enhance economic security and national safety through the prediction and research of weather and climate-related events and provide environmental stewardship of our nation's coastal and marine resources. The program is part of a larger effort to enhance NOAA's strategic efforts to promote environmental literacy and ensure a future, world-class workforce to assist the agency in fulfilling its mission. Hollings scholars will be selected from applicants majoring in a broad range of disciplines including biological, physical, and social sciences; mathematics; engineering; computer and information sciences; and teacher education. NOAA understands and predicts changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and conserves and manages our coastal and marine resources.

Training and Conferences

Dauphin Island Sea Lab Hosts Ocean Observing Workshop For Formal and Informal Educators

What: Ocean Observing Workshop and Southern Association of Marine Educators Conference
When: November 14-16, 2008
Where: Dauphin Island Sea Lab
Fee: \$10, includes lodging, meals, field trips and workshop materials
Registration: Denise Keaton, 251-861-7515 or dkeaton@disl.org

The Centers for Ocean Sciences Education Excellence (COSEE) will be offering a workshop for formal and informal educators on Ocean Observing Systems and Apex Predators. This exciting workshop will occur concurrently with the Southern Association of Marine Educators Annual Conference.

Participants will learn the latest research on ocean observing systems and have a rare opportunity to meet research scientists, policy makers and other members of the educational community to discuss bridging the gap between research and real-world applications in the classroom.

The \$10 fee includes lodging, meals, field trips and workshop materials; participants are responsible for their own transportation and expenses to and from the workshop. Participants will also receive a one-year membership to the Southern Association of Marine Educators and the National Marine Educators Association. COSEE is funded by the National Science Foundation.

Responsible Site Design: Implementing Innovative Post-Construction Stormwater Management Strategies

November 18-19, 2008

Five Rivers Delta Resource Center
30945 Five Rivers Boulevard
Spanish Fort, Alabama 36527

What does the future of stormwater management look like at the site scale? What design criteria are needed to support innovative stormwater management and site design approaches? How do you identify potential retrofit sites and what practices can be designed and implemented on those sites to improve stormwater management? If you and others within your company, agency, or department face these and other challenging stormwater questions, you need to attend this informative 2-day workshop!

Experts from the Center for Watershed Protection (www.cwp.org), a national leader in stormwater management planning and education and the Northern Gulf Institute (www.northerngulfinstitute.org/) a National Oceanic & Atmospheric Administration Cooperative Institute, will provide instruction on effective stormwater management paying special attention to innovative site design practices and retrofit strategies that can be used to improve the performance of existing infrastructure and practices. Additional content will include enhancing local ordinances, strengthening public involvement in stormwater management and meeting regulatory requirements.

Field tours that demonstrate innovative stormwater management practices will be part of the program. Also, interactive group sessions will be conducted to identify the information and tools needed by communities to address local stormwater issues. Target audiences for this event include stormwater managers, planners, engineers, public works officials, elected officials, and regulatory personnel. All will benefit from expert instruction, group sessions and field tours. There are few opportunities in our area to receive this level of training, so please plan to attend.

The registration fee for this event is \$25 (payable to the Weeks Bay Foundation), and it will cover workshop materials, lunch and break foods. Instructions for registering are included on the attached flyer. For additional information regarding registration, directions or lodging, please contact Michael Shelton, Weeks Bay Reserve at 251-928-9792 or michael.shelton@dcnr.alabama.gov. For additional information on training content, contact Jason B. Walker, Assistant Professor, Department of Landscape Architecture, Mississippi State University, 662-325-4561 or jwalker@lalc.msstate.edu.

Sponsored by the Alabama Department of Conservation and Natural Resources, State Lands, Coastal Section; the Center for Watershed Protection; Grand Bay National Estuarine Research Reserve; Mississippi Department of Marine Resources; Mississippi State University; the National Oceanic and Atmospheric Administration; Northern Gulf Institute, and Weeks Bay National Estuarine Research Reserve

Ecosystem Functions and the Natural Processes of Lake Chenier

Location: Lake Charles, Louisiana

Dates: January 8-8, 2009

Contact Information: Natalie Snider: nsnider@crcl.org

The Chenier Plain encompasses six basins and extends from Vermilion Bay, Louisiana, west to East Bay, Texas. The Chenier Plain was built during the last 4,000 years by sediments discharged from the Mississippi River to the Gulf of Mexico that were then reworked by Gulf Coast wave action and deposited on the gulf shoreline. Extensive low lying mudflats were thereby formed along the shoreline toward the Gulf of Mexico. This occurred when the Mississippi River was building delta lobes in central Louisiana. This building was reversed when the Mississippi River shifted and began building delta lobes in eastern Louisiana. At those times, the gulf shoreline of the Chenier Plain eroded, which reworked shell materials to form a “chenier” or natural elevated ridge parallel to the shoreline. The combination of long linear ridges and adjacent extensive marsh provide ideal habitat for many species of birds, including waterfowl and migrating songbirds.

The Chenier Plain wetlands naturally function very differently than the coastal wetlands found in southeast Louisiana. The deltaic plain functions with a significant estuarine gradient. In contrast, the Chenier Plain is dominated by processes constantly shifting sediment parallel to the shore and limiting the interaction of the gulf with the interior marshes. Human alterations to the landscape have drastically changed this natural process. As we look to restore this landscape, we must fully understand this complex system that is constantly being changed and manipulated by people, intentionally and otherwise. The purposes of this meeting are to review what is known about the Chenier Plain, to report on recent and ongoing research, and to identify information gaps that complicate decision making by land managers, water managers and policy makers.

Program:

- Hydrology: Salinity, flow, nutrient dynamics, water quality, modeling, etc.
- Geomorphology: Sedimentation, ridge function and restoration, shoreline processes
- Ecology: Status and trends of wildlife, fisheries, forests, marshes, exotic species and human communities
- Protection: Storm surge modeling and hurricane protection

Home Page URL: <http://www.crcl.org/coalitionprograms/cheniersymposium.html>

Did you find this edition useful? Please send suggestions, comments, and new items for publication to Laurie.Rounds@noaa.gov.