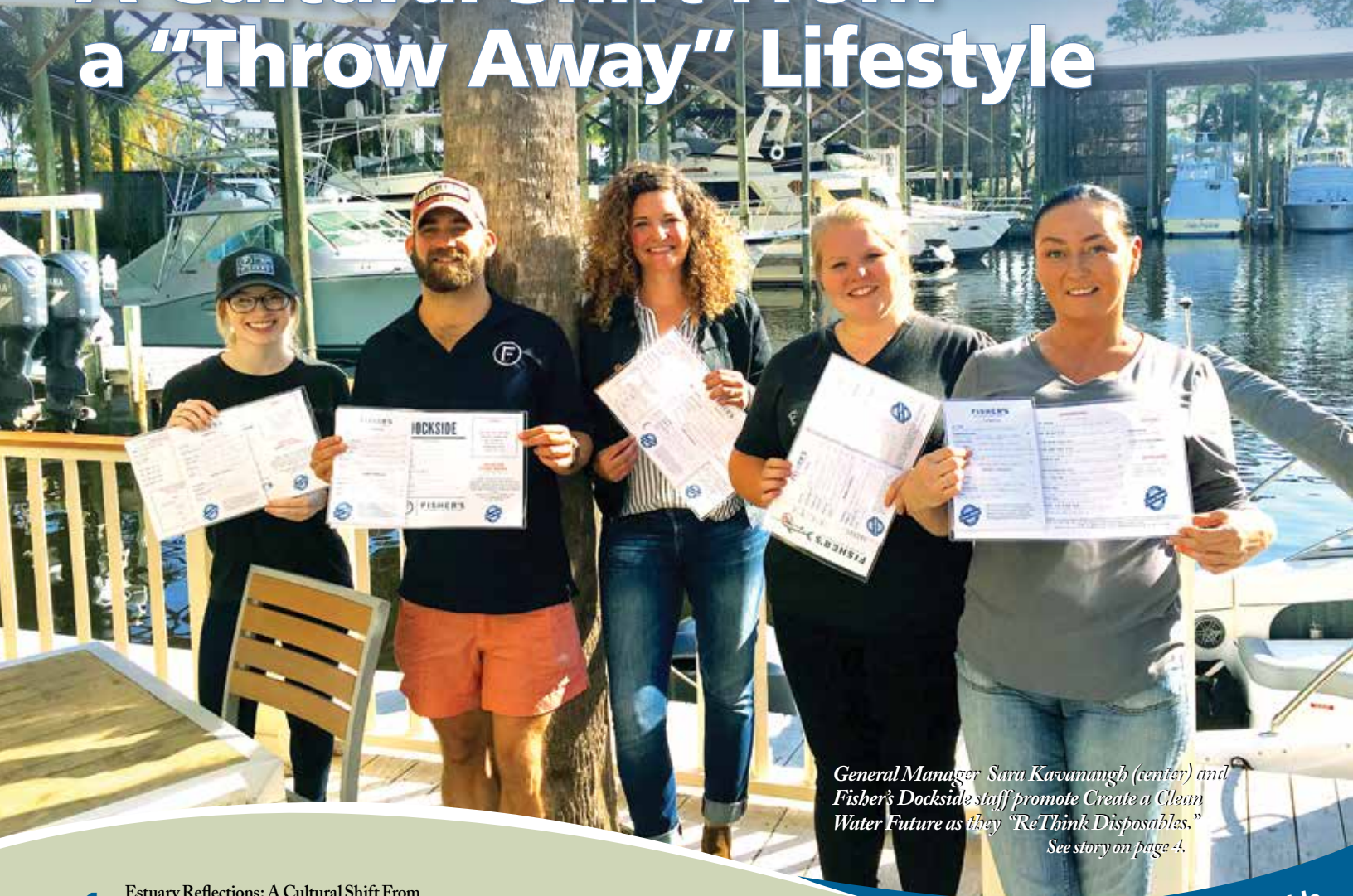


Alabama current connection

WINTER 2017-2018 • Vol. XI, Issue 2

A Cultural Shift From a “Throw Away” Lifestyle



*General Manager Sara Kavanaugh (center) and
Fisher's Dockside staff promote Create a Clean
Water Future as they “ReThink Disposables.”
See story on page 4.*

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Currently Inside



Coastal Corner

By ANGELA UNDERWOOD, COORDINATOR
ALABAMA COASTAL CLEANUP, ADCNR
STATE LANDS DIVISION, COASTAL SECTION

Alabama Coastal Cleanup: 30 Years and Going Strong



Rudy Sanfilippo with TerraCycle, Yael Girard with Weeks Bay Foundation, Angela Underwood with ADCNR, and Don Bates with Thompson Engineering in front of the TerraCycle Supersacks.

The Alabama Coastal Cleanup has been going strong for thirty years, and this year marked one of the best years yet. On September 16, over 5,200 volunteers came out to help "Get the Trash Out of the Splash." The event, which boasts over 30 zones, appeals to volunteers of all ages and reinforces the strong connection that many coastal residents have to our abundant water resources.

"The Alabama Coastal Cleanup is an incredible opportunity for volunteers to give back to their community by cleaning harmful litter from our beautiful waterways while also learning that litter can have devastating impacts to wildlife," said Kara Lankford, zone captain at the Mobile Bay Causeway cleanup site. "It's one of the best educational opportunities in our community." Organizers of this long running event are always looking for ways to increase the positive impact of the cleanup on both the environment as well as the participants, and this year that meant the addition of plastics recycling.

It has been a long standing goal of coastal cleanup to be able to incorporate recycling into the event. This year Alabama Coastal Cleanup partnered with Thompson Engineering, Weeks Bay Foundation, the Alabama Coastal Foundation, and TerraCycle to collect and recycle plastics. The first-year effort was a success with close to 2,000 lbs. of plastics recycled. These plastics will be made into new products, such as shampoo bottles or toothpaste tubes. "We're really pleased with the first-year effort, but expect even more success in the years to follow," said Don Bates, VP of Operations for Thompson Engineering.

While helping to clean up the coast is reward enough for most participants, some are drawn back year after year by the prospect of finding unusual and unexpected items along the shoreline.

Alabama Coastal Cleanup *By the Numbers*



5,200
volunteers

2,000 lbs.
plastics recycled
into new products



30
zones

Each year, coastal cleanup doesn't occur without one or two surprises. "We always find weird items while cleaning and this year was no exception", stated Lankford. "Two young men from Spanish Fort high school found a very large sum of money while cleaning up trash. The boys immediately turned the money in to me. I was so impressed by their honesty and integrity!"

Yael Girard, Weeks Bay Foundation Executive Director, hopes through these events and volunteer opportunities, "our communities see the amazing coastal environment that we live in as something to protect, enhance, and promote. We are proud of everyone who comes together for the Coastal Cleanup and all the initiatives in this area. Together, we are so much stronger, so much smarter, and so much more resilient." The Alabama Coastal Cleanup would like to thank all of the sponsors and volunteers who made the event possible. Make sure to mark your calendars for next year's event!

Alabama Coastal Cleanup is made possible by the generous support of 2017 Presenting Sponsor Poarch Band of Creek Indians and many other sponsors including:

Bebo's, LogoBranders, ExxonMobil, Alabama Power Company, LuLu's, Ike's Beach Service, City of Gulf Shores, City of Orange Beach, Riviera Utilities, Utilities Board of Gulf Shores, Baldwin EMC, The Home Depot, Flora-Bama, MAWWS, Republic Services, Evonik, Bluegill Restaurant, Compass Media, Coast 360, ALFA, ALDOT, Honda Manufacturing of Alabama, Vulcan Materials Company, Alabama Farmers Cooperative, NOAA, The Ocean Conservancy, ADCNR State Lands, Coastal Section and Alabama PALS (People Against A Littered State).



Clean up crew at the Causeway Zone.

Estuary Reflections

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

A Cultural Shift From a “Throw Away” Lifestyle

Elementary school students learn the alliterative *Reduce, Reuse, Recycle* as three great ways to help us, our communities, and the environment save money, energy and our precious natural resources.

Partners in the San Francisco Bay area, facing regulatory pressures, needing to quantify results, and also planning on a sustainable planet to leave to future generations, are charting a course with local business partners to reduce use of disposable products (e.g., single-use bags, cups, bottles, straws, utensils, and other food-related items), reduce waste, and save money.

The body of alarming data is growing. In *Science* (February, 2015), the University of California Santa Barbara’s National Center for Ecological Analysis reported 8.82 million tons of plastic enter our oceans each year, with twice that projected by 2025. *National Geographic* reported there are 5.25 trillion pieces of plastic debris in the ocean, with 269,000 tons floating on the surface and four billion plastic microfibers per square kilometer littering the deep sea floor. Recognition of this growing problem adds urgency to the need for a cultural shift from single-use, “throw-away” lifestyles by earth’s human occupants.

In San Francisco, with \$257,293 from the EPA, the Clean Water Fund created a pilot project called ReThink Disposable

to work with local governments and food establishments to develop cost-effective models to reduce disposable packaging related to takeout food. Pre-project litter surveys in the Bay Area revealed that 67% of trash in storm drains or catch basins were related to take-out food and beverages. ReThink Disposable is a free technical assistance program that helps food businesses implement best practices to reduce use of disposable food serviceware, reducing waste and cutting costs by minimizing disposable product usages.

One such business, the Sacred Wheel Cheese Shop, a popular lunch destination in North Oakland, originally opted for using compostable disposable packaging to help the environment. Owners determined the compostable plastics they used could not

120 BILLION

disposable cups are used by Americans each year.²



PAPER: 54 billion



PLASTIC: 38 billion



FOAM: 26 billion²



Placed end to end these could circle the equator almost 333 times!

Impact of the annual disposable cup habit in the U.S.



Generates
2.2 Billion lbs. of waste
enough waste to fill
78,571 garbage trucks!



35 Billion Gallons
of water
enough to fill almost 53,000
Olympic size swimming pools!



4 Billion lbs. of
CO₂ equivalent
equal to the annual
emissions of 366,384 cars!



11+ Million Trees!



MOST CUPS AREN'T RECYCLED: almost all disposable cups are made of hard-to-recycle materials like plastic-coated paper or foam.^{4,5,6}

be composted in Oakland and were instead sent to the landfill. Owners switched to reusable mismatched silverware and ceramic ramekins and purchased inexpensive stainless steel water cups. Instead of bearing the expense of an additional salary to wash dishes, they rented a dishwasher that actually reduced water use, and current wait staff easily kept up with the demand for clean dishes. All waste material is either recycled or composted, saving costs of waste disposal. Annually, the Shop reduced waste by 602 lbs. and realized a cost savings of \$3,768. Overall, with 109 business participants onboard, ReThink Disposable annually has realized a disposable packing reduction of 10.3 million items, waste reduction of 121,162 lbs., and cost savings of \$394,033. The website, with videos of business champions and tips to engage and educate the community to take action, is www.rethinkdisposable.org.

Without a well-developed program like ReThink Disposable, Fisher's at the Orange Beach Marina has demonstrated the same stewardship ethos and forward thinking. General Manager Sara Kavanaugh reports the Dockside restaurant has fully transitioned to eliminating paper napkins, plastic straws, and paper share plates. They joined the Create a Clean Water Future campaign, and included the CCWF logo and this statement on their menu:

Fisher's and Clean Water Future are partnering in efforts to keep the Gulf of Mexico beautiful. Help by limiting our use of plastic straws and paper products, as we are taking the first step in keeping our oceans and beaches clean. Please join us in our endeavor and visit CleanWaterFuture.com to get involved.

Conforming to municipal regulations, staff members are restricted to using cups with lids, so Fisher's will supply employees with non-disposable cups with the Fisher's and CCWF logos to be used at work instead of styrofoam or plastic cups.

JUST SAY **NO** TO STRAWS!

THE U.S. CONSUMES 500 MILLION STRAWS A DAY.²

That's over 182 BILLION straws a year!



End to end, straws used **DAILY** in the United States could circle the planet more than two-and-a-half times.

Simple choices that consumers practice in their day-to-day lives can have huge collective impacts on conserving resources, reducing greenhouse gases, preventing waste and litter, and reducing plastics pollution choking our oceans. Events like Coastal Cleanup draw attention to the litter problem and its relationship to stormwater runoff, but "moving further upstream" and taking actions to reduce the raw materials of trash and litter is a strategy we should embrace and employ. Bring a mug or reusable

tumbler to the next meeting instead of using styrofoam, plastic, or paper cups; remember to put your reusable totes back in the car to avoid single-use plastic bags next time you shop; and avoid using straws and plastic utensils when possible, being so bold as to keep metal utensils as an option. Anytime possible, opt for less packaging when making retail purchases, and buy in bulk instead. Support businesses that embrace reduction strategies and solutions. Do what's necessary to Create a Clean Water Future.

FISHER'S ORANGE BEACH MARINA

DOCKSIDE

ENTRÉES

FRIED CHICKEN	13
Three pieces of hot sauce marinated chicken, potato salad, coleslaw	
ALABAMA CHICKEN	13
Fried chicken breast, smoked pecan brown butter rice, collard greens, Alabama white BBQ sauce	
SHRIMP AND GRITS	19
Gulf shrimp, tasso tomato gravy, yellow grits	
MOMMA'S PORK ROAST	14
Pork-tender pork roast, collard greens, rice, onion gravy	
GULF COURTOUBOILLON (COO-BEE-YON)	17
Pan seared Gulf fish, Creole tomato sauce, green onion rice	
FISH OF THE DAY	21
Grilled, blackened or fried, whipped sweet potatoes, roasted fall vegetables, pecan, Creole brown butter	
GULF FISH AND GRITS	18
Fried Gulf fish, stone-ground yellow grits, black eyed pea salad	
SHRIMP & TASSO RICE	21
Gulf shrimp, tasso, charred corn, rice, jalapeño sour cream	

SIDES

\$4


FRIES, FRUIT SALAD, STONE-GROUND YELLOW GRITS, SMOTHERED GREENS, TOMATO & CUCUMBER SALAD, BLACK EYED PEA SALAD, ROOT BEER SWEET POTATOES, COLESLAW, POTATO SALAD

JOIN US FOR SUNDAY BRUNCH


10:00am-2:00pm

FISHER'S and Clean Water Future are partnering in efforts to keep the Gulf Coast beautiful. Help by limiting our use of plastic straws and paper products, as we are taking the first step in keeping our oceans and beaches clean.

Please join us in our endeavor and visit CleanWaterFuture.com to get involved.



FISHER'S
AT ORANGE BEACH MARINA



Environmental Stewardship: *Orange Beach's Department of Coastal Resources*



Members of the Coastal Resources Team.

By PHILLIP WEST, COASTAL RESOURCES MANAGER AICP, CITY OF ORANGE BEACH

When asked, "What, exactly, are coastal resources?" we on the staff of Orange Beach's Department of Coastal Resources always begin the answer with a chuckle. It's not because we consider this a silly question, but because we recognize our own difficulty providing a streamlined, succinct, and believable response! Coastal Resource's mission over the last few years has expanded significantly, and even though we've always been a "duties-as-assigned" type of team, our role lately has grown way beyond the typical beaches and waterways sort of assignments.

Our coastal environment always has and will remain the center focus at Coastal Resources. This involves beach management, including beach renourishment and coastal construction permitting, as well as wetland protection, wildlife management and rehabilitation, public outreach and education, recreational project planning, construction and management, waterways and shoreline cleanup and marine debris removal, and

interagency coordination. However, our expanded role has grown to include management of disaster recovery and FEMA coordination, solid waste contract management, community garden stewardship, Wind and Water Sailing Center managers, and of course, other duties as assigned.

However, three programs that highlight the efforts of Coastal Resources staff in protecting the environment that are also relatively new to our department are the Beach Ambassador program, the Operation Clean Sweep effort, and the Waterways and Shoreline Enhancement program.



The City of Orange Beach has adopted a multitude of rules to ensure the safety and cleanliness of our beaches, both for the enjoyment of the residents and visitors, as well as the protection of the beach as habitat for a variety of species that call it home. The Beach Ambassador program was established to communicate not only the rules to beachgoers, but the many reasons for these regulations as well. To give one a glimpse of the dynamic interaction beach ambassadors have with the beachgoing public, consider these numbers to date for 2017: Public Interactions: 80,327; Promo Items Distributed: 8,543; Glass warnings: 1,648; Tent warnings: 2,490; Hole warnings: 1,112; Holes filled: 695; Trash warnings: 137; Trash Bags distributed: 1,397; Injured wildlife incidents: 72; Marine debris removed: 167 items. Additionally, the ambassadors assist with lost children and families in distress. Clearly, the Beach Ambassadors are a valuable and BUSY bunch of folks!

Following up the daily work of the Beach Ambassadors are our intrepid and able Operation Clean Sweep crews, whose job is to remove all unattended beach items after dark. A highlight of this program occurred during our first year of this effort. Orange Beach hosted more than double the sea turtle nests in history due largely to the removal of obstacles to nesting sea turtles! To date in 2017, our Clean Sweep crews have collected 423 tents/canopies, 3,878 chairs, 793 umbrellas and have recorded 40,960 public interactions. Amazingly, almost all material removed from the beach nightly is recycled,

Beach Ambassadors Items Collected



3,873
Chairs



793
Umbrellas



423
Tents/
Canopies



Waterways and Shoreline Enhancement crew members enjoy their job.

including the towels and tent material (textiles) and plastic toys such as shovels and buckets. These items are shipped to New Jersey to TerraCycle at the cost to the company Proctor and Gamble®, which in turn makes shampoo bottles and other containers from the recycled products.

It is with some measure of pause that I suggest our Waterways and Shoreline Enhancement crew enjoy their job more than any other crew in Coastal Resources. These guys love being on the water and removing marine debris! And this crew finds all sorts of goodies: Japanese glass net

floats, bowling balls, parachutes, fishing corks and lures, kitty cats, and even kitchen appliances! Of course, they frequently respond to wildlife emergencies, report manatees, communicate environmental information to the boating public, and yes, they collect literally TONS of marine debris and trash from area waters in a given season. From late March through early September, Shoreline Cleanup crews collected and participated in the following: collected 881 bags of trash (averaging 30 lbs. per bag); recovered 53,760 pounds of large debris (e.g., tires, lumber, appliances, etc.); participated in cleaning up 2 fish kills; assisted in three volunteer cleanup events on the islands and waterways; assisted with nesting shorebird monitoring and protection on Bird and Robinson Islands; and responded to 25+ wildlife emergencies and rescues.

Clearly, the City of Orange Beach takes the stewardship and protection of its coastal environment seriously, and with the help of community volunteers and the efforts of Coastal Resources, it shows! For more information on volunteer activities and opportunities, please contact Ms. Nicole Woerner at 251-981-1063, or via email at nwoerner@cityoforangebeach.com.



The Peninsula:

The City of Mobile's Coastal Community

By DEBI FOSTER, EXECUTIVE DIRECTOR, THE PENINSULA OF MOBILE

The Peninsula is a picturesque, mostly residential community located between Interstate 10 and Dog River within the City of Mobile on the western shore of Mobile Bay. It is filled with wetland lined creeks and bayous that feed both Dog River and Mobile Bay estuaries. Located just 15 minutes from Downtown and 25 minutes to Dauphin Island, there are six public parks and six public access points to area waters. The Peninsula contains several private yacht clubs, marinas and roadside fishing holes. It is also part of several trail systems including: The Great Loop <http://www.greatloop.org/>, the Crepe Myrtle Bike Trail <http://www.bicyclemobile.org/crepe-myrtle-trail/>, and the Dog River Scenic Blueway <http://dogriver.wpengine.com/what-we-do/water-land-trails/dog-river-scenic-blueway/> and is in the process of being added to the Alabama Coastal Birding Trail <http://www.alabamacoastalbirdingtrail.com>.

The Peninsula of Mobile is a 501(c)(3) non-profit community based organization whose mission is to: **Support the development of a clean and vibrant community that sustains the sensitive environment that IS...The Peninsula.** It was founded in 2013 by a group of local community leaders who joined together to identify strengths and weaknesses and develop goals and objectives to redevelop the depressed area. They incorporated, secured funding, and oversaw the development of a community Corridor Master Plan. With a focus on Low Impact Development (LID), the plan outlines redevelopment of the unique urban coastal area in ways that will help manage



Dauphin
Island
Parkway

33
MILES

flooding while bringing valuable passive recreation opportunities to citizens of Mobile and visitors alike.

The basis of the plan is to blend current bike and kayak trails into a large recreation preserve that will attract users and increase economic opportunities throughout the length of the five-mile-long community, breathing life into local businesses. The treasure will be advertised in an unmanned Visitor Information Center located at I-10's Exit 22 south.

More information can be found by visiting www.thepeninsulaofmobile.org or on Facebook.

Background

Rich in economic, racial and age diversity, the Peninsula portion of Dauphin Island Parkway has over 90 businesses offering a wide array of goods and services and an abundance of available real estate fitting any budget. Life on the Peninsula feels a little quieter; a little less hurried – some “plus” benefits not found in town.

An economic downturn began in the late 1960's when Brookley Air Field closed. The closing of ST163 bridge over Deer River in 1979 cut the Peninsula from Dauphin Island turning the state

road into a virtual dead-end. Hurricane Katrina in 2005, the housing market and economic crash, followed by the BP Oil Spill in 2010 has left the community of nearly 11,000 struggling. Residents judged they were forgotten; the City didn't seem to recognize its waters or the area's importance as the City's coastline. Then came word of Airbus Americas coming to Brookley and things began to change. For Sale signs began popping up all over, including inside wetlands.

The community wanted a say in its future, thus the Mobile Peninsula Corridor Master Plan was developed http://the-peninsula.wpengine.com/wp-content/uploads/2017/01/Peninsula-of-Mobile-Corridor-Plan_FINAL_Reduced.pdf, and released earlier this year.

A Collaborative Effort

Partnerships have been invaluable to the group's efforts. MBNEP, Auburn University, Alabama Coastal Foundation (ACF), Mobile Baykeeper, Dog River

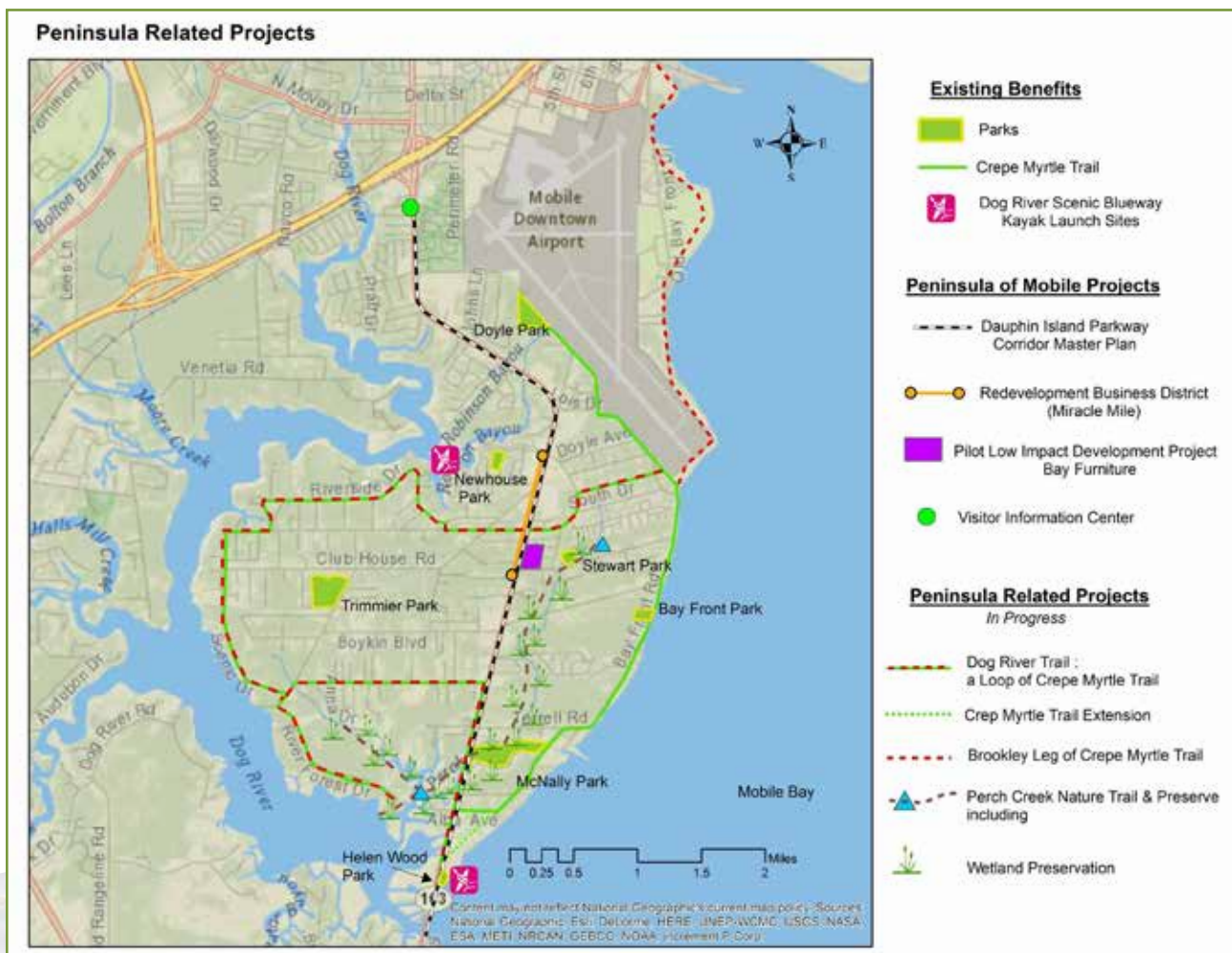
Clearwater Revival, the City of Mobile and others have joined together to help residents empower themselves to achieve the goals for their community and Mobile's shoreline. With guidance and the hard work of many, much progress has been made.

Highlights of the Work

- Developed a digital Mapbook of the 163 corridor and adjacent wetlands containing zoning and ownership information for easy reference.
- Secured funding and developed the Corridor Master Plan.
- Coordinated partnerships for recreational signage along ST163.
- Submitted a series of nature trail and preserve proposals for potential funding through BP disaster funds.
- Created a partnership with the City resulting in two Transportation Assistance Program (TAP) grants for sidewalk construction along the corridor.
- Spearheaded pilot LID redevelopment of facade and parking

lot at to be used as template for other small businesses throughout the City.

- Created Peninsula Brochures; Business Directory; Logo; Logo Stickers; Updated Promotional Flyers; Maps; Web and Facebook Pages; E-Newsletter.
- Installed Phase I of Pocket Park replacing 4500 sq. ft. of impermeable service with installation of irrigation and greenspace.
- Hosted/Co-Hosted Events: Crepe Myrtle Trail Bike Ride; Great Drift; Alabama Coastal Cleanup; Ghost Chase and Goblin Gallop.
- Established Water Quality Monitoring for Rabby Creek at community's north gateway.
- Installed eight concrete table/bench sets at McNally Park on Mobile Bay and Perch Creek shorelines.
- Working toward the development of a Garrows Bend Watershed Management Plan.





The Alabama Coastal Bird Stewardship Program

Established in Mobile and Baldwin Counties

By CHRIS OBERHOLSTER, PARTNERSHIP AND POLICY DIRECTOR, BIRMINGHAM AUDUBON SOCIETY

The National Fish and Wildlife Foundation (NFWF) has approved \$1.46 million through the Gulf Environmental Benefit Fund for the Alabama Coastal Bird Stewardship Program. The Alabama Department of Conservation and Natural Resources, in partnership with Birmingham Audubon, has established a stewardship and monitoring program focused on priority shorebird and coastal waterbird populations.

Birmingham Audubon, a staffed chapter of National Audubon Society, currently partners with Mobile Bay Audubon and other volunteers to survey priority species along Mobile and Baldwin County shorelines through the Audubon Coastal Bird Survey established after the BP oil spill.

“Mobile and Baldwin County shorelines provide critical nesting and foraging habitat for the focal species of this grant. We now have expanded opportunity, thanks to the Alabama Department of Conservation and Natural Resources, to monitor and steward more productive populations,” said Suzanne Langley, Birmingham Audubon Society Executive Director.

“We look forward to adding capacity to local bird conservation and promoting the value of Alabama’s natural treasures to residents and visitors.”

The Alabama Coastal Bird Stewardship program complements the work of similar Audubon initiatives in the Gulf including Florida, Mississippi, Louisiana and Texas. The Alabama program includes monitoring priority species along routes in Mobile and

Baldwin Counties in varied coastal habitats with trained volunteers and staff. The Program will also focus on stewardship of solitary and beach nesting colonies in a suite of focal species. Among the locations of work to be completed through the Alabama Coastal Bird Stewardship program is Dauphin Island, recognized in 2015 as a globally significant Important Bird Area by Birdlife International and its U.S. partner National Audubon Society.



Reddish Egret
photo by John Borom

Birmingham Audubon Coastal Programs is recruiting and training volunteers to assist with this critical conservation work, primarily through the collection of bird-population data at Alabama sites established by National Audubon's Coastal Bird Survey (ACBS). During the nesting season, trained volunteers will maintain the health and safety of nesting colonies through public outreach and the construction of fences and signs at colony locations. Engaging residents and other visitors is a critical volunteer role in helping the public become more aware of coastal wildlife and habitats. Volunteers receive training by Coastal Programs staff and expert birders from Mobile Bay Audubon Society.

Planned training schedule for the ACBS Winter pulse:

- December 12, 2017 - 2:00 p.m.
Gulf State Park Nature Center
- December 14, 2017 - 2:00 p.m.
Dauphin Island Sea Lab

Interested in volunteering? Want to learn more? Contact Coastal Programs Coordinator Mozart Dedeaux at mozartdedeaux@birminghamaudubon.org or call 251-410-8600 or Membership and Volunteer Manager Chris Sykes at chrissykes@birminghamaudubon.org or call 205-719-3678.



*American
Oystercatcher
photo by Bill Summerour*

Small Projects Can Have Big Impacts

By EVE BRANTLEY, ASSOCIATE PROFESSOR & EXTENSION SPECIALIST CROP, SOIL, AND ENVIRONMENTAL SCIENCES, AUBURN UNIVERSITY

Looking for trivia? Polluted stormwater runoff is the only source of pollution to our nation's waters that is actually getting worse. Let that soak in – when it rains, the runoff carries bacteria, trash, oil, metals, fertilizers, pesticides, sediment and other contaminants to our creeks, rivers, lakes, bays, and Gulf. These pollutants travel to waters that are relied on for drinking, recreation, habitat, and industry. Research has shown that the first 'flush' of stormwater, usually the first inch, is the most polluted. Research has also shown that we can slow down this first flush and treat it with a new approach to stormwater management called Green Infrastructure (GI) and Low Impact Development (LID).

Traditional stormwater management collects and transports stormwater efficiently along a curb or gutter into a storm sewer that empties into a stream, river or bay. In urban and suburban landscapes, there is limited opportunity for stormwater to soak into the soil as it moves quickly over impervious surfaces such as parking lots, roads, and roof tops. Imagine a pollutant superhighway that connects parking lots to streams with no removal of harmful substances.

Green infrastructure and LID take a different approach to stormwater management. Instead of moving stormwater off the landscape quickly, GI and LID plan and design opportunities for this water to soak into the ground close to where it falls. Examples include

rain gardens and bioretention cells that use soil and plants to treat pollutants. Grass swales may be designed to transport, filter, and infiltrate stormwater. Planning practices that minimize impervious surfaces, such as parking lots or roads, save development costs and decrease negative impacts to waterways. Incorporating and protecting green space and streamside forests in our communities offers multiple benefits like recreation, habitat, and protection of stream and bay health.

These working GI and LID landscapes are becoming more popular in Coastal Alabama as communities look for ways to combine environmental stewardship, quality of life, and a healthy economy. Daphne and Fairhope along Mobile Bay's Eastern Shore and Foley in central Baldwin County are cities successfully promoting the use of innovative stormwater engineering. As more communities implement GI and LID, we will learn more about what works well for improving stormwater quality and the maintenance requirements for long-term effectiveness.

Stormwater management is only one piece of the puzzle. A watershed approach to understanding potential pollutants, soils, streams, and land use is required to identify how we can each help with protecting coastal waters. For more information on GI and LID, visit www.aces.edu/lid or download the free Alabama Extension iBook, "Planning for Stormwater." Also, visit the MBNEP website (www.mobilebaynep.com) to learn more about watershed management planning and to view the new LID video.

What Goes Down Sometimes Comes Up

By MIKE SHELTON, WATERSHED AND TRAINING PROGRAM COORDINATOR, WEEKS BAY RESERVE,
LANDS DIVISION, ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

Most people in coastal Alabama do not think often about wastewater until a problem occurs. Wastewater that spills from a backed up or failing manhole, pipe or lift station onto streets and ditches is called a “sanitary sewer overflow,” or SSO. No matter what you call it, overflows contain untreated wastewater, including anything that goes down the sink or toilet.

Overflows are serious issues that threaten the quality of coastal surface waters. The U. S. Environmental Protection Agency estimates up to 75,000 sewer overflows occur in the United States each year. In April 2017, AL.com reported that nine environmental groups, including Mobile Baykeeper, identified nearly 1,300 sewage spills in Alabama. Sanitary Sewer Overflows combine to release millions of gallons of wastewater into creeks, rivers, and bays, contaminating waterways and impacting fish and other wildlife present. Humans can contact the sewage directly when swimming or ingesting water or indirectly by eating fish and shellfish from contaminated waterways. Unfortunately, drinking water sources like lakes and reservoirs can be contaminated also.

Exposure to sewage also threatens human health. Sewage and contaminated waters conceal a mixture of harmful pathogens - bacteria, viruses, protozoa, and parasitic worms. Bacterial strains like Salmonella, Campylobacter, and Escherichia coli and viruses like noroviruses and rotaviruses may be present in untreated sewage. The sewage may also contain protozoa with fascinating names like Cryptosporidium and Giardia. Exposure to



Heavy rains in Fairhope caused a sewer manhole to overflow in 2013. Photo by the Fairhope Times, July 11, 2013

these pathogens may result in gastrointestinal illnesses and even more serious health issues. Usually, the age and overall health of the individuals affects their vulnerability to the impacts of sewage-borne pathogens. Serious illnesses caused by pathogens in waterways in the United States are not common but do occur.

Many causes underlie SSOs, including equipment failure and power outages at lift stations or treatment plants, which stop the normal flow of sewage through pipes. Damage to wastewater infrastructure can result from digging, tree roots, or vandalism. Grease, paper towels, disposable diapers, or other introduced solids block pipes and trigger overflows through manholes. Aging sewer infrastructure is a big problem. Rainwater floods old and leaky pipes and manholes, overwhelming the systems and producing SSOs. Some of the causes are easily avoidable, while others are expensive to address and require a concerted effort and funding by cities, utilities, and their customers.

Individuals can make a difference in reducing SSOs. Sewer service is not free; customers need to take care of service for which they are paying. A few simple changes in behaviors have big benefits. Cooking grease should never be poured down the kitchen sink. Paper towels, disposable diapers, feminine products, or baby wipes should not be flushed down the toilet.

Customers who understand how a utility addresses SSOs, and maintains sewer lines, lift stations, and other infrastructure can positively influence operations. Overflows and spills should be reported to the local utility or to the Department of Environmental Management via their complaint website: <http://app.adem.alabama.gov/complaints/submission.aspx>. Customers and utilities working together can reduce the causes of SSOs and improve the quality of coastal waters.

¹ USEPA, <https://www.epa.gov/npdes/sanitary-sewer-overflows-ssos>.

² Dennis Pillion, *Alabama had at least 1,271 sewage spills in 2016; See where they happened, AL.com, April 11, 2017.*

³ USEPA, *Sanitary Sewer Overflows: What are they and how can we reduce them?* EPA 832-K-96-001-1996.

⁴ Centers for Disease Control, *Outbreaks Associated with Environmental and Undetermined Water Exposures - United States, 2011-2012, August 14, 2015 /64(31); 849-851.*

Plan Lower Alabama Now (P.L.A.N.)

By MIRIAM BOUTWELL, COMMUNITY DEVELOPMENT DIRECTOR, CITY OF FOLEY AND PHILLIP HINESLEY, ADCNR, COASTAL SECTION CHIEF

Over the last two years, the Mobile Bay National Estuary Program (MBNEP) has facilitated an effort to identify problems and recommend solutions for improving water quality and promoting land use planning within the Weeks Bay watershed. Funding for the Weeks Bay Watershed Management Plan (WBWMP) was provided through the National Fish and Wildlife Foundation's (NFWF) Gulf Environmental Benefit Fund.

The Baldwin County Soil and Water Conservation District (BCSWCD) provided management support for preparation of the WBWMP with technical support from the Weeks Bay National Estuarine Research Reserve.

The Weeks Bay Watershed encompasses approximately 203 square miles (approximately 130,000 acres) and is managed by ten independent local governmental entities. These include Baldwin County and the municipalities of Daphne, Fairhope, Foley, Loxley, Magnolia Springs, Robertsedale, Silverhill, Spanish Fort, and Summerdale. The majority and central portion of the watershed (85%) is within the unincorporated jurisdiction of Baldwin County while the periphery of the watershed is managed within the incorporated municipalities. As population within the watershed has grown, the municipalities have extended their incorporated boundaries into the heart of the watershed through annexations, a trend that is expected to continue.

One of the key findings of the watershed planning process was the identification of the need for inter-governmental cooperation, particularly among the land use and environmental planners in the area. To answer this need, municipal

and county planners began to hold monthly informal meetings to share local and regional projects and to discuss common issues and concerns related to growth. The group has now expanded to include homebuilders, elected officials, environmental staff and agencies, GIS staff, engineers, regional planners, school board, utility providers, and others who are interested in this topic. The group recently rebranded itself as Plan Lower Alabama Now (P.L.A.N.).

One of the first items discussed and being implemented by the group is a GIS map showing future land use projects. These projects are site-specific and using a GIS format it is extremely helpful for staff to visualize how these projects will affect traffic, drainage, the environment and other critical areas. Additional discussions will include overlapping jurisdictions related to municipal and county regulations. All the municipalities have zoning and subdivision regulations

and some like Foley and Fairhope have low impact design and site disturbance ordinances. On the other hand, the county has subdivision regulations but zoning is limited in the watershed. This presents a problem when it comes to overlapping subdivision regulations in the planning jurisdiction. This points out for the need for the interaction of the group on these important planning matters. P.L.A.N. has gotten off to a great start and will continue to work to reach the goal of working together for better growth and development in Baldwin County.





"Save Our Seagrass"

Education Campaign Launched

BY TRACEY HOLIDAY, ISLANDS OF PERDIDO FOUNDATION

Islands in the Perdido Bay – In Perdido Bay and Orange Beach there are approximately 340 acres of seagrass or 260 football fields.

In April 2017, the Islands of Perdido Foundation partnered with the City of Orange Beach to launch the "Save Our Seagrass" (SOS) education campaign. The campaign centers on raising awareness about the value and needed protection of the vital seagrass beds that surround the islands in the Perdido Pass area. The islands are prime recreational areas and use by boaters has become increasingly intense from the beginning of spring through the end of summer.

Seagrass beds are highly productive habitats. "They really are the nurseries of the sea where juvenile fish and shellfish find refuge to thrive and grow to adulthood," explained Phillip West the Coastal Resources Manager for the City of Orange Beach. "Also, many commercially and recreationally important species like red drum, speckled trout, and blue crabs call the seagrass beds their home." These species are an important food source for other animals including megaherbivores, such as

They really are the nurseries of the sea where juvenile fish and shellfish find refuge to thrive and grow to adulthood.

Phillip West
Coastal Resources Manager
City of Orange Beach

manatees, that travel through the area every year, and the green sea turtles that are increasing in abundance in the region. The beds protect shoreline and reduce coastal erosion by trapping and stabilizing the sediment, which also helps to keep the water clear. Human activity is the main threat to seagrass bed loss. And although seagrass takes years to recover from incidences such as prop scarring, they can rebound if new stewardship habits are formed.



*Underwater seagrass beds are a vital habitat for juvenile fish, shrimp, and crabs in Alabama.
Photo by Dauphin Island Sea Lab*

This spring's campaign was multifaceted and included a proclamation from the City declaring April 7th as "Orange Beach Seagrass Day." The Alabama Coastal Foundation helped structure the project and created the materials. Educational signs were installed at the Boggy Point and Cotton Bayou boat launches in Orange Beach. The signs inform boaters about the critical habitats, explain their value, how vulnerable they are to boat propellers, and why it is important to protect them. The signs also help to make the designated "No Motor Zone" areas clear. Some of these zones have recently been added to protect the seagrass beds and to prevent the erosion.

Another key component of the program was to engage local watercraft rental companies. Because many people renting pontoon boats, jet skis, and other watercraft are unfamiliar with the area, unaware of grass beds, and unacquainted with "No Motor Zones," the group visited company owners and provided them with education materials about the beds, waterproof maps of the area, and bright SOS stickers. By working directly with the rental companies, the Islands of Perdido Foundation and the Alabama Coastal Foundation felt they could tailor the message, reach more visitors, and build strong relationships.

Recognizing that the key to ensuring continued stewardship of these important habitats is to cultivate responsible,

knowledgeable, and committed young people, lesson plans were tailored for 5th grade students. The campaign will continue to expand this component of the plan, believing that in order for the grassbeds and species that depend on them to survive and prosper, it is vital that the next generation become stakeholders.

The "Save Our Seagrass" campaign will continue through social media, additional signage on Robinson and Bird Islands will be put up, and outreach to visitors will be conducted this spring. "Our goal is to ensure the existing seagrass is protected and that these priceless beds thrive in the future," said Bill Jeffries, President of the Islands of Perdido Foundation. "As more and more people visit our area it becomes even more important that we all work together: our partners, local governments, the citizens, and our visitors. We all need to protect these precious resources for future generations."

Partners in the project included the Islands of Perdido Foundation, Alabama Coastal Foundation, Alabama Cooperative Extension System, City of Orange Beach, Dauphin Island Sea Lab, Gulf Shores Orange Beach Tourism, Mobile Bay National Estuary Program, National Fish and Wildlife Foundation, National Oceanic and Atmospheric Administration, State of Alabama State Lands Division-Coastal Section, and The Nature Conservancy.

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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Chris Blankenship Appointed Commissioner of Conservation and Natural Resources

Governor Kay Ivey recently announced that she has elevated Chris Blankenship from Acting Commissioner of the Alabama Department of Conservation and Natural Resources (ADCNR) to the now permanent Commissioner of Conservation and Natural Resources and a member of the Governor's cabinet.

"Since I appointed Chris Blankenship as Acting Conservation Commissioner, he has proven beyond any doubt his abilities to lead ADCNR, Governor Ivey said. "From effectively working to extend the Red Snapper season, to protecting Alabama's natural resources, Chris Blankenship has made it clear he can lead the Department of Conservation and Natural Resources long-term," Ivey continued. "I am proud to have Chris as part of my team."



Blankenship was appointed as Acting Conservation Commissioner on June 1, 2017. He most recently served as the Deputy Commissioner and as Director of DCNR Marine Resources Division

Commissioner Blankenship is a native of Mobile County and a graduate of the University of South Alabama.

from 2011 to 2017. He has worked at the Department of Conservation and Natural Resources since 1994 when he was hired as a Conservation Enforcement Officer. Governor Ivey announced Commissioner Blankenship's permanent appointment at the Governor's Conservation Achievement awards in Montgomery on Friday, August 4, 2017.