

# Alabama current connection

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## Coastal Alabama Conservation Corps

*Building A Workforce Committed  
to Creating a Clean Water Future*

In early February, ten young adults – three women and seven men, climbed into leased trucks bound for north central Florida to be trained as the first Coastal Alabama Conservation and Resiliency Corps.

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# Coastal Corner

By RANDY C. SHANEYFELT,  
ALABAMA DEPARTMENT OF ENVIRONMENTAL  
MANAGEMENT, COASTAL PROGRAMS

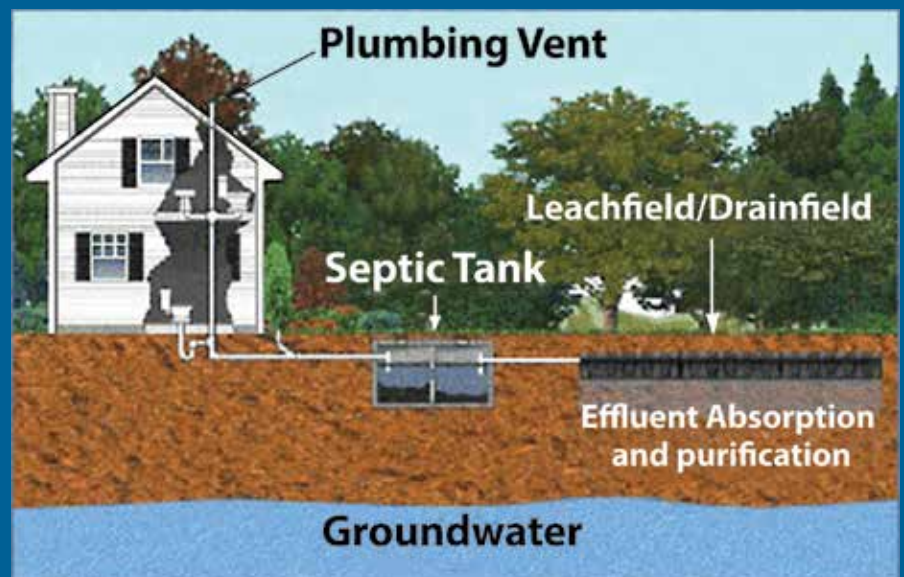
## "An Ounce of Prevention" You and Your Septic Tank

### *Residential Wastewater an Issue for Coastal Alabama*

**M**ost rural homeowners do not realize that they are responsible for maintaining their own private sewage treatment system! If you are like most homeowners, you probably never give much thought to what serious things could happen if waste goes untreated out of your tank system. But if you rely on a septic system to treat and dispose of your household wastewater, then it is important that you know what to do to keep your septic system running efficiently and what can hurt or impair your system. In our coastal communities, proper operation and maintenance of your septic system can have a significant impact on how well it works and how long it lasts. Pump-outs and inspection are like performing routine maintenance for your automobile; it is important to learn to do these things and help spot potential problems ahead of time.

With proper installation, care and maintenance, your septic system can continue to properly recycle your residential wastewater and continue working effectively for decades. Often there are warning symptoms of an impending system failure, but most homeowners are not aware that they are courting disaster until after the fact. Local studies at the University of South Alabama indicate that

#### Basic Components of a Septic System



pump-out maintenance and inspection every 4-5 years can help to prevent catastrophic failure of your system. Here, truly "an ounce of prevention" is definitely worth "a pound of cure!"

When a septic system needs maintenance, or fails, the inadequately treated domestic wastewater can pollute local wells, streams, rivers, lakes, and ponds. This can lead to the potential for exposing family, friends, and neighbors to waterborne diseases and other serious health risks, especially if untreated effluent

reaches the groundwater. Pathogens and nutrient enrichment are potential nonpoint source (NPS) pollutants of concern.

Through NPS prevention projects sponsored by Alabama's Coastal Nonpoint Pollution Control Program, NOAA and EPA have joined efforts with the local Health Departments, County Conservation Districts and the Gulf Coast RC&D Council to promote knowledge and support the maintenance of residential septic tank systems in coastal Alabama. Your participation in





**Inspection & Maintenance Workshops** in Baldwin and Mobile counties that **provide FREE Pump-Outs** of residential septic tanks by certified AOWB Pumpers. *Please do not delay, the number of Pump-outs is limited and attendance is required to obtain your free Pump-out/Inspection.* Currently **Sector 2 Workshops** (see green outline on maps below) are being held in these coastal areas.



this program can help you to learn how to better maintain your septic system, saving you money in the long run and helping to protect the health of your community. The Alabama NPS Management Program has provided funding to develop a multi-year project (2016 to 2019) that will host public **Coastal Alabama Septic Tank**

**For important Septic Tank I&M Workshop information, please contact:**

**Baldwin County residents:**

Ms. Rhonda Bryars at Baldwin County Conservation District:  
(251) 937-3297, ext 3  
rhonda.bryars@al.nacdnet.net or

**Mobile County residents:**

Ms. Tracey Hall at Mobile County Conservation District:  
(251) 441-6505 ext 3  
thall@mobile-county.net

## Current SECTOR 2 Workshop Areas in Alabama





# Estuary Reflections

By ROBERTA SWANN, DIRECTOR,  
MOBILE BAY NATIONAL ESTUARY PROGRAM



*Transforming the Maple St. Canal  
in the Three Mile Creek Watershed*

## Coastal Alabama Conservation Corps *Continued from page 1*

The Corps was funded through a National Fish and Wildlife Foundation *Creating a New Generation of Conservationists* grant secured by the Mobile Bay National Estuary Program (MBNEP) with a purpose of creating wise environmental stewards in the Three Mile Creek watershed. Joined by project partners, MLK Avenue Redevelopment Corporation of Mobile (MLKARC) and the Student Conservation Association (SCA) of Washington DC, the initiative was piloted in response to concerns of a group of leaders from the MLK Avenue area focused on strengthening the cohesive functioning of their surrounding community. These leaders voiced a need for area young people to become more connected with local environmental assets. They suggested looking for opportunities

to combine local environmental education with employment opportunities, and the idea for a youth conservation corps was born.

Plans solidified as the \$250K grant was awarded in August 2016. The MLKARC assumed recruiting and public involvement responsibilities; SCA handled human resources administration, training, payroll and benefits, and provision of two trained SCA Leaders; and MBNEP provided local program oversight, project identification, watershed education, training assistance, funding, and grant management. SCA contributed \$100K in matching funds, with local matching contributions of \$25K by Alabama Power, \$10K from the Crampton Trust, and \$2.5K contributions from Councilmen Levon Manzie and Fred Richardson and \$5K each from Mayor

Sandy Stimpson and Commissioner Merceria Ludgood.

Program objectives included training and employing ten Corps members to carry out smaller-scaled restoration projects recommended in the Three Mile Creek Watershed Management Plan. Project outcomes include improving environmental stewardship and awareness among minority, low-income, young adults; improving training for and access to employment in an expanding Gulf restoration economy; and increasing local “ownership” of environmental resources of Three Mile Creek through hands-on restoration and management activities to improve habitat condition and water quality.

Ali Brown of Alton, IL, and Randal Weamer of Phoenix, AZ, experienced SCA team leaders, arrived in Mobile in



January to provide supervision, training, assistance, and guidance to the local Corps members. They found places to live; occupied Suite J at the Renaissance Plaza across from Bishop State Community College (Corps Headquarters through July); paddled into wooded wetlands surrounding the historic lower streamway of Three Mile Creek and One Mile Creek; and prepared to train and catalyze an enthusiastic, educated, and capable pilot Corps.

A Corps work week typically includes 5 eight-hour days – four “in the field,” undertaking restoration measures and applying skills acquired during training including certifications in chain saws, prescribed fire, wilderness and basic first aid training and CPR, and canoeing. On the fifth day, they are engaged in advanced professional training and learning about coastal resource management, communication skills, and environmental issues. They are also working to develop speaking skills to carry the message of environmental stewardship to Mobile County sixth grade students through a curriculum-appropriate *Watersheds 101* presentation.



*Weeks Bay*



*Conservation Corps members*

Members are paid \$10 per hour with health benefits. At the conclusion of their term, each will be eligible for educational financial assistance through the AmeriCorps program.

Pilot Corps members include Shaila Fletcher, J’Kobi Wheat, Ajene’ Hires, Charleston Ingraham, Ken White, Kevin Kidd, Eric Lucas, JaMarcus Talib, and Claudia Washington. Their typical work day includes pushing off from Scotch Gulf Lumber wearing snake boots, work clothes, hard hats, and gloves; paddling in pairs to remote parcels of habitat-rich, wooded wetlands; carrying herbicide, machetes, and spray bottles through thick vegetation; and using different methods and herbicide concoctions to eliminate four invasive problem species: Popcorn trees (or Chinese tallow), Chinese privet, elephant ears/taro, and alligator weed. With rapid reproductive abilities and lacking natural grazers, these species spread incredibly fast, frequently “squeezing out” the native species on which local birds, wildlife, and fish depend. Acres of wetlands have already been treated and thousands of popcorn trees, privet, and taro plants

eliminated. The Corps has also planted pine trees in flood plains of restored streams and improved drainage in the flood-prone Toulmins Spring Branch subwatershed. They


planted native marsh vegetation to create four new acres of salt marsh habitat on the recently restored northern tips of Mon Louis Island.

Partners hoped at the onset of the program, Corps members would grow from new experiences in remote habitats, effecting positive environmental changes.

We hoped that they would assume new attitudes of stewardship, ownership, and appreciation of the natural assets in the lower watershed. We have not been disappointed. What we did not anticipate was how interacting with our new friends in the Corps would affect us: opening our minds, increasing our appreciation of their qualities and potential, and filling us with optimism and hope that their transformation might be expanded throughout their home communities, which bear the downstream brunt of nonpoint source pollution and impacts of climate change.

**With this session concluding at the end of July, partners are investigating ways to make this a sustainable feature towards Creating a Clean Water Future.**





# Shoreline Stabilization and Marsh Creation

## *on the Northern Tip of Mon Louis Island*

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

Photo courtesy of Sam St. John/flythecoast.com

**In November 2013, the National Fish and Wildlife Foundation's Gulf Environmental Benefit Fund awarded the Mobile Bay National Estuary Program over \$3.24 million to restore the chronically-eroded, habitat-rich northern tip of Mon Louis Island, undertake a sediment loading analysis, and develop a comprehensive watershed management plan for Fowl River.**

The MBNEP has assumed a watershed approach, informed by sediment analyses, to ensure restoration efforts are based in science and fit into an overall management program.

Restoration of the storm-vulnerable northern tip of the island, however, was viewed as an emergency, to protect existing fisheries habitat and to mitigate storm-related hazards to relatively pristine upstream waters.

After soliciting Statements of Qualifications, MBNEP selected Thompson Engineering to design stabilization of the vulnerable shoreline using habitat-friendly measures and creation or enhancement of up to eight acres of salt marsh habitat as quickly as possible. The path to restoration was not to be smooth and straight. The design team got to work, performed hydrographic and topographic surveys and geotechnical investigations, evaluated coastal processes, and analyzed alternatives for restoration.

A continuous rock breakwater was selected as a "tried and true," aesthetically-

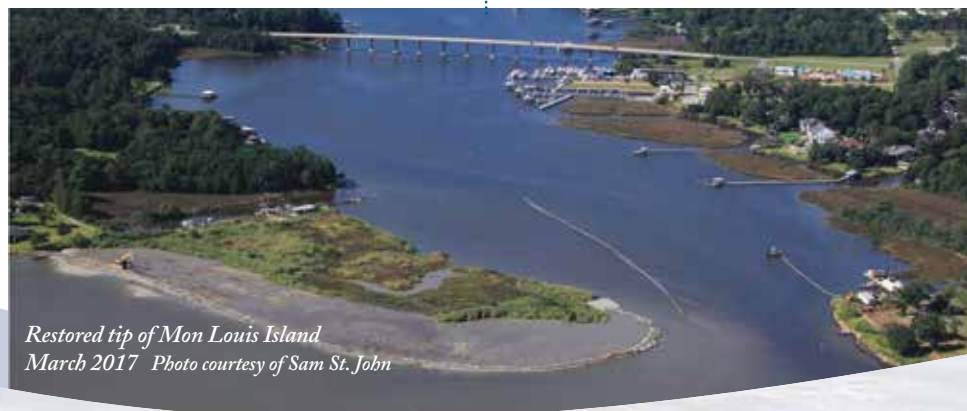
agreeable measure for stabilizing a shoreline in this high energy area with a particularly long "fetch," or distance over which waves can build from a prevailing direction, of over 20 miles. The next consideration was the new shoreline footprint, which ranged from the ambitious 1979 shoreline (eight acres), a more conservative 1997 alignment (four acres), or along the current shoreline with no new habitat created. This alternative depended upon the availability of sediment appropriate for marsh creation.

Initially, Thompson proposed dredging sediment directly from the adjacent Fowl River navigation channel, but sediments there, though in large quantity, were silty and unsuitable for marsh creation. They investigated transport and delivery by truck or barge from dredge disposal sites, but costs were prohibitively expensive. Sandier material was available directly offshore, so the idea of borrowing material there via hydraulic dredge was reconsidered. However, The U. S. Army Corps of Engineers

strongly discouraged this option, leaving few alternatives and consideration of shoreline stabilization without creating new habitat. The path to restoration was unclear.

In spring 2015, Corps operations personnel reported to MBNEP that preliminary sampling of sediments in the Corps' Fowl River Open Water Disposal Area (FROWDA) revealed a sandy composition, potentially sufficient for marsh creation. Thompson sampled and confirmed the quality of the sediment, and a potential source of material was identified. MBNEP contacted AL State Senator Bill Hightower about securing funds to dredge the shallow and neglected Fowl River navigation channel. Sen. Hightower, with the Governor's approval, secured \$800K from the State Deepwater Horizon Impact Fund to finance dredging of the channel. The intermediate option, breakwater placement at the 1997 footprint and creation of four acres of salt marsh, was selected.

*Continued on page 14*



Restored tip of Mon Louis Island  
March 2017 Photo courtesy of Sam St. John



# *Derelict Crab Traps* Removed from Mobile Bay

By DAVID RAINER, ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

**A**nyone who has crossed the north end of Mobile Bay on either the Bayway or Battleship Parkway at low tide in the last few years likely noticed the numerous crab traps littering the shallow water on the south side of the thoroughfares.

If you drive across that area now, very few crab traps remain on those shallow flats thanks to the Alabama Marine Resources Division's Volunteer Derelict Crab Trap Removal Program that was conducted by volunteers and sponsors back in March of this year.

Despite poor weather conditions, the volunteers were able to remove 84 derelict traps from the northern end of Mobile Bay that could have become hazards to navigation for recreational and commercial fishermen and boaters in that area.

The Marine Resources Division (MRD) teamed up with the Mobile Bay National Estuary Program and the National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program to conduct the cleanup.

Jason Herrmann, Marine Resources Biologist, said MRD personnel conduct surveys of derelict crab traps on the flats during low tide. "We surveyed other areas in the upper bay and then decided on the sites that needed the most attention," Herrmann said. "Some areas wouldn't have but one or two traps. The count on the flats just south of I-10 and the Battleship Parkway was 109 traps, and about 100 of those were on the flats right across from the (U.S.S. Alabama) battleship."

Using the Chocolotta Bay boat ramp as the staging area, a dozen volunteers with four boats showed up under less-than-ideal conditions. "The wind was not on our side," Herrmann said. "The tide was coming up and the wind was blowing from

the southeast and covering up the traps. We strictly focused on the flats across from the battleship. I told them the weather was coming in and to get out and get as many traps as possible before it got here."

Of course, any live crabs that were in the derelict traps were released immediately. Volunteers released 157 live crabs and found only one dead crab in the traps. Herrmann said there was no by catch (fish or other aquatic species) in the traps.



Herrmann said there is really no way to tell how long the traps had been derelict. "Some of the traps were in pretty good shape and some were torn to shreds," he said. "The last time we had a cleanup was in 2010. We do the counts twice a year, and we apply for grants. We received a grant to cover this cleanup and two more through 2019. Based on the counts, we decided that there was enough to organize a cleanup. As in the past two Derelict Crab Trap recoveries, Big Red Container of Daphne provided a haul-away container to dispose of the recovered traps.

"What we are looking for are crab pots that are visible and accessible to volunteers. There are more derelict traps out there, but

they're not accessible to our volunteers."

"Additionally, the derelict traps ghost fish. They're unidentified and underwater. They continue to catch crabs for a certain period of time. We don't want traps out catching fish and crabs indiscriminately that aren't being harvested," Herrmann said. Another group of volunteers helped ensure the cleanup day would be successful. Several kayakers volunteered to take PVC poles into the cleanup area and mark the derelict

traps that might become submerged because of tidal activity or the southeast wind. The kayakers managed to mark more than 60 traps for removal. "I think we did a good job given the conditions," Herrmann said.

After the derelict trap cleanup ended, the volunteers and sponsors were treated to food and refreshments. Participants included Thompson Engineering, Alabama Department of Public Health, The Nature

Conservancy, Lafarge/Holcim and the U.S. Fish and Wildlife Service. "Holcim brought a food truck," Herrmann said. "Normally we'll have between 30 and 40 volunteers, so that's what they planned for. We had food for everybody, and we had enough left over to take to the Salvation Army to distribute to the needy."

Still in a volunteering mood, the participants decided to help with another cleanup. This time the volunteers picked up all the trash at the Chocolotta Bay boat ramp. "We did some good for the environment," Herrmann said. "I want to offer a great, great 'thank you' to all the volunteers and sponsors."

# Rain Barrel Program Teaches Coastal Residents *How to Reduce Stormwater Impacts*

By CHRISTIAN MILLER, WATERSHED MANAGEMENT COORDINATOR, MOBILE BAY NATIONAL ESTUARY PROGRAM

**C**oastal Alabama receives more than five feet of rain per year. In urban areas, most of this water washes across hard, or impervious surfaces, picking up and carrying pollutants into our waterways. The U.S. Environmental Protection Agency considers stormwater runoff to be the greatest threat to water quality in the United States. As more people continue to move to coastal areas, impervious surfaces and, therefore, volume and velocities of stormwater runoff continue to increase.

Rainwater harvesting, the practice of collecting and storing stormwater runoff from roofs and other hard surfaces for future use, is one practical way to reduce impacts associated with residential stormwater runoff. An inch of rain falling on a typical 1,000-square-foot roof yields over 600 gallons of water. Installing a rain barrel at your home is an inexpensive way to capture and store some of this water for later use. With a rain barrel, you'll not only help reduce stormwater runoff, but you'll also have a supply of free, non-chlorinated, soft water for washing your car, watering plants, and many other household uses.

Although rain barrels can be purchased through many retail outlets, they are generally expensive and don't offer much in the way of education for the consumer. Through an ongoing series of workshops, residents of Mobile and Baldwin counties have been learning how to construct and set up low-cost rain catchment systems at their home, along with other ways to



*Workshop showing residents how to create rain barrels to store water and prevent stormwater runoff.*

conserve water and protect water quality along the coast. These workshops are continuously scheduled throughout the year, in coordination with partners in both coastal Alabama counties, and last approximately two hours.

The success of the program has been due in large part to the partnerships that have been formed. Local municipalities, including the cities of Daphne, Fairhope, Foley, and Mobile and the Town of Dauphin Island have all hosted rain barrel workshops. "These workshops have been a great help to us on the local level," said Ashley Campbell, Environmental Programs Manager with the City of Daphne, "They provide an opportunity to inform the public of the issues we are facing related to stormwater management on the coast."

The Prichard Drainage Study, funded by the MBNEP for Mobile County,

and hydrologic modeling by Latif Kalin and Enis Baltaci at Auburn University's School of Forestry and Wildlife Sciences analyzed conditions in the Toulmins Spring Branch Watershed, a subwatershed of the greater Three Mile Creek Watershed, and examined impacts of stormwater runoff in the Bessemer community of Prichard. These studies recommend the installation of Low Impact Development features, including strategically located rain barrels, as a means of alleviating chronic urban flooding in the area. Follow-up outreach in the community also indicated a strong willingness to receive and use rain barrels at home. Currently, plans are underway to work with partners and homeowners on a pilot project to install approximately 30 rain barrels at homes and local residences around Toulmins Spring Branch. If successful, this project could be expanded throughout the community to significantly reduce the impacts of localized flooding throughout the subwatershed.



A group of approximately 15 people are on a canoe tour on a calm river. They are wearing hats and casual clothing, and are holding paddles. The canoes are in various colors, including red, green, and black. The background is a dense line of green trees and foliage. The water is still, reflecting the canoes and the people.

# Thompson Engineering *Takes on Trash in Our Waterways*

By RENIE BAYA KENNEMER, THOMPSON ENGINEERING

*Thompson Engineering employees and Partners for Environmental Progress joined Mobile Bay National Estuary Program staff for a canoe tour of Three Mile Creek.*

**I**n June 2016, Thompson Engineering joined Partners for Environmental Progress (PEP) and the Mobile Bay National Estuary Program (MBNEP) on a canoe trip tour of a section of Three Mile Creek in downtown Mobile. The canoe trip was designed to give participants a look at the historic waterway slated to become a city-sponsored nature trail flowing from the University of South Alabama to the Mobile River. Once on the water, the tour's showstoppers became apparent: a meandering creek home to Alabama's star pitcher plants, young alligators and even a blue heron rookery of young birds entertaining us with their wobbly performances. About 45 minutes into the tour at a bend in the creek, the show stopped, the tour blocked by invasive plants and years of trash.

"I think most of us on the tour were surprised to learn that this nature trail was hiding in the center of downtown Mobile," said Don Bates, VP of Operations at Thompson Engineering. "We were also surprised to learn that discarded trash was keeping more people from enjoying this natural resource. That's when we began thinking about how we could help."

## Maple Street Mobilization

Thompson met with the Mobile Bay National Estuary Program, Partners for Environmental Progress and the Alabama Department of Conservation and Natural Resources to develop a strategy. Using city maps and the experience of paddlers who knew the area, the group decided to tackle the trash from the Maple Street Tributary. The waterway is one of Three Mile Creek's most impacted tributaries, capturing decades of the city's litter conveyed by stormwater runoff.

MBNEP and Thompson Engineering collaborated on a plan to get volunteers on the water. In November 2016, the group planned an Amphibious Assault. MBNEP rented canoes, purchased hand-held litter grabbers, gloves, nets and trash bags and invited its Business Resource Committee, PEP and University of South Alabama students to get involved. Thompson provided lunch, safety training and employee volunteers with kayaks.

"We had quite a challenge in front of us," said Rick Frederick, Community Relations Manager with MBNEP. "On a scouting mission a few days before the cleanup, we found plastic bottles and bags, rusted aluminum cans, tires, and Styrofoam from urban runoff so thick it appeared you could walk across it from bank to bank. We could tell that much of it had existed for years in this small creek. It was overwhelming, and I even wondered if it was a lost cause."

*Continued on page 10*





*A fallen tree in the creek was trapping trash.*



*200 bags of trash and 12 tires were collected in the waterway and on the shoreline.*

On cleanup day, a few volunteers paddled out to a fallen tree that was trapping trash, and worked that area for hours. Other volunteers covered a 200-yard-stretch of the tributary, bagging floating debris. Others tackled the shoreline by foot. In only half a day, volunteers collected 200 bags of trash and twelve tires.

“While there is still much work to be done, this stream segment and surrounding area now resembles a city park more than a dump site,” said Frederick. “It’s been transformed into a showcase of how Three Mile Creek could be revitalized into a tremendous asset for the City of Mobile.”

## Where Else Can We Tackle Trash?

While MBNEP and Thompson worked to find a way to make a difference at Maple Street, another group of Thompson employees was tackling other trash problems near our corporate office. The group began working together to pick up trash along the banks of an urban stream. Every other month, employees fill bags with Styrofoam cups, plastic bottles, food wrappers and oddball items like bike wheels, PVC pipe and furniture.

“With my work in transportation design, I’m always thinking about drainage and water runoff as part of the projects I work on,” said Chase Horton, Engineering Associate at Thompson Engineering and a volunteer with the group. “I do that work

from a computer. But, I think it’s also important to get out from behind the screen and help my community with these issues. Trash pickups are an easy way to do that.”

In September 2016, Thompson employees found a way to use the company’s offshore drilling barge to clean up trash in another watershed. Partnering with the Weeks Bay Foundation for the Alabama Coastal Cleanup, Thompson Engineering employees used the barge to ferry volunteers and their kayaks to hard-to-

reach spots along Fish River and Weeks Bay. The barge also served as a collection point for large debris. A second Thompson team mobilized the same day in small boats on Dog River, helping volunteers transport trash back to shore. In February 2017, we were back at Weeks Bay with the barge, ferrying volunteers and hauling trash in an effort that collected 1,000 pounds of trash,” said Bates. “Now, we are also recycling the materials we collect when possible.”



*Thompson's "Litter Gitter" team along the Montclair Creek Fitness Trail*



## Birth of the "Litter Gitter"

Coastal cleanups have been mobilizing volunteers for decades, but the continual return of stormwater-borne litter can be discouraging for people who want to see shorelines stay free of trash. "For years I've been thinking about a tool, some sort of trap, that would make cleanup missions more meaningful," said Don Bates. The prototype – dubbed the Litter Gitter – that Bates had in mind became a reality shortly after the Maple Street Tributary cleanup occurred. "We identified an ideal place to install the litter trap and had the partners to help the idea succeed," said Bates. Representatives from MBNEP and the City of Mobile Engineering Department met with Bates and participated in a site visit before approving the testing of the prototype at the Maple Street location.

A new company, Osprey Initiative, was launched to produce the Litter Gitter and to manage its deployment and maintenance. The first Litter Gitter was deployed at Maple Street immediately after the November 2016 cleanup and it is monitored weekly. Since installation, it has trapped more than 130 pounds of litter channeled into the tributary through stormwater drainage pipes. Bates estimates that the trap is collecting 80 to 90% of the floating litter that enters the tributary. Additionally, he is able to sort out plastic and metal recyclables. Data is captured and quantities are reported to the City of Mobile for inclusion in the city's MS4 reporting. In March, Bates installed a secondary boom behind the Litter Gitter to better gauge its effectiveness. Most importantly, the area that was cleaned up last November has remained relatively clear of litter and other trash.

**I am optimistic that the Litter Gitter will provide another tool in our arsenal to combat litter transported through our urban stormwater drainage system.**

**Don Bates**  
*Vice President Operations,*  
*Thompson Engineering*

The Litter Gitter is designed for small streams, making it easy to install and easy to empty. Based on the success of the Maple Street prototype, MBNEP and PEP are sponsoring a pilot program and the installation of three additional Litter

Gitters, two in Mobile and one in Prichard.

The team is working through the approval process with several resource agencies with a mid-June 2017 deployment goal.

"I am optimistic that the Litter Gitter will provide another tool in our arsenal to combat litter transported through our urban stormwater drainage system. The devices can be placed tactically

at areas where we know litter is a problem, preventing the fouling of downstream greenways," said Bates. "This entire process has been a rewarding experience, watching so many groups come together to take on a recurring problem. We've been able to make a



*Don Bates installing the Litter Gitter*

big change in a small amount of time, so I'm excited to see what happens next."

For more information on Thompson Engineering's litter removal efforts, contact Don Bates at [dbates@thompsonengineering.com](mailto:dbates@thompsonengineering.com).



*Trash is trapped in the waterway as a result of the Litter Gitter.*





# Alabama Coastal Cleanup Celebrates 30 Years of “Keeping the Trash Out of the Splash”

*Volunteers on Dauphin Island having fun while making an impact on the environment.*

By ANGELA UNDERWOOD, NATURAL RESOURCES PLANNER, ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, STATE LAND DIVISION- COASTAL SECTION

**This is shaping up to be a big year for the Annual Alabama Coastal Cleanup. In the 30 years since its humble beginning with just 2 clean-up sites, the program has grown to include over 30 cleanup sites and more than 5,000 volunteers annually.**

Participants of all ages can choose from a variety of cleanup zones across Mobile and Baldwin counties, as well as inland counties, where they can engage in becoming better environmental stewards and network with others interested in improving their communities.

An exciting addition to this year's 30<sup>th</sup> annual cleanup will be an effort to incorporate enhanced recycling opportunities for trash collected during the cleanup event. The Weeks Bay Foundation, Thompson Engineering and the Alabama Coastal Cleanup will partner with the TerraCycle

Company to provide plastics recycling at many of the cleanup zones. TerraCycle offers free recycling programs funded by brands, manufacturers, and retailers around the world to help collect and recycle hard-to-recycle waste, such as washed-up trash found along beaches and shorelines.



*Cub Scouts at 2016 cleanup.*

Given the recent recognition of the harmful effects of microplastics in the environment, we are excited to be a part of this effort to remove and recycle plastics from our area waterways.

Over the years, more than 87,000 volunteers have picked up more than 1.5 million pounds of trash from Alabama's beaches and shorelines. This includes an incredible 639,361 cigarette butts, 189,610 plastic bottles, and 102,981 plastic bags. As you can see, for 30 years the Alabama Coastal Cleanup has been bringing people together to help protect our marine environments and wildlife. And thanks to volunteers, we are truly making a difference. I hope I can count on you to join us this year on September 16 to Keep the Trash out of the Splash! For details and cleanup sites, visit [www.alabamacoastalcleanup.com](http://www.alabamacoastalcleanup.com).



# Water Rangers

## Water Data and Pollution Reporting at Your Fingertips

By JASON KUDULIS, MONITORING AND SCIENCE COORDINATOR,  
MOBILE BAY NATIONAL ESTUARY PROGRAM

**T**he Mobile Bay National Estuary Program (MBNEP) Community Action Committee (CAC) works to cultivate and support local grassroots watershed groups. Boots on the ground grassroots organizations often serve as a voice for their local waterway and a first line of defense when protection is needed. United by the CAC, grassroots groups have a collective voice to raise concerns to larger stakeholder and decision making audiences as well as address individual organizational needs. In 2016, the CAC shifted gears to meet a critical need – volunteer water quality monitoring (citizen monitoring was highlighted in the Winter 2016-17 Current Connection, page 11). Fortunately, some groups already had successful volunteer water quality monitoring programs in their respective watersheds, however, with CAC buy-in, the MBNEP is systematically targeting, recruiting, training and outfitting new volunteer monitoring groups as well as providing technical and financial assistance to established volunteer water quality monitoring programs. Creating a grassroots citizen science water quality data network will allow us to cast a larger net to better understand trends and conditions in coastal Alabama watersheds.

With emphasis now on volunteer water quality monitoring, the CAC looked to veteran monitors for guidance. Discussions identified a gap existed in the public's ability to quickly capture and report water quality issues and data. Concurrently, Mobile Baykeeper was working to develop an education and engagement program that includes



a volunteer water quality monitoring component – Strategic Watershed Awareness and Monitoring Program (SWAMP). “When considering web tools, we knew it would be critical to engage monitors with a platform that let them easily visualize their water monitoring results and report pollution they observed, as well as making water quality monitoring more relatable to youth by incorporating technology they are familiar with,” said Baykeeper Program Director, Cade Kistler. Everyone agreed that a platform was needed to easily input and visualize data, as well as report pollution



Students from LeFlore High School receive Alabama Water Watch Training as part of the SWAMP program. Photo : Mobile Baykeeper



in real-time. After an exhaustive search of citizen science web tools, Baykeeper found Water Rangers.

Water Rangers is a web-based platform and smartphone app created to empower citizen scientist. The user friendly, non-technical, and visually appealing design allows anyone to report water quality data, animal and plant observations and pollution. By leveraging technology, Water Rangers forges new connections to our waterways and natural resources by allowing audiences of all ages to engage in stewardship activities and citizen science. Even better, the smartphone app allows users to upload data, photos and GPS location directly from the field in real-time.

CAC members fully endorse Water Rangers, and with funding from the MBNEP, new functionalities have been added to further improve usability for coastal Alabama residents. Local grassroots groups are now being trained to maximize its suite of features. Water Rangers fills a void that has existed for too long. Water Rangers adds convenience and usefulness that could greatly assist recruitment and retention of volunteer water quality monitors. To be clear, Water Rangers is not just for water quality monitors. Many coastal Alabama residents spend a lot of time on the water and outdoors. I encourage everyone to download Water Rangers to document nature rather it be a rare bird, rare plant, manatee, or pollution issues like trash dumps, tar balls, and sewage overflows. This powerful tool will undoubtedly help us Create a Clean Water Future. To try Water Rangers, visit <https://waterrangers.ca> or search Water Rangers in the App Store. If your school, church, or community group would like to learn more, contact Mobile Baykeeper at [www.mobilebaykeeper.org](http://www.mobilebaykeeper.org).



## Shoreline Stabilization and Marsh Creation *Cont. from page 6*

Combining restoration of the northern tip of Mon Louis Island with channel maintenance was a “win/win” proposition, offering advantages for all concerned. Limited federal funding for Corps dredging has been restricted to ship channels, so the neglected Fowl River channel was too shallow for recreational boaters. Mobilizing a single dredge for both hydraulic borrow for marsh creation and channel maintenance dredging offered significant cost savings. Environmental regulatory clearances for dredging in the FROWDA already existed, and the potential impacts of an open water borrow “hole” to water quality and wave climate could be avoided by replenishment with channel sediments. The path became clearer.

A final plan for the project was submitted to the Corps and ADEM for permitting. The Corps required an Individual Permit for implementation, even more robust dimensions for the breakwater, and arduous monitoring requirements. Fees to dredge were paid to both ADEM and the Alabama Department of Conservation and Natural Resources, State Lands Division. On March 9, 2016, we received our Individual Permit to restore the northern tip of Mon Louis Island, and the project went out to bid.

With a low enough bid to ensure that maintenance dredging of the Fowl River navigation channel could exceed Corps protocols, Orion Marine Construction won the bid and mobilized shallow draft barges, excavators, and rock on the Steiner property across Fowl River. Restoration began in early July with construction of a 50-foot-wide, six-foot-deep access channel just inside the breakwater footprint from the river mouth south to the Montgomery property, with excavated material temporarily side cast inboard of the temporary channel. Barges carrying class 3 riprap and an excavator moved to the southern extent of the project. Geotextile was placed on

the bottom, held in place with crushed aggregate rock, and the continuous rock breakwater was constructed over it from south to north with a four-foot crest at an elevation of 4.1 feet NAVD88. As the breakwater took shape, side cast material was replaced to refill the temporary access channel. The breakwater, over 1,400 feet long, extending from a tie-in to existing infrastructure on the Montgomery property

north around the tip of the island, was completed in early September as dredge pipe was staged on the Steiner property.

In mid-September 2016, hydraulic dredges delivered material from the FROWDA into the shallow waters inside the breakwater to form new

marsh substrate. A week later, dredge fill was concluded, and operations moved into the navigation channel. Material was removed from the channel at depths ranging from nine to eleven feet, and the dredged material was used to fill the borrow pit in the FROWDA, avoiding problems of low dissolved oxygen. With dredging operations concluded in October, settlement plates were left to indicate to engineers when materials had adequately consolidated and the next phase of construction, earthwork, installation of atidal creek, and planting could be undertaken.

In March 2017, contractors performed the earthwork on the marsh substrate and sculpted a tidal creek running from the north towards the south across the new marsh. Native species, *Spartina patens*, *Juncus roemerianus*, *Spartina alterniflora*, and even troublesome-but-sturdy *Phragmites australis* were planted with assistance from the Coastal Alabama Conservation Corps in appropriate “zones” in early May to create a productive salt marsh to support local fisheries. Three and a half years later, the emergency restoration of the northern tip of Mon Louis Island is complete.

*Native species...were planted with assistance from the Coastal Alabama Conservation Corps in appropriate “zones” in early May to create a productive salt marsh to support local fisheries.*

## Welcome New Employees Paul Lammers Restoration Program Manager

Paul Lammers joined Mobile Bay NEP in January 2017 as Restoration Program Manager. Paul has worked



for over twenty years in both the private and public sectors as an environmental professional and he has a broad multidisciplinary background as a project and program manager and lands and natural resource manager.

## Bethany Dickey Administrative Assistant

Bethany joined the Mobile Bay National Estuary Program in November 2016 as



Administrative Assistant. Bethany graduated from the University of South Alabama with a degree in Business Administration. She loves spending time with her family, especially her infant niece and nephew. She enjoys the outdoors, including camping and trips to the beach. Bethany lives in Semmes with her husband Derrick and two dogs, Diego and Yoshi.



# Environmental Stewardship

## Can be as Simple as Choosing a Marina

*Dog River Marina*

By CHRISTIAN MILLER, WATERSHED MANAGEMENT COORDINATOR,  
MOBILE BAY NATIONAL ESTUARY PROGRAM

**N**ow that Memorial Day weekend is behind us, many coastal residents are looking forward to heading out on the water for a day of fishing, water skiing or just a relaxing afternoon cruise. With stress being placed on our aquatic ecosystems due to development and other pressures, it is now more important than ever to be a conscientious boater.

One way to ensure you are being a good steward of our waterways is by using a designated Clean Marina. The Alabama-Mississippi Clean Marina Program assists marina, boatyard, and yacht club operators in protecting the resources that provide their livelihood: clean water and fresh air. It is a voluntary program that gives managers the resources they need to minimize impacts on aquatic ecosystems. This is accomplished through incentivizing marina operators to implement best management practices in the following areas

- Marina siting, design, and maintenance
- Sewage handling
- Fuel Control
- Waste management
- Vessel cleaning and repair
- Stormwater management
- Marina management
- Boater education

The program recognizes environmentally responsible facilities as "Designated Alabama-Mississippi Clean Marinas." This designation lets boaters know that these businesses adhere

to, or exceed, program criteria to be good stewards of our aquatic resources. For a boater, this can mean clean and well-lit bathroom and laundry facilities, easy pump-out stations, and plenty of trash cans, recycling bins, and other amenities that not only keep our waterways clean but make your time on the water more relaxing. Two such marinas in our area that have been awarded Clean Marina designation are Dog River Marina on the western shore of Mobile Bay and Zeke's Marina in Orange Beach.

Whether you are looking for a new place to keep your boat or a destination for a weekend cruise, visiting a Clean Marina supports businesses who have chosen to adopt sustainable practices. As more boaters seek out and patronize Clean Marinas, it will have the effect of driving other marinas to follow suit and become Clean Marinas themselves. To get more information on the program, or to locate a designated Clean Marina, visit the Mississippi-Alabama Clean Marina website [www.masgc.org/clean-marina-program](http://www.masgc.org/clean-marina-program)



*Zeke's Landing in Orange Beach.*

## 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.

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# Alabama current connection

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## New Alabama Oyster Shell Recycling Program

**A** new program in coastal Alabama is allowing restaurants to recycle their oyster shells instead of throwing away that important resource. The Alabama Oyster Shell Recycling (AOSR) Program, which is being led by the Alabama Coastal Foundation, collects shells from participating restaurants, stores them, and then puts them back into Alabama waters to help additional oysters grow.



The process is simple: Once the shells are collected from participating restaurants, they are stored outside for at least six months. Then they are loaded on to barges and put

back in the water where they can be productive again. Oyster shell is the preferred habitat of oyster babies (larvae) to settle on as juveniles (spat) to form new reefs.

In addition to food value, oysters provide many other ecosystem services including:

- **Improving water quality:** An adult oyster can filter up to 15 gallons of water per day.
- **Providing habitat:** Oyster reefs provide habitat for fish, shrimp, crabs, birds and other animals.
- **Limiting erosion:** Oyster reefs are natural breakwaters that protect shorelines.

The AOSR Program is one of the activities that the Alabama Coastal Foundation does as a part of our involvement in the Create a Clean Water Future campaign. Funding to establish the shell recycling initiative is through a grant from the National Fish and Wildlife Foundation as a part of the Gulf Coast Conservation Grants Program.

To ensure the success of this project, ACF formed an Advisory Committee of restaurant owners, managers and chefs in addition to representatives from the Alabama Department of Conservation and Natural Resources, The Nature Conservancy, Mississippi-Alabama Sea Grant Consortium and the Mobile Bay Oyster Gardening Program.

The AOSR Program has already collected over 1.5 million shells since the program started on October 31, 2016. To quantify, the weight of shells collected equals approximately thirty-one elephants. In cubic yards, that many shells is sufficient to fill twenty-three dump trucks or to provide around 3.8 acres of coverage!

To find more information about the AOSR Program including participating restaurants, please visit [www.joinACF.org](http://www.joinACF.org)