

Alabama current connection

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Community Shoreline Restoration Project Along Mon Louis Island Receives \$120,000 in Funding

By TOM HERDER, MOBILE BAY NATIONAL ESTUARY PROGRAM

The Mobile Bay National Estuary Program has been awarded a \$60,000 Gulf of Mexico Foundation Community Restoration Partnership Grant and \$60,000 from the U. S. Fish & Wildlife Service (F&WS) Coastal Program to restore 1,000 feet of shoreline habitat along the western shore of Mobile Bay.

The project, to be undertaken in partnership with Mon Louis Island (MLI) shoreline property owners, the University of South Alabama Department of Civil Engineering, F&WS, and others, will include installation of reef structures and native marsh planting parallel to the shorelines of residential properties on the northern end of MLI, immediately south of Fowl River. Reef structures will be installed just offshore to attenuate wave energy from ship traffic and prevailing southeasterly winds and stabilize an erosion impacted shoreline while providing habitat

for oysters, other invertebrates, and finfish. Native marsh vegetation will be planted in intertidal areas approved by property owners to further stabilize sediments and provide fish and wildlife habitat.

MBNEP hosted two meetings with property owners to gather their input and feedback. The first meeting was held Tuesday, April 7, 2009 at St. Rose of Lima Parish Hall, Coden, to educate about different shoreline stabilization strategies, gather input and insights from property owners, and assess interest in participating in a demonstration project. MLI property owners were asked how they currently maintain their shores, including average cost of maintenance, effectiveness/impacts of activities (i.e., what worked or didn't work, and what impact has it had on your neighbor's shoreline?), and under ideal circumstances, what would owners' shorelines look like and include?

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At the July 29 meeting, residents used laminated maps to describe and draw their visions for a restored and enhanced Mon Louis Island shoreline.

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Currently Inside



Coastal Corner

By WILL BRANTLEY, ADCNR,
STATE LANDS DIVISION, COASTAL SECTION

Alabama's Natural Resource Trustees and the Natural Resource Damage Assessment (NRDA) Process

Almost everyone along the Alabama Gulf Coast has been affected in some way by the Deepwater Horizon oil spill. Although the Macondo well has been capped and oil is no longer flowing into the Gulf, many challenges associated with this incident remain. Individuals and businesses continue to work through the government claims process in an effort to cope with the economic losses which resulted from this incident and our coastal communities are fully engaged in efforts to begin the recovery and revitalization process. Additionally, Governor Riley has initiated a Coastal Recovery Commission, which has engaged the best and brightest leaders throughout coastal Alabama and the state, with the goal of developing a plan which will transform coastal Alabama

into a resilient and vibrant region – a region even better than before the oil spill. As part of the coastal recovery process in Alabama, the State is engaged in an effort to ensure that the coastal natural resources impacted by the oil spill are restored and the public is able to gain the full benefit from those resources. This process, known as Natural Resource Damage Assessment or NRDA, is provided for in various federal laws, including the Oil Pollution Act of 1990. In the NRDA process, natural resource trustees assess injury and damage to various natural resources (including the human use of such resources), including wetlands, shorelines, groundwater, water column, birds, fish and all other forms of marine life, which have resulted from hazardous releases, like oil. This is a legal process that depends upon the collection of scientific data to develop information about damaged trust resources.



Field teams from Geological Survey of Alabama, a NRDA trustee agency, inspect salt marshes, survey beaches, and monitor groundwater along the Alabama Coast.

Photos submitted by ADCNR, State Lands, Coastal Section.



The Mobile-Tensaw Delta Nature Preserve and Recreation areas secured by Forever Wild are the largest grouping of state owned lands in Alabama. These wetlands, bogs, and swamps make up almost 50,000 acres of Mobile and Baldwin Counties.

Photo by Beth Maynor Young ©

In Alabama there are two natural resource trustees. The Commissioner of the Department of Conservation and Natural Resources, Commissioner Barnett Lawley, serves as the lead trustee and the State Geologist and Director of the Geological Survey of Alabama, Dr. Nick Tew, serves as the state's co-trustee. These trustees, along with the respective agencies they lead, have been engaged in the NRDA process from the beginning of the spill. They are working closely with trustee partners from the other gulf coast states and the federal government to assess natural resource injuries and determine the extent of damages to those resources. For this NRDA, the federal natural resource trustees are the Department of the Interior, acting through the U.S. Fish and Wildlife Service (USFWS) and the Department of Commerce, acting through the National Oceanic and Atmospheric Administration (NOAA).

Alabama's trustees serve as members of the Gulf-wide Trustee Steering Committee which provides overall guidance to this NRDA process. Additionally, technical experts from each of the trustee agencies are engaged in various NRDA Technical Working Groups (TWGs) to collect baseline data and develop plans that will help determine the extent of injuries to specific trust resources like birds and fish. Results of data collection and plan implementation efforts by the TWGs will help focus future restoration efforts. Human use losses of natural resources, or the loss of the public's ability to utilize these resources (examples: fishing, birding, and beach utilization) are also considered as part of the NRDA. The NRDA trustees are currently in the restoration planning phase of the process, which will ultimately result in restoring injured natural resources and human losses to

pre-spill baseline conditions.

The NRDA is an important process that will serve as one tool to help the Alabama coast recover. Public involvement in this process is critical and the trustees will inform the public of opportunities for engagement in the NRDA. Towards that end, the trustees hosted the first, widely publicized, NRDA public meeting on Thursday, November 11 at Five Rivers in Spanish Fort. Additional public meetings will be planned to provide the public an opportunity to learn about the fundamentals of NRDA and develop an understanding of how they can be involved in the process as it moves forward. If you would like more information about the NRDA or information about future NRDA public meetings, please visit www.outdooralabama.com.

ADCNR Awards \$55,000 in Public Access Grants

By JANIS HELTON, ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

The Alabama Coastal Area Management Program, which is administered by the Alabama Department of Conservation & Natural Resources (ADCNR), State Lands Division Coastal Section, has awarded a total of \$55,000 in low-cost public access grants to the cities of Chickasaw in Mobile County and Orange Beach in Baldwin County and to the Historic Blakeley State Park. The grants will provide the cities and the park with federal funding from the National Oceanic and Atmospheric Administration (NOAA) and each grantee will invest an equal amount of non-federal funding in the projects.

The City of Chickasaw will use the funds to expand the existing wetland boardwalks at William Brooks Park by approximately 1,200 feet and expand the upland trails by 420 feet. The park is located on the south side of Chickasabogue Creek and west of Hwy 43. This project is phase four of a multi-phase project to make improvements to the park. In phases one, two and three, the

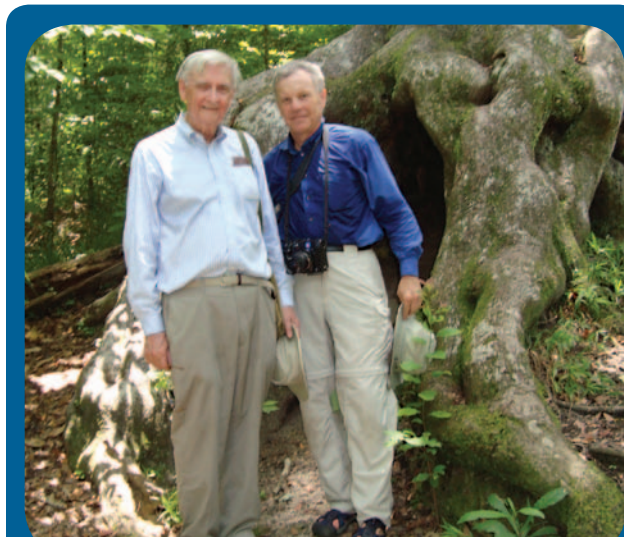
city constructed a fishing pier, other sections of the wetland boardwalk, several pavilions and picnic tables, and upland trails. The city also installed interpretive signage and a parking area.

The City of Orange Beach will use the funds to add two canoe/kayak launches to the existing Orange Beach Canoe Trail, which now has 10 launch sites. The two new sites will be in the Terry Cove/Cotton Bayou area and the

Bear Point Estates area on Hayden Drive. The Hayden Drive site will include a pier out to Arnica Bay for easier access. The city will install signage and a limited number of parking spaces at each site.

The Historic Blakeley State Park will use the funds to construct a 335-foot boardwalk to and around the historic "Hiding Tree." The boardwalk will end at Bayou Salome. The park will also install a permanent parking area for easy access to the boardwalk.

For questions, contact, Janis Helton at Janis.Helton@dcnr.alabama.gov; 251-621-1216 or 251-928-9792.



Renowned biologist and Mobile native E. O. Wilson, left, and Alex Harris of the Center for Documentary Studies at Duke University, right, visited the Hiding Tree at Historic Blakeley State Park last summer. A grant from the Alabama Coastal Area Management Program will provide funding to build a boardwalk to and around the historic tree.

Photo submitted by Historic Blakeley State Park.

The More Things Change...

By ROBERTA SWANN, DIRECTOR, MOBILE BAY NATIONAL ESTUARY PROGRAM

There was an interesting “silver lining” in the events that unfolded this past summer as Louisiana light crude spewed unchecked into the Gulf of Mexico for 87 days. This toxic sludge that threatened our waters, fisheries, birds, and beaches brought acute attention to the contributions of our two coastal counties to the State’s economic well-being. In recovering from the damages caused by the spill, it is imperative that time is taken to address the factors, beyond this past summer, that contribute to the continued degradation of our coastal resources.

Concern over the quality of our coastal waters preceded the Deepwater Horizon incident. In 2002, a Loading Budget Analysis for Mobile Bay was undertaken by Tetra Tech, Inc. for the Mobile Bay National Estuary Program (MBNEP) and the U. S. Army Corps of Engineers. Its goal was to assess pollutant contributions to Mobile Bay from the Mobile River Basin and pollutants resulting from urban development and land practices in the Mobile Bay area. The study included an assessment of urban runoff potential, fertilizer and pesticide application, silviculture (forestry) practices, livestock distributions, and mercury. Major Bay

water quality issues identified from the analysis were nutrient enrichment, sedimentation, pesticides and toxics, habitat degradation, metals, and bacterial contamination.

Nationally, federal legislation in the 1970s and 80s effectively addressed point source pollution, leaving atmospheric deposition and non-point source pollution as the major sources of surface water pollution. The 2008 Alabama 303(d) list of water bodies not meeting designated use criteria included 48 in Alabama’s two coastal counties. Twenty of these listings were exclusively for mercury, with sources either listed as “unknown” or from “atmospheric deposition” (usually associated with mining, manufacturing, and power generation – specifically from the burning of coal), with one each for iron and arsenic. Twenty-six listings were for non-point source pollutants introduced to impaired water bodies through storm water runoff.

Those pollutants included:

- pathogens (generally coliform bacteria associated with failed septic or municipal waste water treatment systems or pet or livestock waste from yards, pastures, or feed lots);

- nutrient over-enrichment (introduced from fertilizer application or the same sources as pathogens);

- organic enrichment (from failed septic or wastewater treatment systems or pet, livestock, or wildlife waste); siltation (from stream bank erosion or poor construction/development practices); and

- pesticides (from yards, farms, golf courses, or other upland sources).

Clearly, the issues at the start of this decade remain as we roll into the next

Challenges to fishery populations before the threat of oil were largely associated with habitat degradation – generally losses of wetland nursery areas and submerged aquatic vegetation (SAV). Salinity increases and proliferation of oyster drills are blamed for the local collapse of the oyster fishery. While drought conditions and the opening of a cut in Dauphin Island by Hurricane Katrina in 2005 caused these conditions, they have been exacerbated by human land use practices. The 1920s installation of the Mobile Bay Causeway dammed the nation’s fourth largest estuary in terms of freshwater inflow, increasing estuarine vulnerability to salinity.

Losses of wetland nursery areas challenged the health of Alabama’s fisheries prior to the Deepwater Horizon spill.



Shorebirds impacted by the Deepwater Horizon spill, like this snowy plover chick, were already experiencing population pressures along Alabama's coast due to beachfront development and habitat fragmentation. Photo courtesy of Margo Zdravkovic.

Both wetlands and SAV – critical nursery, refuge, and forage habitats for commercially and recreationally important fish and shellfish – are also being lost due to land use practices. Shoreline armoring, or use of bulkheads to protect upland properties, eliminates adjacent intertidal habitat. In 1997, almost one-third of the Mobile Bay shoreline was armored, and the rate of armoring corresponds with the rate of population growth in the area. Recent census data reflects 1.5% and 22.5% population increases in Mobile and Baldwin Counties, respectively. 2008-09 mapping efforts revealed over 20% loss in SAV habitat since 2002, and sedimentation and turbidity associated with development practices are at least partly to blame.

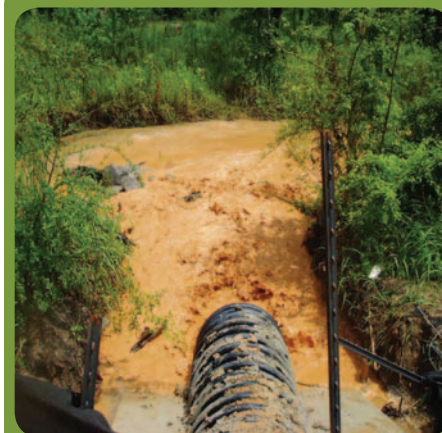
Our beaches took the brunt of the damage from the oil spill, and coastal birds, including oiled gannets, pelicans, and other shore birds, became poster children of the Deepwater Horizon incident highlighted by media. Before the spill, several species were threatened by habitat loss imposed by human use and development of these sensitive coastal habitats. Snowy plovers, Wilson's plovers, and oystercatchers are among those considered threatened both locally and nationally. Development along these beaches has decreased colonial and migratory bird habitat such as continuous

stands of maritime forest, long leaf pine, and other valuable habitat types. Several tools have been developed which will help us as we move forward.

In July 2010, a Comprehensive Watershed Management Plan for the D'Olive Creek, Tiawasee Creek, and Joe's Branch Watersheds was completed by Thompson Engineering. This plan will provide a road map for alleviating drainage and sedimentation issues that have plagued the watershed for nearly forty years. In Baldwin County, a comprehensive stormwater runoff education and outreach campaign coupled with demonstration projects will engage the community in taking proactive measures to improve water quality, reduce flooding and safeguard community health.

Community-based inshore habitat enhancement activities, like the project planned along the Mon Louis Island shoreline, will restore important habitat for fish, shellfish, and other wildlife, while demonstrating the value of habitat enhancement and re-establishment to local communities.

The oil shifted a long-standing paradigm that "having a healthy economy results in a healthy environment" to "having a healthy environment results in a healthy economy". One result is the publication of "A Roadmap to Resiliency" by the



With strict federal regulation of point source pollutants in the 1970s and 1980s, nonpoint sources, such as stormwater runoff, are the most prevalent causes of pollution in Mobile Bay and its surrounding waters.

Governor's appointed Coastal Recovery Commission. This plan's environmental section lists five priority areas: re-nourishment of our beaches and back bays, achieving the optimal yield of Gulf fisheries, creating a Management Council to coordinate efforts, improving water quality, and creating a world-class marine and coastal institution focusing on the Gulf. "We believe we have helped set in motion a process that will inspire generational change," stated Ricky Mathews, the Commission chair. This plan provides a step in the right direction, but efforts to implement it must be coupled with similar efforts to reduce the pollution-generating activities that have and will continue to degrade our coastal resources. In doing so, we must commit to using the best available science to direct our actions so that our investments have the best possible chance of success.

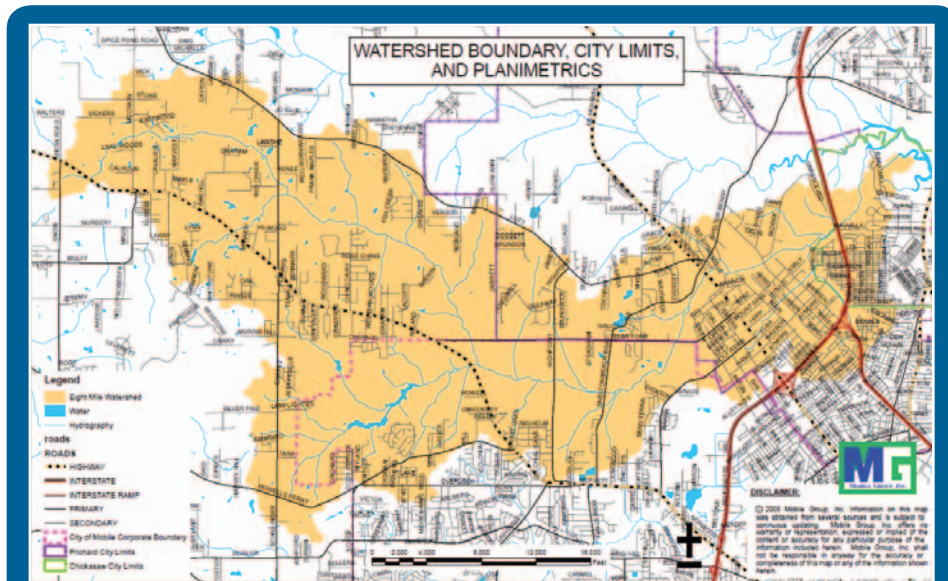
A lot has changed in the past seven months, but our path to coastal resiliency remains the same. With renewed focus in 2011, may we join together to protect our waters, our fisheries, our birds, and our beaches. Let the generational change begin with us.

The Eight Mile Creek Watershed Project

By CHRISTIAN MILLER, AUBURN UNIVERSITY
MARINE EXTENSION AND RESEARCH CENTER

Watersheds are land areas that drain to creeks, lakes, bayous, or other water bodies. We all live in a watershed, and the actions we take on the land impact the quality of water that flows over it. The Eight Mile Creek Watershed, which drains a heavily urbanized area including the City of Mobile, the City of Prichard, and unincorporated areas of Mobile County, has been negatively affected for many years by frequent sanitary sewer overflows. These discharges, in addition to a number of faulty septic systems and increased levels of urban stormwater runoff, have caused the level of bacteria in several local streams to exceed the maximum acceptable levels as set forth by the State of Alabama. If these issues are not addressed, pollution and related health and environmental problems will increase.

Through the establishment of a watershed management plan, the Eight Mile Creek Watershed Project is working to foster the coordinated implementation of programs to control discharges, reduce polluted runoff, and protect drinking water, as well as to identify sensitive natural resources. The Eight Mile Creek Watershed Management Plan will move toward these



The Eight Mile Creek Watershed Project brings watershed residents together to plan for community environmental health.

goals by recommending educational strategies and supporting existing programs that reduce sources of pollution within our watersheds.

The Watershed Plan will recommend effective solutions to urban runoff problems through the use of Best Management Practices that are aimed at both new and current development, homeowners, and on-site septic systems. In addition, recommendations will be provided to

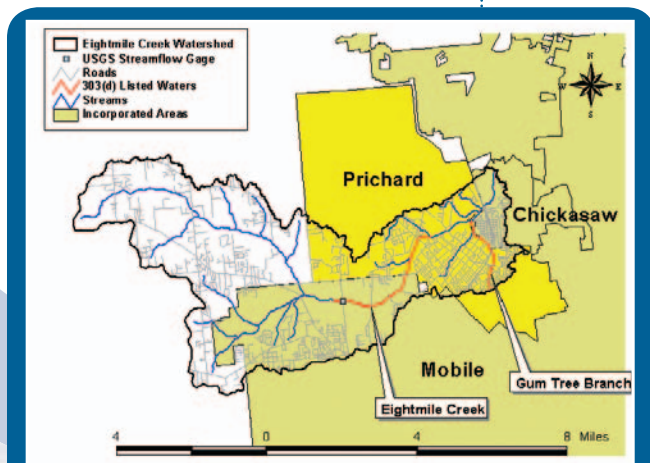
municipalities for proper cleaning maintenance and updates to the sanitary sewer system. Education and outreach programs, an integral component of the watershed planning process, will keep citizens informed about these critical issues and better prepared to protect their own community's environmental health.

In order to effectively improve the water quality of the Eight Mile Creek Watershed, it is very important that

stakeholders play a major role. Stakeholders are individuals who make and implement decisions that will affect the watershed as well as those who are affected by those decisions. Stakeholders can provide valuable information concerning the connections between sources and impacts of pollution within the watershed. Once major concerns are identified, attainable goals can be set.

With further assistance from stakeholders appropriate activities can be designed to meet the ultimate goal of the plan: that all streams within the Eight Mile Creek Watershed meet State water quality standards. Implementation of a good watershed management plan will open additional avenues of funding for projects to correct issues within the watershed, lead to reduced pollution and improved water quality, and help to preserve and restore our environmental heritage for generations to come.

For more information about the Eight Mile Creek Watershed Project, or to learn how you can get involved, contact Christian Miller at the Auburn University Marine Center at 438-5690 or christian@auburn.edu.



The majority of the Eight-Mile Creek Watershed, which drains 37 square miles, is located within the incorporated areas of Prichard, Mobile, and Chickasaw.

MCWCA board members Ernest Ladd, left, and Jack Minto, right, and their children collect derelict crab traps along the Mobile Bay causeway.



Mobile County Wildlife and Conservation Association Update

By BETHANY WALTON, MOBILE BAY
NATIONAL ESTUARY PROGRAM

The Mobile County Wildlife and Conservation Association is a non-profit organization that is involved with conservation, restoration, and enhancement of natural resources in Mobile and the surrounding areas. MCWCA is focused on environmental and recreational issues related to hunting and fishing in the greater Mobile County area. Following is a summary of the group's history and on-going activities and projects.

History The MCWCA, the oldest conservation organization in the State of Alabama, was formed in Mobile in 1934 and dedicated to the preservation, enhancement, protection, and advocacy of Alabama's wildlife and issues relating to conservation and natural resources.

Projects and Events MCWCA participates yearly in the MBNEP's Derelict Crab Trap Recovery Program during

which hundreds of abandoned and illegal crab traps are removed in one day.

Another major project of MCWCA was emergent grass planting to restore wetlands and the ecological services they provide in the Mobile-Tensaw Delta and Mobile Bay in partnership with the MBNEP and the U. S. Fish and Wildlife Service in 2009. Although the planted vegetation was wiped out by the effects of two hurricanes one might call this project a success in terms of engagement and commitment of MCWCA members. These responsible sportsmen recognized the importance of marshes and wetlands to wildlife, the impacts that development and human use have imposed upon them, and their responsibility not only to act to restore them but to set an example of stewardship to their neighbors in coastal Alabama. In fact, the Mobile Bay NEP nominated the MCWCA for a 2009 Gulf Guardian Award.

Some of the other projects MCWCA sponsors and supports include:

- Annual Wood Duck Box Project (Mobile-Tensaw Delta)
- Fall Speckled Trout Tournament (fundraiser)
- Project CATE (educational materials centered around wildlife and the outdoors)
- Sponsor of Annual "Kids' Day" to promote gun safety and ethical hunting
- Roads to Reefs Project

Future of MCWCA

MBNEP looks forward to its continued partnership with MCWCA on grass planting projects, derelict crab trap recovery, and other community outreach activities.

Please visit www.mcwca.org for more information about MCWCA, the latest news, and calendar of activities.



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Many property owners said that total maintenance costs over the past several years (that included Hurricanes Ivan through Gustav) ranged between 30 and 40 thousand dollars, while average annual maintenance costs ranged between three and six thousand dollars. Some described the maintenance of their shorelines as “minimal” or “nothing,” while others said that they used rip rap, broken concrete, or fill dirt to maintain their shorelines or built or replaced bulkheads and side walls. One homeowner reported using concrete-coated fence wire to block wave energy and grow oysters seaward of his property. When asked to describe an “ideal shoreline,” the most common response was “sandy beach,” others said they would like “vegetation on the exposed clay layer,” and some included the presence of rocks.

At the second meeting, held July 29, 2010 at the St. Rose Parish Hall, 45 homeowners in attendance were asked to develop and draw visions of how habitat could be restored or enhanced seaward of their properties. Details were recorded on laminated, 1:300 scale maps of the approximately six-mile shoreline. Homeowners were asked to consider several factors, including boater accessibility to the Bay, existing structures that might affect any new habitat that is created, water depth profiles from mean high

water to one meter depth, and any relevant historical information about the shoreline. Their input was converted to GIS layers that were added to 2010 images of the shoreline.

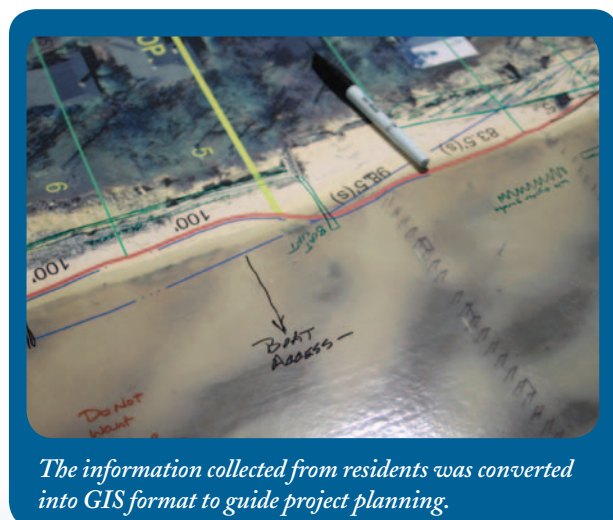
Future Steps for the Project

Since the second meeting, Dr. Bret Webb of the University of South Alabama Civil Engineering Department has been gathering data which will be used to refine project design. He is analyzing bathymetry (water depths) and hydrological data (winds, waves, and water movement) from Fowl River to Cedar Point and historic sediment transport along the shore while studying structural wave attenuation.

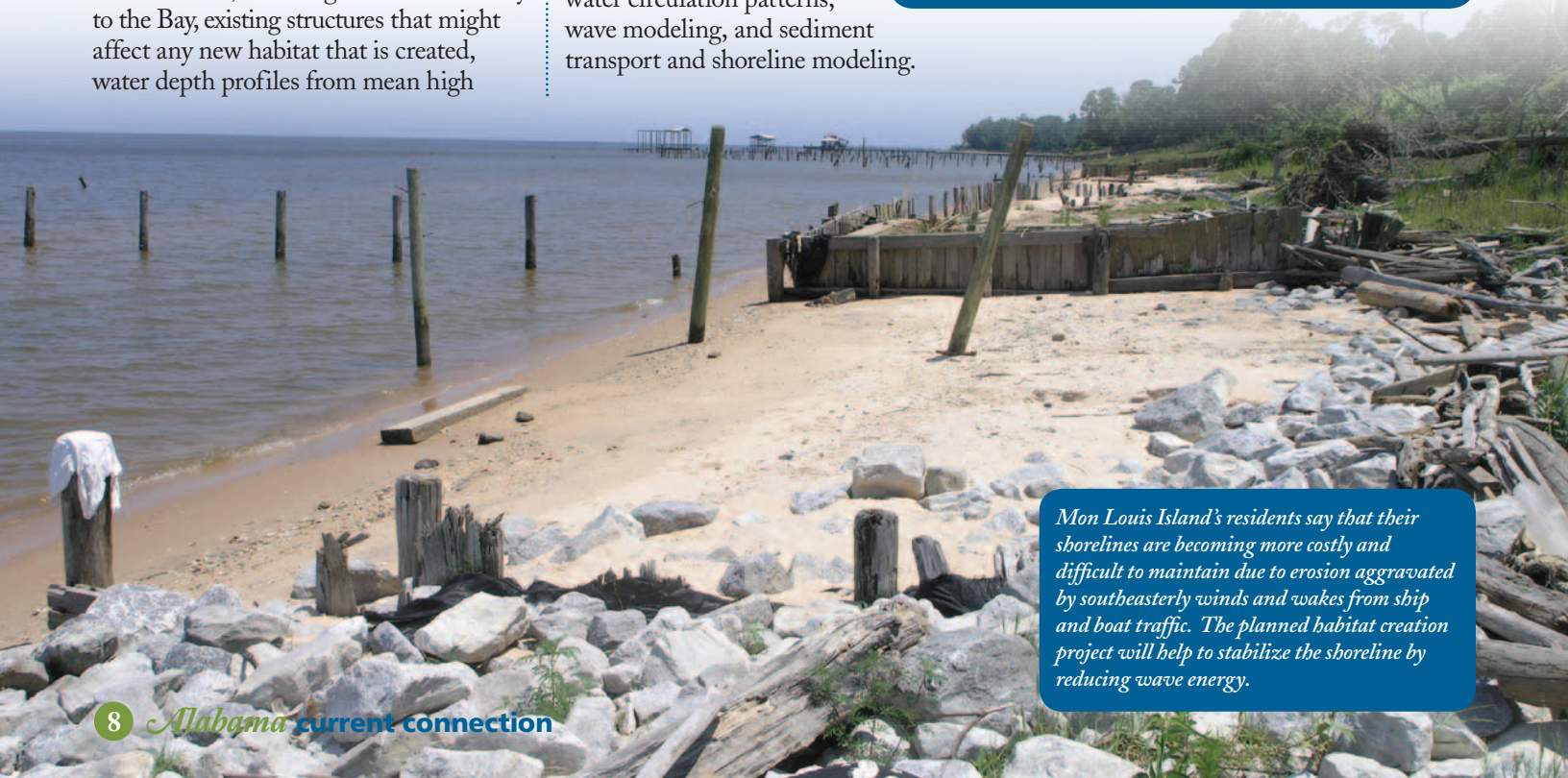
In February, 2011, Dr. Webb will facilitate a workshop with MLI homeowners to develop the actual design of this pilot project using Dr. Webb’s data and feedback from the property owners. Once the project is underway in spring 2011, we will continue to monitor the restoration site and focus on three specific areas for long term study: water circulation patterns, wave modeling, and sediment transport and shoreline modeling.

Each of these will help us better understand the impact of restoration activities on the site, and hopefully our findings will be used as a second phase of the project is set in motion.

We look forward to continuing our partnership with the MLI homeowners to enhance fisheries habitat resources, vital to coastal Alabama’s quality of life. If you would like to learn more about our efforts, please feel free to contact Tom Herder (therder@mobilebaynep.com) or Beth Walton (bwalton@mobilebaynep.com) or call 251-431-6409.



The information collected from residents was converted into GIS format to guide project planning.



Mon Louis Island’s residents say that their shorelines are becoming more costly and difficult to maintain due to erosion aggravated by southeasterly winds and wakes from ship and boat traffic. The planned habitat creation project will help to stabilize the shoreline by reducing wave energy.

Bay's & Bayous Symposium 2010 Brings Science, Industry, and Community Together

By SARA SHIELDS, MOBILE BAY NATIONAL ESTUARY PROGRAM

More than 400 people attended the 2010 Alabama-Mississippi Bays & Bayous Symposium on December 1-2 at the Arthur R. Outlaw Convention Center in Mobile, Ala. Professionals representing over 120 different organizations came together to share topics related to the Symposium's theme: "Science, Industry, Community: Building Bridges to Coastal Health."

Highlights from the Symposium included keynote presentations from John Hankinson, Jr., Executive Director of the Gulf Coast Ecosystem Restoration Task Force; Kerry St. Pe, Executive Director of Barataria-Terrebonne National Estuary Program; Andreas Theuer, head of corporate environmental policies for ThyssenKrupp AG; Ricky Mathews, Chair of the Coastal Recovery Commission of Alabama; and Dr. Wes Tunnell, Associate Director of the Harte Research Institute for Gulf of Mexico Studies at Texas A&M University.

Presentation topics included a number of emerging coastal issues such as Deepwater Horizon Oil Spill recovery, living shorelines, nutrient over-enrichment, and hazard mitigation.

This year's Bays and Bayous Symposium was also the first to bring industry into the fold to share ways that science is being utilized in business decision-making to improve coastal sustainability. The new focus was inspired by actions taken by local industry leaders to find business solutions that are both environmentally sustainable and scientifically-driven, such as ThyssenKrupp's use of acid regeneration and Alabama Power's carbon sequestration project. "We want to build a bridge in our community between the science occurring at the academic and resource agency level and the science occurring within the private sector," said Roberta Swann, MBNEP's



Patti Powell, director of the Alabama Department of Conservation and Natural Resources State Lands Division, left, receives an honorary Gulf Guardian Award from the EPA Gulf of Mexico Program's executive director Bryon Griffith, right. Awards were presented at the symposium to the states of Alabama and Mississippi for their response to the Deepwater Horizon oil spill.

director. "This year's symposium was a great start, and we look forward to an even more diverse dialogue in 2012."



Andreas Theuer, head of Corporate Environmental Policies for ThyssenKrupp, shares his insights on industry and sustainability to a full house at the Bays and Bayous Symposium in Mobile on December 1.

Two honorary Gulf Guardian Awards were presented at the Bays and Bayous Symposium to the States of Alabama and Mississippi on behalf of the many state agencies involved in the response to the Deepwater Horizon oil spill. The US EPA's Gulf of Mexico Program developed the Gulf Guardian awards to recognize and honor the businesses, community

groups, individuals, and organizations that are taking steps to keep the Gulf healthy, beautiful, and productive. For access to the 2010 symposium proceedings, the full symposium program, and powerpoint presentations from the concurrent sessions, visit www.mobilebaynep.com/baysandbayous.



*Science, Industry, Community: Building Bridges to Coastal Health
Bays and Bayous 2010 Arthur R. Outlaw Convention Center, Mobile, AL December 1-2, 2010*



Bays and Bayous Symposium T shirt with sponsor logos.

Surfing in L.A. (Lower Alabama)

By TOM HERDER, MOBILE BAY NATIONAL
ESTUARY PROGRAM

We moved to Mobile two weeks before Ivan, in August, 2004, after a 12-year hiatus from “my passion” in the nation’s heartland, far from salt water or waves. As an avid surfer with 40 years experience riding waves in the Atlantic and Pacific Oceans, neither my hopes nor expectations were particularly ambitious. I searched the web and found Surfline’s evaluation of Alabama, which did little to elevate my hopes or expectations. But I told my wife and friends that if I could surf a couple times per month, I would be satisfied.

In a state where every man considers himself a sportsman and outdoorsman, relatively few have been bitten by the surfing bug, and many who have spent their whole lives in lower Alabama are surprised to hear that people surf in the “calm” waters of the northern Gulf. However, entering my seventh year living in Mobile and surfing the waters between Navarre and the west end of Dauphin Island, I am not sure if I should brag about the surfing community and opportunities here or keep it a secret to be enjoyed by those of us who already know. I will describe surfing in coastal Alabama,

but I will not reveal specific breaks (and have to answer to my friends and acquaintances at our increasingly-crowded favorite spots).

The Community

Learning to surf in coastal Alabama is a surprisingly friendly experience. I grew up in West Palm Beach, and even in 1970, breaking in was difficult and involved getting “vibed” and “stink-eyed” by more experienced surfers. Newbies were not welcomed anywhere. There was an initiation period for learners, during which time it was best to stay at the edge of the crowd and avoid getting in the way. But, the less-than-100-or-so “locals” who surf between DI and Orange Beach are generally pretty laid back and even helpful, just so long as the basic rules of surfing are observed. Regular surfers can paddle out at almost anywhere on the Alabama coast and know most everyone in the water. A “crowd” is seven to thirty people, ranging from even older guys than me generally riding long boards to high school kids on high performance short boards learning to stand up. If a local surfer desires, he/she can surf completely empty waves, something that most American surfers could hardly imagine. In Alabama, female surfers are

few and far between, and not because they are not welcome.

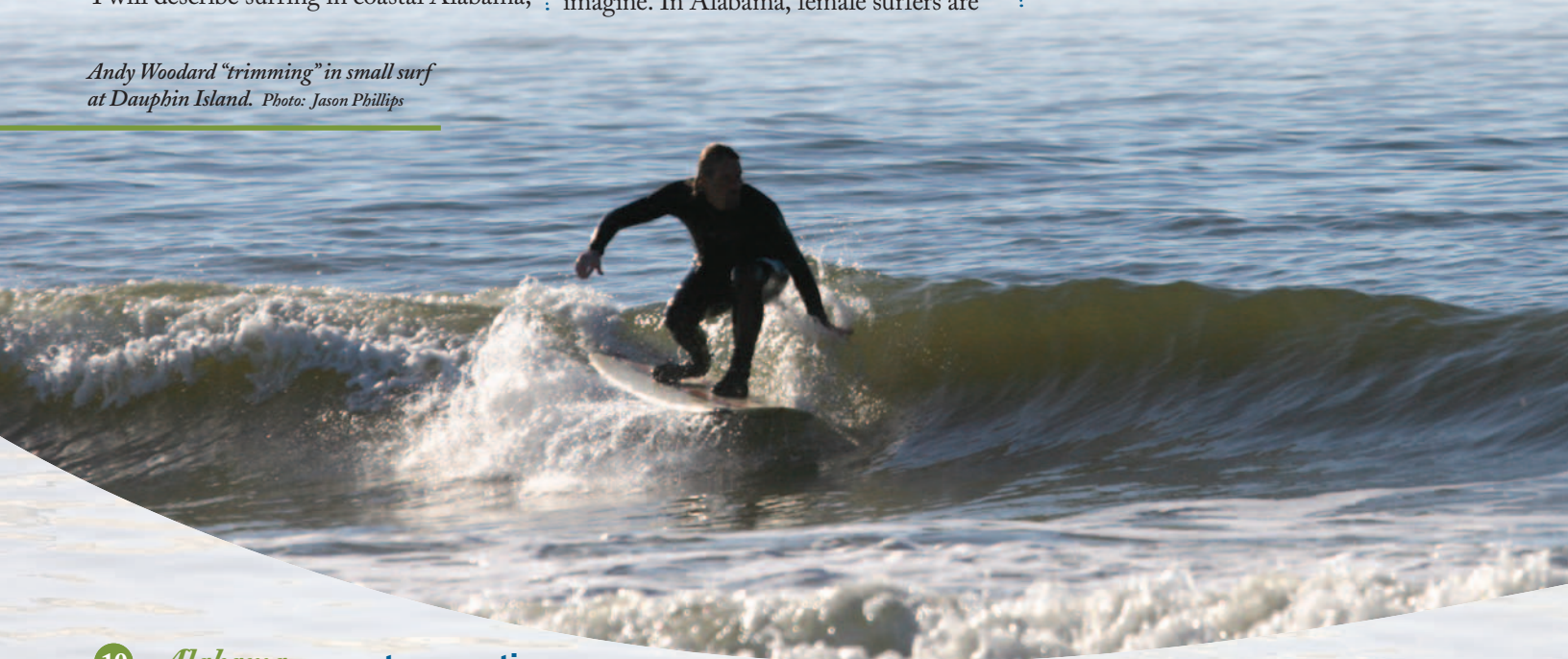
The Surf

OK, it’s the northern Gulf, not the North Shore. As often as not, especially in warmer months, we surf small, relatively choppy, locally-generated wind waves, produced by a day or two of ten-plus mile per hour winds coming out of the east to south. A long board (of eight to eleven feet) allows one to ride waves as small as knee high, and many who ride short boards do so on shapes specially designed for smaller waves.

Between October and November, the cold fronts begin. After two or three days of low pressure with warm temperatures and strong onshore winds kicking up a significant swell, the wind rapidly swings around from east to south to west and finally to the north.

As the front passes, temperatures quickly drop, and frequently overhead waves (six to eight feet) take on a perfect, tubular form with exceptional quality. Sadly, these optimal conditions will last only hours before the strong offshore winds blow the waves flat until the next low moves through.

*Andy Woodard “trimming” in small surf
at Dauphin Island. Photo: Jason Phillips*





A skimboarder watches surfers at Orange Beach.
Photo by Jason Phillips

In the summer, winds are generally too light to generate waves, and Gulf coast surfers face weeks on end of lake-like flatness – until a tropical storm heads into the Gulf. While homeowners and businesses prepare for the impacts of an approaching storm, surfers head to the beach to ride well-organized, powerful waves. Surfers talk of past storms – Rita, Emily, Barry, etc. – like former players or fans talk about epic Iron Bowls or championship games, almost with reverence. Some surfers spend hours dissecting National Weather Service advisories, which awaken chatter and anticipation of an approaching swell on internet surf sites, and schedules are altered and cleared and sick days taken.

Equipment

While many Gulf coasters exclusively ride long boards in “ankle slappers” or overhead barrels, others accumulate “a quiver” of multiple boards suited for

different wave conditions. These include at least a long board for the small stuff, a highly maneuverable short board

(about six feet) for intermediate conditions, and a performance board (six to seven feet) for heavier cold front or hurricane surf. Custom boards are not much more expensive than those bought off the shelf. A new long board costs more than \$600, with short boards generally a little less expensive, and used boards cheaper and easy to find. There are two surf shops in Alabama, both in



An Orange Beach surfer takes off on a waist-high right as a dolphin surfaces in the background. Photo: Jason Phillips

Gulf Shores.

Our semi-tropical climate allows us to “trunk it” between April and November, but when water temperatures fall below 70° and down towards 50°, out come the wetsuits. For many, it’s either a full suit (with long sleeves and legs) or nothing, but others grade through a one to two millimeter (thick) wetsuit top, a “shorty” or spring suit (with short legs and

sleeves), to a full suit that’s usually three millimeters thick. On the coldest days, with water temperatures in the mid-50s and wind chills in the 30s, boots and gloves are mandatory, and hoods are not uncommon.

A surfer wears “a leash” that attaches around the ankle to keep the board nearby even after a wipeout. To keep the board’s deck from getting slippery, surf wax is applied thickly.

Wrap Up

This is neither California nor Hawaii, but there are months where, were it not for work or school, one could find ten to fifteen surfing opportunities, and most with just a couple of friends. Even during the “oil-scare summer” of 2010, we found more than two opportunities per month, even with no hurricane activity. When there’s surf, we might make the forty-minute drive to Dauphin Island, the hour plus trip to Gulf Shores or Orange Beach, or even cross state lines to surf in Pensacola or Navarre. There is nothing I enjoy more than a surf session with buddies, and lower Alabama is largely an undiscovered secret in the national surf community. I’m glad I found it...

Shoreline Stabilization at Dog River Park Environmental Action Through Public-Private Partnerships

By TOM HERDER, MOBILE BAY NATIONAL ESTUARY PROGRAM,
WATERSHED PROTECTION COORDINATOR

This photo taken in 2007 shows the extent to which erosion prevented the growth of shoreline plants, which are important habitat for fish and wildlife.

In 2008, the Mobile Bay National Estuary Program (MBNEP) received funding through an Association of National Estuary Programs/NOAA Community-based Restoration Partnership Grant to stabilize the shoreline of Dog River Park – formerly known as Navco and Luscher Park – in Mobile. Dog River Park's four boat ramps provide the only direct public access for recreational boaters to Mobile's urban river, and erosion from recreational boat wakes had cut a four-foot escarpment into much of its 400-foot shoreline.

The grant proposal, submitted in response to concerns by the Dog River Clearwater Revival (DRCR) and City of Mobile, resulted in an award of \$26,000, with the requirement that this funding was to be matched by non-federal contributions or in-kind services.

MBNEP hoped that the project would demonstrate that upland areas can be protected from routine erosion without sacrificing important shoreline and near-shore habitat for fish and invertebrates. Shoreline armoring, like bulkheads or riprap, is widely used to stem erosion but at the expense of shoreline plants or submerged aquatic vegetation

(SAV or seagrass beds) that cannot survive the energy of reflected waves. A project design was developed with Dr. Scott Douglass of the University of South Alabama Civil Engineering Department, who recommended installing seven 20-foot, pile-supported, timber structures separated by 30-foot gaps along the shoreline's southernmost 320 feet. His plan included placing clean sand fill behind the installed structures to create artificial headlands and grading the escarpment in the gaps between the



Seven twenty-foot, pile-supported, timber structures were installed along the Dog River Park shoreline with clean sand fill placed behind them to create artificial headlands.

structures to prevent further sedimentation and provide areas for planting. He also recommended placing riprap seaward of the timber structures to prevent scouring from reflected waves and provide habitat for aquatic critters.

Project success hinged upon development of public-private partnerships. Before construction began, a memorandum of understanding between MBNEP and the City of Mobile was developed and signed. Dauphin Island Construction was awarded the construction contract and installed the timber structures five feet seaward of the mean high water line in March, 2010. Finding silt-free sand for creation of headlands and pocket beaches in gaps was challenging. Project management turned to the Alabama State Port Authority, who provided 220 tons of pristine, silt-free sand recently dredged from the new turning basin.

In April, City of Mobile Public Works staff removed the large Chinese Tallow/Popcorn Tree and excavated and graded escarpments in gaps, and the project area was temporarily stabilized with erosion blankets. The City also provided 240 tons of riprap - enough for placement seaward of timber structures with enough left to place just offshore in gaps to calm wave energy. On May 21, the day before the annual DRCR Dog Paddle, a cleanup was undertaken and 1,500 plants – including southern wild rice, cattails, black needle rush, pickerel weed, duck potato, arrowhead, and salt meadow cord grass – were planted by DRCR members, Southern Native Plants staff, and local volunteers.

A single bald cypress tree was planted on each headland. Additional emergent plants, transplanted from consultant Gena Todia's pond in Fairhope by teachers participating in Dauphin Island Sea Lab Discovery Hall summer programs, supplemented the first planting. Educational signage describing the location of the project in the watershed, project description, and ecological benefits conveyed by the project are currently in development and will be installed early in 2011. To decrease wave energy along the project area, Marine Police staff expanded the "No Wake Zone" by placing signage at the southernmost point of the restored shoreline.

The completed project provides a highly visible shoreline stabilization demonstration that provides a habitat-enhancing alternative to traditional shoreline armoring at a unique, municipal, public access venue. It has fostered a healthy working relationship between MBNEP and the City of Mobile. Turning a \$26K investment by the ANEP/NOAA into over \$80K of implementation provides a model of public-private partnership to effect positive environmental change. The stabilized shoreline is being monitored for erosion at the margins of the installed headlands and for the re-occurrence of aquatic nuisance species, like popcorn trees and elephant ears.



The Dog River Park shoreline stabilization project was completed in November 2010 and is currently being monitored on a regular basis.

Above, native shoreline plants, including southern wild rice, cattails, duck potato, and arrowhead were planted by volunteers to create habitat and stabilize the shore.

To Cut or Not to Cut? – That is the Question

Construction to fill Dauphin Island's Katrina Cut is seen here in July 2010. Filling of the breach began last summer to prevent oil from reaching sensitive wetlands in Mobile Bay and Mississippi Sound.

Photo submitted by Brian Jones.



BY GEORGE F. CROZIER, DAUPHIN ISLAND
SEA LAB

The natural course of barrier island evolution involves a couple of major processes, one of which is inlet formation which leads to sand movement landward through the cut. The second occurs when the inlet migrates downdrift until it disappears, or it may fill naturally, more or less in situ. Hurricane Katrina cut a one-mile swath through the west end of Dauphin Island. The cut has remained in place over the subsequent five years, although with some periods of shoaling and then deepening again with passage of storms. The drought and reduced hydraulic head from Mobile Bay seemed to favor landward movement of sand and salt water.

As a consequence of the combination of factors, two biological events occurred. Robust seagrass beds developed in Mississippi Sound inside and on either side of the cut, and the increased salinity resulting from the cut and the drought led to a bloom of the oyster drill, *Stramonita haemastoma*. Seagrass beds are an

extraordinarily productive habitat for a variety of Gulf of Mexico species, many of recreational and commercial value. The oyster drill, on the other hand, is a voracious predator on the oyster reefs capable of eating the adult oysters, but, even more importantly, taking recently settled spat and younger oysters like cattle grazing a pasture. The impact on the commercial harvest can be devastating. The harvest is in the range of only 10 % of what it had been five years ago – pre-Katrina Cut formation.

So there is a clear conflict of resource management found in this discourse. The oyster industry had been pushing hard for the closure of the cut even while the grass beds were developing inside the inlet as a result of elevated salinities. It remains unclear as to whether the cut or the drought is the larger contributor to the current situation.

But the Deepwater Horizon incident provided a clear answer to the problem as viewed by the oyster industry. Computer models clearly predicted the movement of surface oil residues into the eastern end of the Sound, so obviously BP should pay for the filling of the cut. Thompson Engineering in Mobile was awarded a \$13 million contract to construct a rock and sand-filled plug for the mile-wide inlet. The Corps of Engineers emergency

permit to fill in the Katrina Cut requires that the state undo the project — removing all of the rock poured into the gap — by June 9, 2011. The alternative to use sheet piling was discarded because of gas pipelines somewhere beneath the cut.

The process of filling has continued despite the cessation of the oil spill and the opinions of a number of coastal scientists that the rock plug may continue to erode from one or both ends. The current plan of two parallel rows of rock with sand in the middle appears to be functioning as a “perched beach” which traps mobile sand between parallel structures.

Two questions remain. One, will the ends of the plug remain attached or will we be left with a one-mile long rock fishing reef within an even wider inlet with nice grass beds to the north? Or two – will this plug adequately reduce the salinity in the eastern end of Mississippi Sound enough to inhibit oyster drill proliferation during drought conditions? Time will tell, since it seems unlikely that BP will pay to remove the structure as required by the Corps permit.

Current events

March

March 1-2, 8:30 a.m. - 4:45 p.m.

What: Preparing for Meaningful Evaluation Workshop - The workshop addresses in detail the increasing demand for evidence of program accountability and impact by preparing participants for a meaningful evaluation. Participants will actively engage in creating a comprehensive evaluation plan. Registration fee for the individual courses is only \$15.00. Course materials and lunches will be provided.

Where: Weeks Bay National Estuarine Research Reserve, Fairhope, Ala.

For more information contact Michael Shelton (251-928-9792 & michael.shelton@dcnr.alabama.gov) or Avia Huisman (228-475-7047 & avia.huisman@dmr.ms.gov).

March 16-20

What: 40th Annual Benthic Ecology Meeting

Where: Renaissance Riverview Plaza and Battle House Hotel

For more information visit <http://bem.disl.org>.

April

April 2, 9 a.m. - 3 p.m.

What: Weeks Bay Day - Join us at the Weeks Bay Resource Center for activities and presentations to celebrate the 25th Anniversary of Weeks Bay National Estuarine Research Reserve.

Where: Weeks Bay National Estuarine Research Reserve, 11300 US Highway 98, Fairhope, Ala.

For more information contact Angela Underwood (251) 928-9792, or angela.underwood@dcnr.alabama.gov.

April 16, 10 a.m. - 2 p.m.

What: Discovery Day - This fun-filled family event includes a variety of environmentally-themed children's activities; an Open House at the Research Facilities of the DISL where the public can interact with scientists and graduate students to explore their ongoing research projects; and free children's admission to the Estuarium, the aquarium at the Sea Lab.

Where: Dauphin Island Sea Lab Estuarium
For more information visit www.disl.org.

April 26, 10 a.m. - 2 p.m.

What: Coastal Kids Quiz - an environmental quiz competition for teams of fifth graders in Baldwin and Mobile Counties. Winning teams receive scholarship bonds and their teacher sponsor receives funds for conservation activities in the classroom.

Where: Daphne United Methodist Church, Daphne, Ala.

To become a sponsor or volunteer, contact Anna Keene at 251-990-6002 or akeene@joinacf.org.

April 30

What: Baldwin County Oyster Gardening Workshop

Where: Alabama Gulf Coast Convention and Visitor's Bureau, Orange Beach, Ala.
or more information contact PJ Waters at 251-438-5690 or waterph@aces.edu.

May

May 9, 8 a.m. - Noon

What: Weeks Bay Area River Cleanup Weeks Bay Watershed Project and the Weeks Bay Reserve are hosting the Fifteenth Annual Weeks Bay Area River Cleanup. Trash and debris remain a problem in the waterways around Weeks Bay. To respond to the insult, the Weeks Bay Area River Cleanup brings together concerned citizens to pick up the discarded material along the banks and under bridge crossings. These actions combine to protect local water resources. Lunch and t-shirts are provided.

Where: Weeks Bay National Estuarine Research Reserve, 11300 US Highway 98, Fairhope, Ala.

For more information contact Michael Shelton at 251-928-9792 or michael.shelton@dcnr.alabama.gov.

May 14

What: Mobile County Oyster Gardening Workshop

Where: Auburn Shellfish Laboratory; Dauphin Island, Ala.

For more information contact PJ Waters at 251-438-5690 or waterph@aces.edu.

Alabama current connection

About the Mobile Bay National Estuary

Program: The Mobile Bay National Estuary Program's mission is to lead the wise stewardship of water quality and living resources of the Mobile Bay and Tensaw Delta. The MBNEP serves as a catalyst for activities of estuary stakeholders, helping to build community-based organizational capacity for sound resource management and leveraging commitment and investment to ensure the estuary's sustainability. For more information, please contact the MBNEP office at 251-431-6409.

About ADCNR, State Lands Division, Coastal

Section: In an effort to protect and enhance coastal resources and reduce potential conflicts between environmental and economic interests, the Alabama Coastal Area Management Program (ACAMP) was approved by the National Oceanic and Atmospheric Administration (NOAA) in 1979. The ACAMP is administered through the Alabama Department of Conservation and Natural Resources, State Lands Division, Coastal Section. For more information, please contact the Coastal Section office at 251-621-1216.

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Alabama Current Connection encourages reprinting of its articles in other publications. If you have recommendations for future articles or would like to subscribe, please contact the editor:

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We reserve the right to edit submissions for content and grammar.

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September

September 17, 8 a.m. - Noon

What: Alabama Coastal Cleanup

Where: McNally Park (4380 Park Rd., East of DIP and one mile north of the Dog River Bridge) or various locations in Baldwin and Mobile Counties.

Alabama current connection

Dauphin Island Sea Lab
Marine Environmental Science Consortium
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Dauphin Island, Alabama 36528

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Helen Wood Park Restoration Completed

By SARA SHIELDS, MOBILE BAY NATIONAL ESTUARY PROGRAM

Helen Wood Park's new signs will educate park visitors about salt marsh habitat, the marsh restoration project, and the Mobile Bay watershed.



The Mobile Bay National Estuary Program, Alabama Department of Conservation and Natural Resources-State Lands Division, and the City of Mobile completed the final phase of the restoration of Mobile's Helen Wood Park in September by installing educational signage about the project and the park's saltmarsh ecosystem.

Beginning in 2005, project partners installed permeable parking, a boardwalk, and gazebo at the site, which had been donated to the State of Alabama by Ms. Helen Wood of Daphne in 2004. In 2008, project partners began the restoration of a 3.5 acre salt marsh at Helen Wood Park which was heavily infested with the invasive plant *Phragmites*. Over the past two years, the site has been excavated to restore the natural hydrology of the

wetlands and the invasive plants have been treated with an environmentally-friendly herbicide. In November 2009, a volunteer planting re-established the marsh by introducing over 13,000 new native plants and marsh grasses into the area.

The project has been successful in restoring the natural water flow and native plant population to the marsh.