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Interview with Chris Blankenship

Commissioner of the Alabama Department of Conservation and Natural Resources

A native of the Alabama Gulf Coast, Department of Conservation and Natural Resources (ADCNR) Commissioner Chris Blankenship began his work with the Department in 1994 as a Conservation Enforcement Officer and later as the Chief Enforcement Officer for the Alabama Marine Resources Division (MRD). He served as Director of the MRD from 2011 until August 2017, when Governor Kay Ivey appointed him ADCNR Commissioner. *Cont. on page 2*

Photo by The Nature Conservancy

Currently Inside

He provided leadership and technical expertise for the Department throughout the early days of the *Deepwater Horizon (DWH)* oil spill and continues to lead Alabama's efforts in the recovery and restoration of the coast.

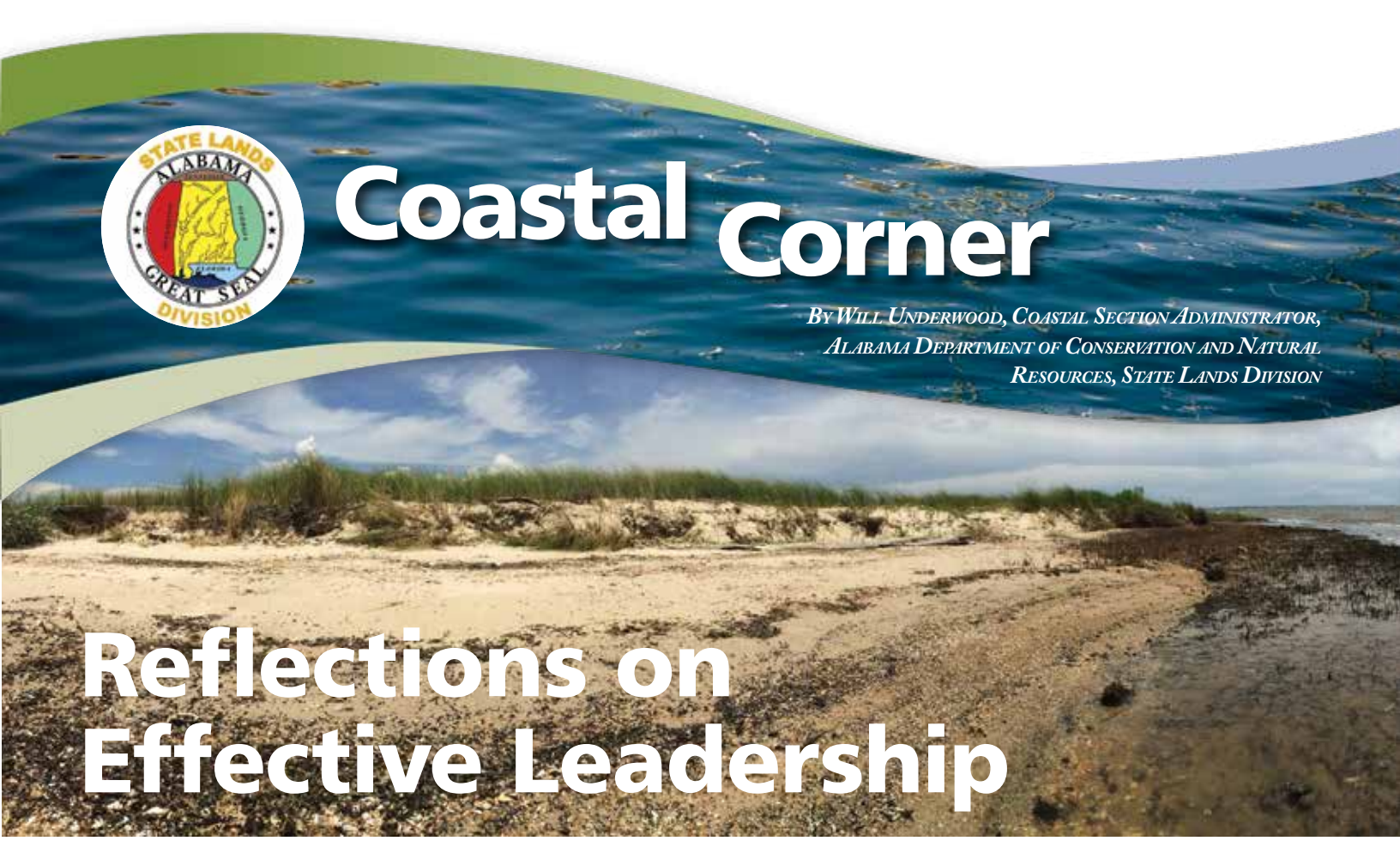
At the onset of the *DWH* spill, Blankenship was serving as the Chief of Enforcement for the MRD. A few days after the spill, he stopped by the Brookley Field Coast Guard base to see if ADCNR could be of assistance. Coast Guard staff asked him to stay for a few days to help out, and he agreed. At the time, only a handful of people staffed the Incident Command Center (ICC), as the eventual magnitude and impact of the spill were not yet revealed. For months, while at the ICC, Blankenship provided technical support and coordinated Alabama's response efforts in concert with the Alabama Department of Environmental Management (ADEM) and the Governor's office. Following that initial detail at the ICC, Blankenship continued to direct ADCNR's response to the spill and the subsequent transition into the Natural Resource Damage Assessment (NRDA) phase of the response and recovery, led by ADCNR's State Lands Division (SLD).

Commissioner Blankenship is proud of the response efforts of ADCNR employees following the spill, including early efforts to develop a Response and Booming Plan and executing contracts to deploy boom. Blankenship worked with ADEM and ADCNR GIS specialists to develop a system which allowed field personnel to map boom type, location, and condition, along with sightings of oil, using GPS on their boats. That data was consolidated and analyzed daily, giving real-time intelligence to the Governor's office and the ICC and allowing for adaptive management of boom deployment strategies to best protect Alabama's coastal resources. Blankenship specifically credited Lynn Ford at ADEM for providing behind-the-scenes expertise to give life to the GIS mapping application. The mapping information proved useful as Departmental personnel, in consultation with FDA and NOAA staffs, worked to manage commercial and recreational fisheries over the duration of the event.

During Blankenship's time at the ICC, he and many others experienced an emotional roller coaster of watching engineers confidently deploy multiple technologies to cap the wellhead and stop the spill, only to see them fail. Concerns grew over the potential impacts to marshes, sea grasses, fisheries, and tourism. Once the wellhead was finally capped, Blankenship shared a sense of relief as the task then shifted to quantifying the amount of oil released and starting down the long road to recovery.

Blankenship noted that the *DWH* incident is a stark reminder of how easy it is to take for granted the abundance, beauty, and value of the clean water of Alabama's coast. Now, over a decade later, Alabama is on the path to recovery and restoration with tourism booming and over 160 projects, valued at more than $900 million, either completed or underway through the *DWH* settlement. With funding for recovery and restoration extending well into the next decade, Blankenship recognized the additional strain and workload that administering and managing these projects had on existing ADCNR staff. This prompted the creation of the *DWH* Coastal Restoration Section, headed by Dr. Amy Hunter, whose staff is responsible for overseeing the efforts and making best use of the unprecedented resources afforded by the settlement. The Section reports to the ADCNR Commissioner's office, is housed at the Coastal Stewardship Office at the 5 Rivers Delta Center, and coordinates closely with the SLD and MRD of ADCNR on project implementation.

Blankenship's evolving roles over the last 10 years have given him unique perspective and insight as ADCNR has worked to fulfill its duties in protecting and managing Alabama's natural resources. "The cooperation with federal agencies and other State agencies throughout the years has been rewarding," says Blankenship, "and has strengthened in response to the *DWH* incident. This cooperation has paid dividends, as it has opened lines of communication, brought to light common management needs and concerns, and resulted in meaningful restoration and conservation in the face of an unimaginable tragedy."



Coastal Corner

By Will Underwood, Coastal Section Administrator, Alabama Department of Conservation and Natural Resources, State Lands Division

Reflections on Effective Leadership

Much of the content of this issue of the *Current Connection* focuses on individuals who have emerged as leaders in the field of conservation in coastal Alabama in the wake of the *Deepwater Horizon* oil spill. Each of them, in their own way, contributed to the response and ongoing recovery following one of the largest human-caused environmental disasters to impact the Gulf of Mexico. While their backgrounds are diverse and their accomplishments wide-ranging, I suspect that you will recognize some common traits among them important for effective leadership.

One of the most important of these traits is being a lifelong learner. Coastal ecosystems are about as dynamic as they come, with hurricanes, droughts and floods, and rising seas as just a few examples of stressors that quickly come to mind. When that dynamic nature is coupled with injuries and insults inflicted by human activities, we must be ready to implement a response equally as dynamic to facilitate recovery. In our modern environmental lexicon, we call this *adaptive management*; Aldo Leopold, regarded as the father of the field of wildlife ecology and management, referred to it as "intelligent tinkering." Leopold cautioned his readers to "keep every cog and wheel" when managing and restoring the environment, lest we overlook some small but vital piece of the machinery of nature. This, of course, begs the question: Do we know and understand all the pieces that make coastal environments function? While the answer to this question is unequivocally summed up with "we don't know what we don't know," an effective leader will move past the stage of analysis paralysis to choose a path forward to do the most good with their available resources.

The ability to lead such a response in uncertain times comes from years of observing, doing, and learning from successes and failures. In preparing for this issue of the *Alabama Current Connection*, I had the opportunity to interview just such a leader. Alabama Department of Conservation and Natural Resources Commissioner Chris Blankenship rose through the ranks of the Department and, at the time of the *DWH* spill, led the agency response efforts as the Chief of Law Enforcement for the Marine Resources Division. After realizing that the Department didn't have an effective way to track and manage the deployment of boom and other resources during the response, he quickly spearheaded an effort to develop and implement a GIS system to solve the problem. While his role has evolved with his appointment as ADCNR Commissioner in 2017, he has continued to provide leadership to Alabama's recovery from the spill and hold the Department on a steady keel through many natural disasters. His career-long dedication to managing Alabama's coastal resources was recently recognized, as Governor Ivey dedicated the Christopher M. Blankenship Artificial Reef Zone, a 63-square-mile area offshore of Dauphin Island. This reef zone will provide habitat, recreational opportunities, and economic benefits to the entire state. Join me in congratulating Commissioner Blankenship on this honor.

As I close out this edition of the Coastal Corner, I'd like to remind everyone that effective leaders are forged one good decision, one good deed, at a time. I challenge you to use your voice to be a leader with your family, friends, and community as we work towards the common goal of conserving our coast.

Interview with Amy Hunter

Deepwater Horizon Restoration Coordinator, Alabama Department of Conservation and Natural Resources

Dr. Amy Hunter serves as the *Deepwater Horizon (DWH)* Restoration Coordinator for the Alabama Department of Conservation and Natural Resources (ADCNR), leading a staff that stands up Alabama's restoration projects resulting from the *DWH* oil spill. As a marsh ecologist, trained at the Dauphin Island Sea Lab and the University of Alabama, viewing things as systems has provided her a useful approach to thinking about restoration programs, in addition to salt marshes.

Dr. Hunter recalls leaving work April 20, 2010, and noticing news tickers indicating 11 persons missing in the collapse of an oil rig in the Gulf – a grim story. In the days that followed, the reactions of friends in the oil and gas industry gave her insight into the gravity of the event. It was the first realization of how overwhelming the problem would be.

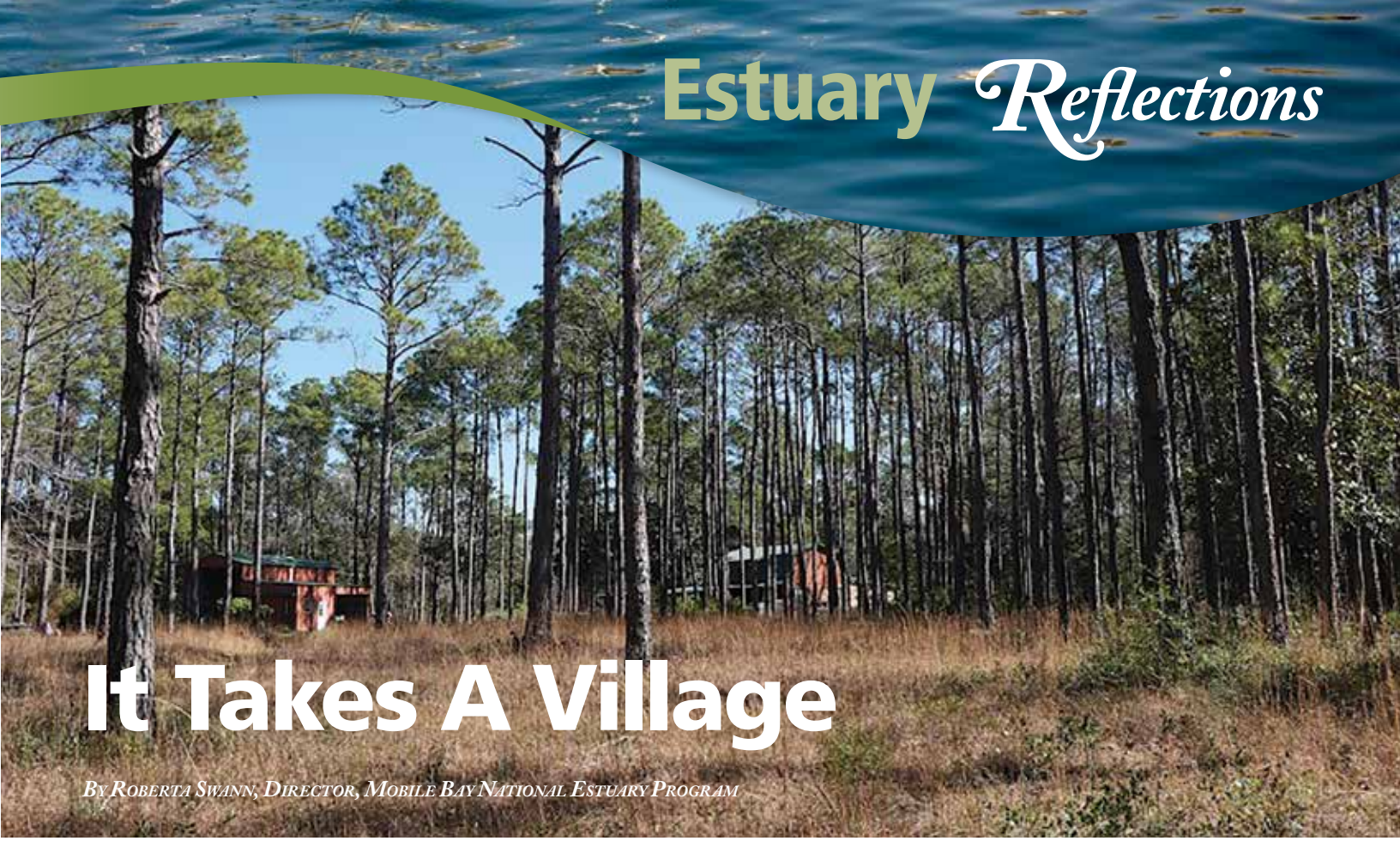
Pre-settlement, Amy was hired by ADCNR's State Lands Division as a contractor to help with "early restoration" as part of the Natural Resource Damage Assessment (NRDA). Alabama, along with the other four Gulf states and federal agencies, met with BP regularly and began negotiation of restoration projects – the beginnings of recovery. Post-settlement, Dr. Hunter accepted her current position, overseeing the State's Oil Pollution Act fines under NRDA, RESTORE Act funding from Clean Water Act (CWA) fines, and the National Fish and Wildlife Foundation Gulf Environmental Benefit Fund from criminal penalties. She serves as a connector between the federal agencies that oversee the funding (e.g., U.S. Treasury and Federal RESTORE), the Alabama Trustee Implementation Group, and local partners that make the projects work.

Like the other Gulf states, Alabama receives one payment every April to continue through 2031 under the terms of the settlement. As the Coordinator, Dr. Hunter reviews project suggestions solicited by ADCNR and follows up with municipalities to assess project need, priority, and sustainability into the future. Her role in planning for the use of *DWH*-related funds is to listen to the needs of each jurisdiction and balance those needs across coastal Alabama in terms of how each project will contribute to its long-term health. She works to identify a mix of projects to not only fix what is needed now but also invest in building future capacity to continue to manage Alabama's natural resources.

Dr. Hunter has learned many lessons and taken notes on how other states invested *DWH* funding. Florida established their Gulf Consortium, and Louisiana manages their settlement through the previously established Coastal Protection and Restoration Authority. In terms of coastal restoration, Alabama and Mississippi exchange ideas frequently; however, Dr. Hunter understands that a solution for another Gulf state may not work for Alabama, or vice versa.

Additionally, other states can learn from the Alabama Gulf Coast Recovery Council concept, where local elected officials determine the use of RESTORE Buckets 1 and 3 funding. This puts funding back into the hands of local communities and enables them to fund priority projects within their communities like the historic Africatown Welcome Center or local wastewater treatment plants and sewer projects. A portion of RESTORE Act funding is directed to the Center of Excellence for academic research. Bucket 2 funds large-scale ecosystem restoration. The benefit of the funding being run through one agency, ADCNR, is it forces Alabama to look at the "big picture" and create a restoration "quilt" rather than just a "patchwork of projects."

Amy Hunter takes pride in her role representing Alabama, working with federal agencies overseeing the *DWH* settlement funds and with local governments implementing those funds. Using science and local priorities to guide planning helps to create a well-targeted restoration effort. *DWH* funding can be most transformational if the funds are directed towards building capacity through infrastructure, water monitoring stations, and training personnel to manage whole systems and their accompanying data. Alabama has the opportunity to grow its capability to identify, implement, manage, and complete restoration on a coast-wide scale. Dr. Hunter is humbled to serve the people of her home state and the Gulf Coast, working cooperatively to preserve, maintain, and restore Alabama's natural resources.



Estuary Reflections

It Takes A Village

By Roberta Swann, Director, Mobile Bay National Estuary Program

Over the holiday season, I spent quite a bit of time on our front porch—admiring the many shades of green, entertained by the chickadees and nuthatches, and reflecting on the many different types of community around me with their "true grit" on full display. A quick Google of "true grit" returns a description of "someone who sticks to their goals despite numerous issues, problems, setbacks and failures…a person with firmness of mind and unyielding courage."

As the pines bent in the breeze and the birds flitted from feeder to feeder, the human dimension of true grit transmuted to these natural communities, and I sat up in awe of the resilience of the world around me. Through storms, habitat conversion, and droughts and floods, the trees in front of me stand, sometimes gnarled but still reaching to the sky, and the birds return - confident they will find food and a place to rest.

There is a community along the Alabama coast whose sole purpose is to ensure these natural communities thrive in perpetuity. The Mobile Bay National Estuary Program Management Conference, made up of federal, State, and local governments; scientists; businesses and industry; non-profit organizations; community groups; and frankly anyone who wants a seat at the table, works collaboratively and through many partnerships to counter the many stressors on our coastal ecosystems and way of life. Demonstrating true grit on a continual basis, their collective impact in conserving and restoring habitats, improving environmental management, and growing community stewardship is the product of overcoming setbacks, steadfastly addressing barriers to project implementation, and demonstrating deep commitment to protecting what we value along the Alabama coast: Access to the water and open spaces, healthy populations of fish and wildlife, robust beaches and shorelines, celebrations of our heritage and culture, resilient communities, and clean and productive waters.

Their work is guided by best practices in science, engineering, and community engagement. In this issue of *Alabama Current Connection*, we present to you a look back and a look forward. We begin with memories of the *Deepwater Horizon* oil spill and ask eight different community leaders to share their thoughts about what happened. Almost eleven years later, we asked whether they think, in the spill's aftermath, Alabama has done well with the resources available for restoration. We then highlight many of the efforts undertaken to date, with firmness of mind and unyielding courage, to improve coastal Alabama's environmental conditions and management processes.

Have we collectively gotten it right? Not always. Has it taken time? Definitely. Could we improve our methods? Almost always. Are there still needs to be filled? Of course. Do we have the true grit necessary to continue the momentum? We do. Thanks to the continued support for the National Estuary Program, Alabama has been given the resources possible to sustain a backbone organization, the Mobile Bay National Estuary Program, to coordinate the many community efforts working toward a common vision: Alabama's estuaries, where the rivers meet the sea, are healthy and provide an abundance of ecological and human uses. There is an African proverb, "It takes a village to raise a child." Along the Alabama coast, it takes the entire community to protect our way of life.

Interview with
Jimbo Meador
Certified Master Naturalist
Jimbo's Delta Excursions

Point Clear's Jimbo Meador is a bonafide lower Alabama legend. Tales of him running bearded in swim trunks through area golf courses are true, while wilder, less verifiable ones of him wrestling alligators and hauling nutria out of the swamp are told with equal gusto. He generally wears a ball cap over long hair, sunglasses hanging from his neck, khaki fishing pants, and sandals or bare feet. He owns a custom-built boat he runs from near the Bluegill Restaurant for Jimbo's Delta Excursions, guiding small tours and sharing information about the Mobile-Tensaw Delta waters he's plied for almost 70 years. He has forgotten more about those waters and coastal Alabama than most of us knew.

As the spill unfolded, Jimbo was with Dragonfly Boats building stand-up paddleboards for fly fishing and flats boats for bonefishing. When they heard about the oiled birds to the west, they designed and built extremely shallow-draft boats with cleaning stations to retrieve and clean up the birds. They made one for the Gulf Coast Research Lab in Ocean Springs, another for an operation in Fort Morgan, and a third ended up at the Dauphin Island Sea Lab for use in their manatee program.

Jimbo was frustrated by barriers to recovery in early spill responses. He was told only the feds could touch oiled birds, which at the time were considered "evidence," so he negotiated an arrangement where volunteers could treat oiled birds with one federal person onboard. When aerial dispersant application began, he felt "out of sight, out of mind" was a weak approach. The worst may have been when oiled sargassum beds, floating nurseries for over 130 species of pelagic fish and turtles, were set afire as part of a controversial clean-up program.

The outlook was dark. Jimbo felt the spill would adversely affect seafood markets, commercial fishermen, boat captains, and even guides – anyone making living from the water. But he held onto hope, saying, "No matter what happens, I try to always think there's a good reason for it." The only good thing he expected would be money available for conservation and restoration in the destroyed marine world, though his thoughts about dispersants tested the limits of optimism.

Jimbo doesn't know how another deep-water spill can be prevented and fears this could happen again. He feels regulations should be more stringent and agencies should more aggressively observe what's going on. "That's the biggest problem," he says. "They couldn't stop it. The best outcome was for people to realize we can't have this happen again." He wonders what's different now.

He sees estuaries and nursery habitats suffering. While he acknowledges the oil spill was a significant hit, he knows "we've got a whole lot more problems than the spill. We've got overpopulation. I'll take people on tours of the Delta, showing and naming invasive species. I'll ask, you know the worst invasive species we have? Us. Humans." He reminisces about clear Eastern Shore waters lined with seagrass beds when he was a kid. People built the first piers out past the grass beds so they could swim without wading through the grass. He said seagrass makes water clear by trapping sediment. Back then, he would flounder on calm nights, able to see the bottom. He fears the next generations will have no idea how good things were and be oblivious to what we've lost.

"I'm really serious about this," he said. "If you cover your lawn with a tarpaulin, how long will it live without photosynthesis? You can pull up the tarp and plant more grass, but it's gonna die right away without sunlight. It's the same thing with muddy water and sea grass. If the water's muddy, it's like a tarp keeping sunlight out. Chicken and the egg. You can't have clear water without the grass, and you can't have the grass without clear water. How are we ever gonna get it back?"

"When it used to rain, water went into the soil, was absorbed, and went into the aquifers. Now, having paved and roofed everything, the rain is running off carrying silt, dirt, and nutrients into tributaries, rivers, and the Bay. How do we take care of all that runoff?" he asks, suggesting, "You've got to have buffer zones or ideas how to stop it." He hopes some land is conserved and not developed. "They need to build parks. Let's have some grass and ground. Let the rain go where it needs to go, instead of running down streets and gutters and into drainage pipes. There's more pavement, more roofs, and less ground. That's the whole problem, but you can't stop people from building houses."

A Watershed Approach to Resource Management

The Mobile Bay National Estuary Program's Comprehensive Conservation and Management Plan, created collaboratively by Management Conference partners, prescribes a watershed approach and development of watershed management plans (WMPs) to manage the State's estuarine waters and resources. It is a shift from traditional city planning, where geopolitical boundaries limit available actions to address threats. A WMP is concerned with areas, independent of political boundaries, that drain to common receiving waters like Three Mile Creek, Dog River, Weeks Bay, or D'Olive Creek.

A WMP takes over a year to develop, requires lots of community input, and focuses on teaching communities about their watershed with data related to governance, demographics, socioeconomics, geology and geography, biology and ecology, and hydrology and climate. It identifies stressors that threaten water quality or habitats and recommends prioritized solutions to those problems. A WMP even recommends strategies and potential funding sources to implement those solutions. Each WMP conforms to the EPA's criteria, including Coastal Zone Act Reauthorization Amendment 6217(g), and addresses the six values most important to those living in coastal Alabama and vulnerabilities related to climate change.

In each of the aforementioned watersheds, stressors impacting receiving waters were identified in WMPs, leading to implementation of projects to address them.

• In Three Mile Creek, litter, pathogens, excess nutrients, sediment, and invasive species were major identified impairments. In response, Litter Gitter trash collection devices have been installed and maintained; the Mobile Area Water and Sewer System (MAWSS) has upgraded infrastructure, including construction of stormwater attenuation tanks and installation of new, larger trunk lines; the major source of sediments, 12 Mile Creek, is being restored/stabilized; and efforts to eliminate invasive island apple snails and terrestrial plants, such as Chinese tallow trees, are underway.

• With similar stressors identified in Dog River, MAWSS has upgraded infrastructure to reduce pathogens, address nonpoint source pollution, and improve water quality. With most Dog River Watershed wetlands lost to urbanization, approximately 300 acres of contiguous undeveloped bottomland hardwood wetlands are being acquired in the Halls Mill Creek Watershed.

• In the D'Olive Creek Watershed, where all five principal streams are impaired by siltation from development, an extensive stream restoration program has been implemented. More than two miles of degraded streams and over 75 acres of floodplains and wetlands have been restored, sediment loads have been reduced by 27,422 tons per year, nutrient loads were reduced by 111 tons per year, and Joe's Branch was removed from the State's 303(d) list of impaired waters when post-construction monitoring revealed greater than 90 percent sediment reductions.

• In the greater Weeks Bay Watershed, pathogens and sedimentation were among the most significant stressors identified. The Natural Resources Conservation Service is implementing agricultural best management practices, like livestock exclusion from streams, to reduce pathogens. A Lower Fish River Watershed Restoration Program has been initiated to restore degraded stream reaches in the Marlow community and to tributaries to the Magnolia River to reduce sedimentation.

Watershed management plans are key to identifying problems threatening our coastal waters and securing the funding necessary to mitigate them.

Interview with Ashley Campbell

Natural Resource Planner, Planning and Zoning Department, Baldwin County

Ashley Campbell is a lifelong resident of Baldwin County. A Natural Resource Planner for the Baldwin County Planning and Zoning Department, she formerly served as the Environmental Programs Manager for the City of Daphne. She was a charter member of the D'Olive Watershed Working Group and was crucial to the development of the D'Olive Creek, Tiawasee Creek, and Joe's Branch (D'Olive) Watershed Management Plan (WMP), published in August 2010. She has subsequently been involved in almost every step of implementation of the Plan's recommendations to restore a network of stormwater-degraded streams delivering tons of silt to fisheries nursery habitats of D'Olive and Mobile bays.

When the spill happened, she was engaged in developing the WMP. "All of the partners, Thompson [the engineering contractor], Daphne and Spanish Fort, and everybody were in the last stages of getting the Plan ready, reviewing projects, and getting them ready to go." She doesn't really watch the news, so she couldn't remember exactly where she was or what she was doing when she heard about the disaster.

Once she became aware of potential spill impacts, her department's focus shifted to submerged aquatic vegetation, which they anticipated would be affected. She worried about all the efforts by the D'Olive Watershed team. Partners expected (or feared) it was going to derail or slow the planning process in the Watershed. "I was worried. We had the County on board, Daphne, Spanish Fort, and tons of agencies together. We were ready to move forward, and then BANG…" She was anxious it could shut them down. It did not.

As time passed, she marveled, "Who knew the spill would turn out to provide the funding from NFWF [the National Fish and Wildlife Foundation's Gulf Environmental Benefit Fund] to pay for the projects recommended in the WMP? Who would have ever dreamed that?" With a WMP in place and recommendations already prioritized, projects were nearly shovel ready. "When the first NFWF funding came down, we had already finished the Joe's Branch step-pool project. I think between the Plan and the success at Joe's Branch, it 100% resulted in us getting funding from NFWF for restorations across the Watershed."

"Because we had an implementable WMP, we set a precedent for future watershed planning. From now on, watershed planning will be a part of all restoration in our area. When we got the $6 million in late 2013, I think I danced a jig. Dreams do come true. But then we got hit with that huge rain in April 2014. We had to go back and ask NFWF to double the amount. It tore us up. But guess what? They said yes! From that day on, D'Olive restoration became a success." She says it works when you study your watershed, pull your partners together, hold stakeholder group meetings and create a live document to guide actions. "Daphne and Spanish Fort followed through with Plan recommendations to update environmental regulations and install wetland and stream buffers. Everything changed in the last ten years. Partners stepped up and let the Plan guide them."

She recommends a video "that still gives [her] goosebumps": *Protecting Alabama's Waters* (https://www.mobilebaynep.com/videos/protecting-alabamas-waters). "It's about planning and what it did for us. It was all of us that made the D'Olive restoration program a success. An urbanized stream [Joe's Branch] delisted for sediment [by ADEM in April 2020]? That doesn't happen! It could only happen with a good WMP and great partners. Watershed planning leads to funding, which leads to delisting. That's what it's all about."

She believes completing development of plans for the two coastal counties and updating ones where many projects have been implemented would be among the best investments of remaining spill-related funding. "We'll continue to seek grant money in the future. Even when we run out of oil spill money, these plans will be used to decide where funding will be directed to the largest impairment or where we'll get the best bang for the buck.

"We don't do it because it's political. We do it because of the potential environmental improvement or sometimes opportunities for partnerships with people willing to step up and do the right thing."

Total Quality Management in Watershed Management Planning

Total Quality Management (TQM) is a business term used to describe a management approach to long-term success through customer satisfaction. TQM is based on all members of an organization or effort participating in improving the processes, products, services, and culture in which they work. The Mobile Bay National Estuary Program employs elements of TQM throughout watershed planning, where the customers – watershed residents and stakeholders – are brought to the table in initial stages of planning to establish and work towards common goals.

Developing a watershed management plan (WMP) is process-centered, with steps like analyses of watershed characterizations and conditions, land use and land cover, surface water quality, and habitat conditions key to identifying critical areas and issues and prescribing appropriate and effective management measures. Fact-based decision making, another element of TQM, is integral to the watershed approach.

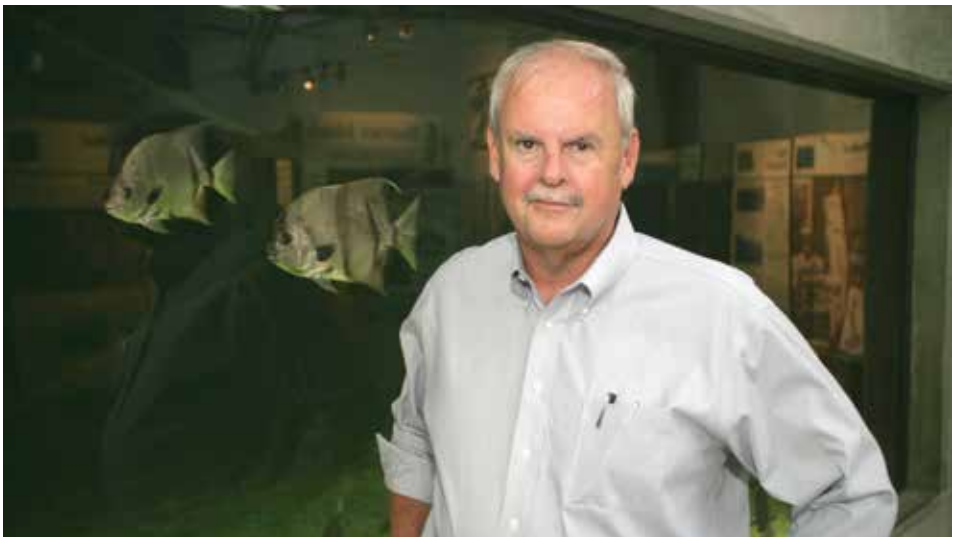
When development of the 2010 D'Olive WMP was initiated, primary stakeholder concerns were centered around sedimentation and resultant shoaling in the Lake Forest lake, generally blamed on new construction north of Interstate 10. Through analyses, the real problem was identified to be erosion of stream banks throughout this hilly, rainy, erodible, and developed Watershed. The excessive siltation was manifested not only in the lake, which served as a sediment trap, but also downstream in seagrass beds of D'Olive and Mobile bays. The WMP prescribed restoration of the degraded tributaries supplying the sediments as a primary management measure.

The sources of the excess sediments impacting the waters of Daphne were degraded streams in the Joe's Branch Subwatershed in Spanish Fort across municipal boundaries. TQM prescribes a strategic and systematic approach requiring everyone "at the table." With both cities invested in improving conditions in their shared D'Olive Watershed, the MBNEP established the D'Olive Intergovernmental Task Force, which included the mayors of both cities along with State agency representatives, to provide municipal oversight of WMP implementation. With land development the only causative factor under human control, the cities strengthened stormwater and stream buffer regulations to make them more uniform and effective in protecting receiving waters.

Another TQM element is continuous improvement. After over a decade of successful D'Olive WMP implementation, the WMP is being updated. The revised (and improved) D'Olive WMP will conform to EPA criteria and the Coastal Zone Act Reauthorization Amendment 6217(G) and address the six values of the Comprehensive Conservation and Management Plan and vulnerabilities related to a changing climate.

Interview with
Dr. John Valentine
Executive Director of the Dauphin Island Sea Lab

Dr. John Valentine has been at the Dauphin Island Sea Lab since 1988 and chaired the Sea Lab's University Programs until his appointment as Executive Director in 2011. He is considered an expert in experimental marine ecology, plant-animal interactions, and human-dominated ecosystems. Under his direction, the DISL was selected in 2019 as the home of Alabama's Center of Excellence with funding from the U.S. Department of Treasury in cooperation with the Alabama Gulf Coast Recovery Council and State of Alabama.



As the *Deepwater Horizon* oil spill unfolded, Dr. Valentine led University Programs in trying to secure an organized response to the event and its impacts, thinking it was impossible, at the time, to separate fact from fiction. With the coast in a 24-hour news cycle, emotions running extraordinarily high, and BP extremely confident they would be able to handle the situation, he headed into the response effort concerned about the lack of organization, with baseline conditions not well-defined and no response plan in place.

His involvement was at first limited, but that changed when his predecessor, Dr. George Crozier, charged him with pulling together a team of scientists to develop initial resource assessments. There was little historical data to inform efforts – just a "report here or a report there" – and no comprehensive assessment of coastal Alabama biological resources. The team of scientists recruited from across the DISL campus began working with the Northern Gulf Institute in Mississippi, who received some funding from BP to get out and start sampling and assessing impacts.

In late April 2010, the State of Alabama received $5 million from BP for additional assessments. Governor Riley charged the Marine Environmental Sciences Consortium, aka DISL, with this task. Through proposal solicitations, conversations, and meetings, they recruited 107 investigators from the 17 member schools to participate in the various assessments, from tiny microbes and meiofauna to sharks and other apex predators, requiring tremendous effort and lots of coordination. Dr. Valentine felt they did a "pretty good job" under great pressure, considering they had little time, tough circumstances, and no existing baseline from which to evaluate trends. The teams created baselines in about four weeks. "It was a big effort."

Dr. Valentine found few "positives" related to the event, other than having the extraordinary value of Gulf of Mexico resources brought to the nation's attention. One benefit arising from the event was that we learned "a hell of a lot about how the northern Gulf of Mexico functions and the remarkable resources found here." Yet, even now, he worries we don't hear too much about "what we do next time." He noted the lack of long-term monitoring following the 1979 Ixtoc oil spill in Mexico, and he is concerned we are headed in the same direction. Determining what is natural and what is man-made can only be achieved through monitoring, and he recommends the Gulf states and industry partner to establish a long-term monitoring plan for the Gulf.

Dr. Valentine believes the "shop is largely closed" with regard to remaining spill-related funds for research efforts beyond support for the Center of Excellence. The Center recognizes the need to better understand and mitigate existing stressors like nutrient pollution with a whole new set of stressors coming online related to a changing and rapidly warming ocean. The Center is conducting studies to determine how current stressors and projected future stressors will affect coastal conditions. Without judgements, the Center hopes to provide data to answer questions like "How will saltwater intrusion affect aquifers? How will small increases in sea level affect the Delta? Will we see tropical species in the northern Gulf? Will there be a reorganization in coastal food webs?" The Center hopes to investigate restoration success to determine if projects really worked and to provide the State with data to guide management. Encouraging long-term monitoring to figure out which changes are natural and which are man-made is important to both perceptions and planning. He stresses the importance of monitoring above all. "Monitoring is not a short-term project. It needs to be a long-term commitment."

Coastal Monitoring by the Alabama Department of Environmental Management

The Alabama Department of Environmental Management monitors water quality in the streams, rivers, estuaries, and nearshore coastal waters of Alabama on an annual basis to collect current water quality data, document long-term water quality trends, identify sources of impairments, and develop protective water quality criteria. ADEM has divided Alabama's coastal waters into three areas that include multiple monitoring stations in Mississippi Sound and its tributaries on the west (monitored in 2022), Mobile Bay in the center (to be monitored in 2023), and Perdido Bay and its tributaries on the east (to be monitored in 2024).

The areas are rotated, with a different area monitored every year and data collected for eight consecutive months (from March through October) each year. Unless a special study is authorized by ADEM's Water Division based on total maximum daily load development or issues of timely interest, each area is only monitored every three years.

At each monitoring station, ADEM collects data for several water quality parameters, including nutrients, metals, and chlorophyll, which require laboratory analyses, as well as in situ parameters like temperature, dissolved oxygen, pH, and salinity. Biologically, only chlorophyll and *E. coli* and *enterococci,* sampled in the beach monitoring program, are monitored. Fish tissue monitoring is ongoing through a different program but at five-year intervals. ADEM works to coordinate monitoring efforts with other resource management agencies, including the Alabama Department of Conservation and Natural Resources and the Dauphin Island Sea Lab, that monitor water quality in the coastal area to obtain as much water quality data as possible and avoid duplication of effort.

As with any effort or project, the more resources you have, the more work you can get done, but all organizations – both public and private – have to operate within what their budget will support. While constrained by funding and personnel limitations, ADEM is confident their current monitoring protocols provide a good, overall picture of current water quality, as well as water quality trends, allowing them to fulfill their mission of assuring a safe, healthy, and productive environment for all Alabama's citizens and visitors.

The *Deepwater Horizon* incident has had major environmental and economic impacts along the Gulf Coast. In the wake of that incident, focus has increased on funding restoration projects, acquiring and preserving critical habitats, and upgrading infrastructure like wastewater treatment plants, all of which will benefit coastal area residents and visitors.

Funding secured from the Federal RESTORE Council has been used to support construction of a new ADEM Coastal Office. Currently, ADEM Coastal staff and programs are divided between two offices almost ten miles apart. This arrangement results in inefficiencies in communications, travel, and overall project implementation. Consolidating all those efforts into a new, state-of-the-art facility will enhance operations, increase productivity, and position ADEM to fulfill its mission along coastal Alabama for many years to come.

Interview with

Wayne Eldridge

President, J & W Marine Enterprises Inc.

Wayne Eldridge is a Bayou La Batre native and an Alba High School graduate who grew up working on the water, not only as a vocation, but as a favorite pastime. He enrolled at the University of Southern Mississippi but became disenchanted and dropped out, believing the seafood industry provided a better path to good money. When increasing regulatory pressures and economic hardships in the shrimping industry caused many to lose their boats, he moved into oystering exclusively. He met his wife, Pam, in 1992, opened up a shop, and began oyster processing the following year.

Four or five years later, the Alabama Marine Resources Director approached him about building a fishing reef. That was the beginning of J&W Marine, who bid their first job as Bayside Oysters and subcontracted it. It was kind of a part-time thing for the first four-to-six years, but following Hurricane Katrina, things really got moving with a lot of contracts to clean up debris.

He was in West Virginia attending a church conference when Wayne saw the news that April morning. He didn't think much of it – "an oil rig fire. No big deal." Then he got a call from some people he had worked with after Katrina, wanting to use his dock to load equipment. He told them, "Go ahead." "No," they replied. "You don't understand. You need to get down here." He got on a plane that morning and arrived at his dock later to see 200 people loading boom on barges. "Even at that point, no one had any idea of what a big deal this was." He leased equipment – tugboats, barges, and track hoes – to BP, deployed boom for them, and even had small boats working, running crews in and out. As the spill unfolded, J&W Marine had projects underway, including the Little Bay Restoration, breakwater installation around Coffee Island, and closing the Katrina Cut. These jobs were temporarily back-burnered because of the spill.

Wayne considers oyster reef restoration to be key for the direction of spill-related funding. His company has been involved in the creation and enhancement of private oyster leases in Louisiana, reflecting nearly $10 million of work annually. He envisions oyster restoration on a large scale, performing similar work in Escambia Bay, Florida, where six thousand tons of rock were recently delivered for reef creation. Wayne is passionate about promoting the role of oysters for both their economic and environmental benefits. Oysters "filter the water, create habitat for fish and crabs, and create jobs," says Wayne. He hopes to see increased attention given to oyster reef restoration and creation in Alabama as *DWH*-funded restoration work moves forward. He also believes "with the population growing, people need better access to water" and complimented the recent State-funded access improvements in southern Mobile County. He followed up by pointing out that the State of Alabama is doing an amazing job of creating and managing offshore fishing reefs, which provide additional recreational opportunities.

Coastal Alabama Comprehensive Oyster Restoration Plan *(2021 Revision)*

The Alabama Department of Conservation and Natural Resources (ADCNR) Marine Resources Division (MRD) and the National Oceanic and Atmospheric Administration (NOAA) recently completed a *Coastal Alabama Comprehensive Oyster Restoration Plan (2021 Revision).* It describes Alabama's existing oyster resources, discusses past and ongoing oyster restoration activities, and presents a comprehensive long-term plan to guide future oyster restoration efforts under changing climatic conditions.

Its overarching goal is to create new reefs and restore, replenish, or enhance existing reefs to improve connectivity and establish a network of intertidal and subtidal oyster resources in coastal Alabama. The Plan will increase resilience of oysters to variability in environmental conditions and other factors to support sustainable harvest and provide ecosystem services.

Annual commercial oyster landings, tracked since 1880, peaked at over two million pounds during the 1950s but have since dramatically declined to less than a quarter of that yield. This trend is blamed not only on natural stressors like hurricanes, freshwater influxes, and drought with proliferation of oyster drill snails but also on man-made impacts like dredging, construction and maintenance of navigation channels, coastal development, and pollution.

Historically, most oyster restoration efforts in Alabama have consisted of planting cultch – oyster shell or rocks – to offer settlement substrate for oyster larvae, especially after hurricanes. Based on landings data, post-Frederic (1979) cultch planting increased productivity on Alabama's oyster reefs, at least until Hurricanes Ivan (2004) and Katrina (2005). However, despite approximately 265,000 cubic yards of cultch material deployed since 2004, the trend of declining oyster productivity continued through 2018. The differences in outcomes between historical and more recent cultch planting efforts appear to be related to changing environmental conditions like temperature and salinity. These include temperature-related, prolonged hypoxic (low O_2) or anoxic (no O_2) conditions and changing precipitation patterns leading to stressful freshwater inundations and drought. It has become clear that traditional cultch planting alone is no longer a viable solution for long-term oyster restoration.

Lessons learned from oyster reef restoration experiences have informed development of strategies recommended in the *Comprehensive Oyster Restoration Plan*. Some strategy components already under implementation include:

• Use of cultch material with increased longevity, such as limestone, since most oysters harvested in fall 2018 were culled from limestone rock planted in 2015.

• Mapping and characterizing substrate using side-scan sonar to assess historically productive oyster reefs and identify previously unknown areas with bottoms suitable for oyster restoration.

• Investigating advantages of arranging different cultch types in different configurations to promote settlement and growth, since some of the State's historically productive oyster reefs no longer produce due to altered environmental conditions.

• Construction of an oyster hatchery at the MRD's Claude Peteet Mariculture Center in Gulf Shores along with upgrades to their remote set facility on Dauphin Island. Remotely set, spat-on-shell oysters will be deployed to existing reefs to increase oyster density and enhance larval recruitment as reefs are being restored.

The Plan's strategies also include use of living shoreline measures to reduce impacts of erosion, the volunteer-based Alabama Oyster Gardening Program to enhance existing oyster reefs, and the Alabama Coastal Foundation's Oyster Shell Recycling Program, which recycles oyster shells from local restaurants and returns them to State waters to provide settlement substrate for spat.

Interview with Tina Sanchez

Director of Environmental Services, Mobile County

Tina Sanchez is Mobile County's Director of Environmental Services. She manages the County's Environmental Grants Program and oversees the MS4 Stormwater Management and Conservation Property Management programs, environmental regulatory compliance, the Parks and Recreation Department, solid waste management, community resilience and disaster recovery, and the Environmental Enforcement and Animal Control departments. Before assuming these responsibilities at the County, she was an Environmental Planner for the South Alabama Regional Planning Commission.

She doesn't remember the moment she heard about the *Deepwater Horizon* explosion but does remember the feeling of shock and sadness for the people lost and hurt in the accident. She was dismayed at the magnitude of the oil spewing into the Gulf of Mexico, her home.

At the local government level, she felt she and her colleagues didn't have much of a role in the early response. There was a chain of command, and she understood that initial actions were in the hands of federal and state agencies, the Coast Guard, NOAA, and ADEM. Local governments depended upon those entities to mount the response and recovery, and to lead the way…until the July 2012 signing of the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies (RESTORE) Act.

After reading the RESTORE Act, Ms. Sanchez began to realize there may be some silver linings to this dark cloud and the Act included something for the State of Alabama. It created the Alabama Gulf Coast Recovery Council and placed local elected officials on the Council, giving them important planning responsibilities and authority.

The Council gave mayors and commissioners an opportunity to have a voice in prioritizing and funding projects with RESTORE dollars. Ms. Sanchez hoped by coming together, elected officials from Baldwin and Mobile counties, along with State officials, could use their local wisdom to guide investments in long-standing needs for improving our coastal environment. She firmly believed, after 20 years of serving with them, that local governments were where real change would be made.

Now, Ms. Sanchez believes the Council and the community have learned how to identify projects and programs for water quality, habitat restoration, and conservation and recognize opportunities to support the economy even under funding constraints. "We have come to understand that projects take a lot longer than we would like, moving through concepts, grants, engineering and design, and construction, and extra time should be budgeted into larger projects.

"Local governments have learned through on-the-job training and trials by fire in developing projects meeting funder's expectations. In the future, we could learn more from states like Louisiana, because they've been working at restoration and recovery with more resources and for much longer. They've undertaken large-scale projects, marsh restoration and dredging, to restore thousands of acres and hundreds of miles. It seems like we can learn from each other."

She credits the MBNEP framework and Management Conference and long-term relationships between stakeholders in government, the private sector, the community, and environmental groups as having been instrumental. Knowing each other, having worked together to protect Mobile Bay and the Alabama coast, and employing a watershed management planning approach have all been key to getting things done. "Identifying needs and potential solutions with the stakeholders at the table through the watershed planning process has led to impactful projects being advanced to the Council for funding through RESTORE."

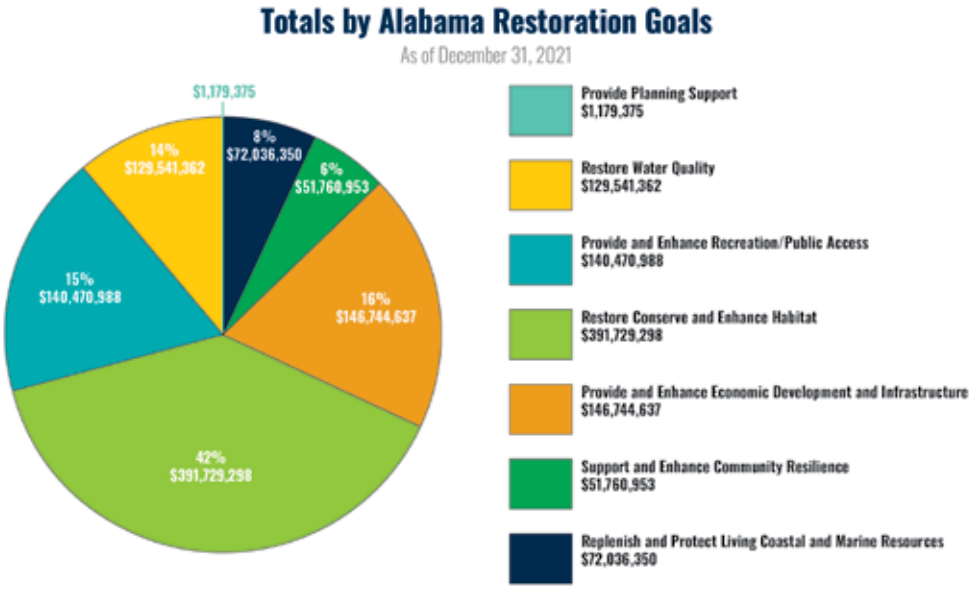
Alabama Coastal Restoration Program Project Submission Portal

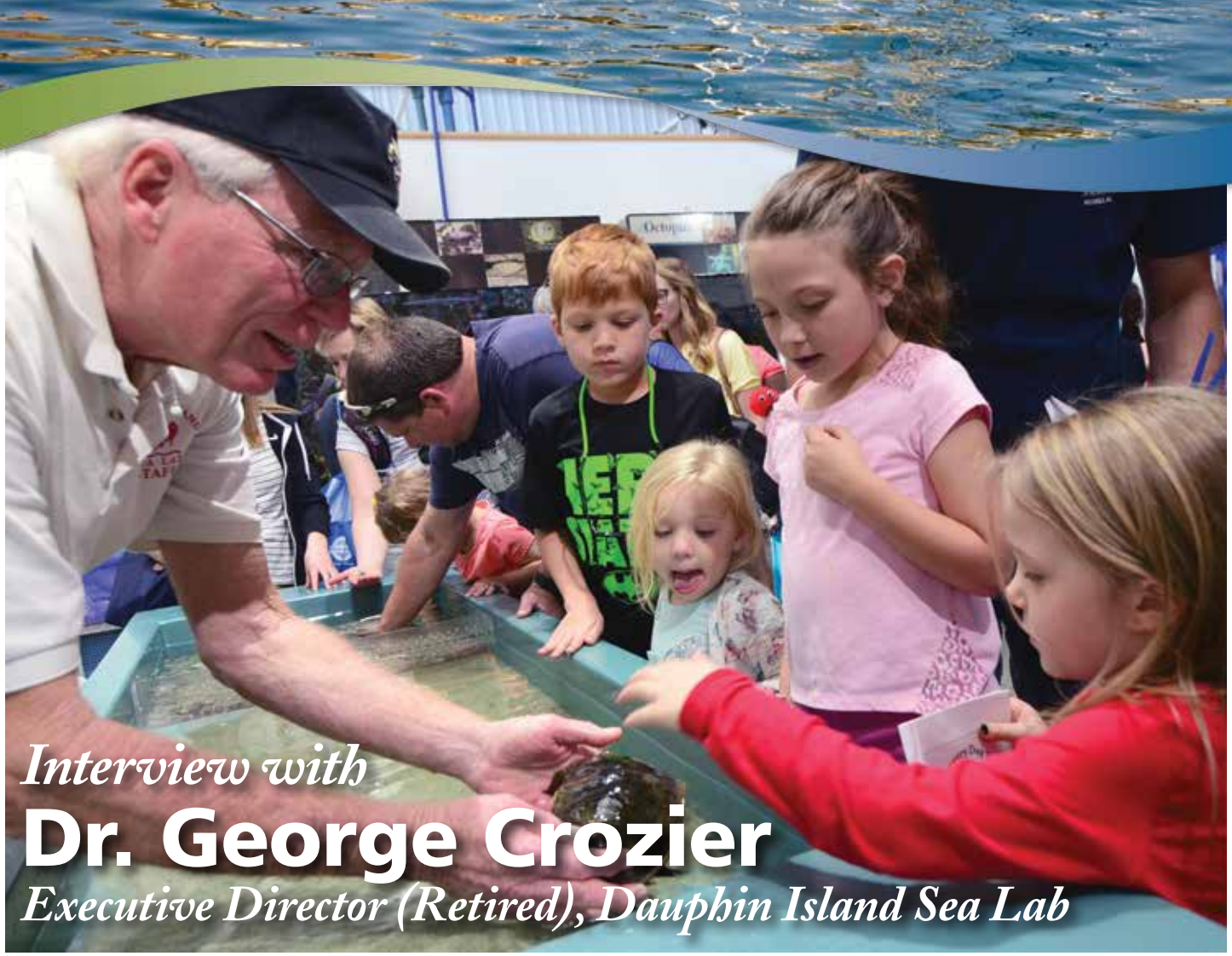
Following the *Deepwater Horizon* incident, the Alabama Coastal Restoration Program (ACRP) was created by the Alabama Department of Conservation and Natural Resources to inform project selection and distribution of funds associated with the various spill-related funding streams. One innovative approach used during this process was establishment of a restoration project selection portal (Portal), which serves as an initial screening tool aiding State resource managers in vetting project ideas before proceeding through a more formal proposal development process. The Portal, which can be accessed through https://www.outdooralabama.com/alabama-coastal-restoration-program, allows anyone interested in restoration and conservation efforts in coastal Alabama to not only view project submissions but to actually submit their own project ideas for consideration.

The Portal also serves as a valuable tool during the development and implementation of coastal watershed management plans. As plans reach the project development and prioritization stage, the Portal provides an initial gauge of priorities within a given watershed along with previously submitted projects included as watershed plan priorities. Projects prioritized as part of the watershed planning process are likewise entered into the project Portal. Initial project ideas have been submitted during the planning process and led to implementation even before completion of the plans. One such example is The Nature Conservancy's Lightning Point shoreline restoration project, which was identified as a priority during the development of the Bayou La Batre Watershed Management Plan with implementation initiated even before it was published.

As a result of the efforts of coastal stakeholders to submit project ideas, the Portal has emerged as a robust database of restoration and conservation priorities identified through extensive watershed-based community planning and vetting processes conducted throughout Mobile and Baldwin counties. This source is routinely utilized by State resource managers to identify projects for implementation when additional funding sources become available. Although born of necessity to aid distribution of *Deepwater Horizon*-related funds for project implementation, funding for Portal projects are not limited to spill-related sources. The Portal has routinely been tapped for other opportunities, including Gulf of Mexico Energy Security Act (GOMESA) funding.

In short, the ACRP has created a unique opportunity through the project Portal to allow everyone who lives, works, and plays in coastal Alabama to have direct input over restoration and conservation priorities ultimately brought to fruition.





Interview with

Dr. George Crozier

Executive Director (Retired), Dauphin Island Sea Lab

Dr. George F. Crozier is one of the country's most respected and experienced marine scientists, having served for 32 years as Executive Director of the Dauphin Island Sea Lab. Since 1977, he led a fledgling organization from humble beginnings on the east end of Dauphin Island to its position today as a global powerhouse in marine research and education.

Dr. Crozier has seen his fair share of growth and development in the field of marine science. He obtained his Doctorate from Scripps Oceanographic Institute in San Diego before it had even yet been incorporated into the University of California system. He has witnessed the massive global focus in the field brought about by the phenomena and impacts of climate change.

With important questions swirling around the fate of our oceans from every angle – ecological, environmental, economic, and existential – Dr. Crozier said increased interest in the field could not have come at a more crucial time. But his reaction to the question of what he thought when he first heard about the *Deepwater Horizon* oil spill might surprise you.

"You know to be honest with you, one of my first thoughts when I heard about the *Deepwater Horizon* spill was shock at the depth of it. I thought to myself, they are drilling five miles down? Depth of oil exploration was not something I had paid particular attention to, and I found that fact to be astounding."

Some things stood out in particular for the former Sea Lab Director. "I was obviously, like everyone, horrified. But I do remember, even in those early days, having that fear tempered a bit by my knowledge of the ecology of the Gulf itself. The Gulf is an oil-rich ecosystem, or actually many, that for millennia – eons – have been consistently exposed to petroleum. Certainly not in those amounts. That was unprecedented. But my knowledge of the flora of the Gulf and its capacity for at least some petroleum resistance, softened my expectations."

Still there were lessons. "I think what really was drawn into sharp focus is how little we know about the deep ocean or even the ocean just several hundreds of feet deep.

"The oceans are powerfully dynamic systems of currents and upwellings, conveyor belts of incredible energy bringing colder temperatures up from the depths and pushing warmer waters below. It's in some of these most active transition areas where sea life is most abundant.

"Did you know with all this focus on climate change and the warming oceans, we actually know very little about temperatures much below the surface? And not only do we not have historical data to make comparisons, we don't even have much contemporary data to speak of…there is no global database." Dr. Crozier elaborated, "For instance, without knowing that, it's very hard to predict how changes in climate will affect hurricanes in our area. This research is not being funded."

Photo: Sam St. John (FlyTheCoast.com).

The Dauphin Island Sea Lab/Marine Environmental Sciences Consortium – Alabama's Center of Excellence

The RESTORE Act dedicates 2.5 percent of the Gulf Coast Restoration Trust Fund to the five Gulf states to establish Centers of Excellence for science, technology, and monitoring. The Dauphin Island Sea Lab (building upon the network of 23 public and private colleges and universities of Alabama's Marine Environmental Sciences Consortium) is home to Alabama's Center of Excellence (ALCoE). The ALCoE will, in turn, grant competitive sub-awards to nongovernmental entities to investigate the effects of multiple environmental stressors, including climate change, on the future health of the northern Gulf of Mexico and its wildlife and ecosystems. Almost $8 million from RESTORE will be used to fund research projects, monitoring, and facility upgrades.

In the face of a changing climate, research projects funded by the ALCoE over the next three years will include investigations of hypoxia on the Alabama shelf; living shorelines as alternatives to armoring; oyster growth; distribution patterns and habitats of manatees; tidal freshwater wetlands of the Mobile-Tensaw Delta; coastal Alabama groundwater resources; development of a platform for coastal monitoring, assessment, and predictions; and development of a framework to use communities of tiny interstitial animals (meiofauna) as environmental indicators.

In addition to funding research, the ALCoE has committed funds to monitoring efforts in both coastal Alabama counties. As part of the Smithsonian's MarineGeo Network, the ALCoE is monitoring changes to seagrass and saltmarsh habitats over time and, with the AL Marine Resources Division (MRD), examining feasibility of using environmental DNA for fish sampling and joining the MRD in trawl sampling to comparatively analyze these two monitoring techniques. The ALCoE is providing partial funding to the Alabama Real-Time Coastal Observation System (ARCOS) for needed upgrades to hydrographic and meteorologic sensors at three of the network's seven stations and for annual maintenance. This investment will improve the quality and longevity of data provided to an array of coastal stakeholders, from the U.S. Coast Guard and NOAA to recreational anglers.

In addition to the research and monitoring, RESTORE-funded upgrades to the DISL's wet lab facilities will include the installation and maintenance of equipment that can mimic changes in chemical and physical properties of the water column, including pH, temperature, and oxygen concentrations.

Coastal Alabama Governor's Conservation Achievement Award Honorees


Roberta Swann


Eric Spadgenske


Scott Bannon


Debi Foster

On October 22, a convoy of resource management stars finally had the opportunity to head up I-65 from Lower Alabama to the Prattville Marriot for the 2021 Alabama Wildlife Federation's Governor's Conservation Achievement Awards. The event was originally scheduled in early August, but with COVID surging, the opportunity to receive the State's most prestigious conservation awards was postponed until October. For over 40 years, individuals and organizations making the greatest contributions to conserving Alabama's wildlife and natural resources have received these awards. The team of coastal 2021 GCAA recipients included Roberta Swann of Coden; Eric Spadgenske, who recently moved from Daphne; and Scott Bannon and Debi Foster, both from Mobile.

Roberta Swann, Director of the Mobile Bay National Estuary Program since 2009, was honored as the 2021 Conservationist of the Year. She directs an EPA-funded National Estuary Program, nine full-time staffers, and a Management Conference of six working committees and over 350 key stakeholders from the two coastal counties. With an MBA in Public/Non-Profit Management from Boston University, Roberta quickly admits she is not a scientist, but she has developed a keen understanding of the needs of Alabama's estuarine resources and applies her vision and organizational skills to ensure those needs are met. Formerly a community developer, she skillfully brings people together, focusing on an issue and developing effective strategies to address it. She has overseen two updates to the MBNEP's original Comprehensive Conservation and Management Plan (CCMP), a collaborative blueprint for managing Alabama's estuarine waters. Under her watch, the Program and CCMP have garnered national attention for employing a "watershed approach," developing watershed management plans to ensure restoration and conservation efforts are based in science, fit into an overall management program, and address threats to receiving waters. Over the past decade, the MBNEP has secured over $36.8 million in external funding to develop management plans for all of Alabama's tidally influenced watersheds and implement projects recommended to restore streams, stabilize shorelines, provide access, control invasive species, and create vital habitats to benefit fishery and wildlife resources. Although she is involved in every aspect of planning and project implementation, Roberta purposefully steers clear of the spotlight, deflecting attention and credit to the Program and Management Conference partners.

Eric Spadgenske, who spent the last 17 years with the U.S. Fish and Wildlife Service's Partners for Fish & Wildlife Program, was honored as the 2021 Wildlife Conservationist of the Year. Eric recently moved from Daphne to Rociada, NM, to become Project Leader for the Northern New Mexico National Wildlife Refuge Complex. In Alabama, he implemented successful habitat restoration programs for non-game species like the rare red-cockaded woodpecker (RCW) and the recently-listed trispot darter. Eric's work at the Sehoy and Enon plantations resulted in dramatic RCW population increases from a precarious three groups in 2007 to the current and stable 40 groups. He worked with landowners and managers to restore hundreds of acres of longleaf pine forest on private lands. His pioneering work in removing old and obsolete Alabama dams has contributed to water resource improvement benefitting entire stream and river aquatic ecosystems. He spearheaded the removal of the obsolete Howle and Turner Dam on the Tallapoosa River, significantly improving water quality, restoring flow, and removing a migration barrier to aquatic species. He oversaw removal of the obsolete Shadow Lake Dam on Turkey Creek, the only known home of the endangered vermilion darter. As the City of Livingston switched to groundwater as its drinking water source, he successfully oversaw removal of an old water supply dam in ill repair. Its removal not only

eliminated a safety hazard for boaters and a liability for the City but also restored habitat and passage for several species of fish and mussels. Eric's achievements in restoration programs are powered by his vision and ability to bring individuals and groups together. Retired GSA Deputy Director Pat O'Neill says, "Eric's tool bag always has the right instruments available and ready to go just waiting for the right opportunity."

Former Chief Enforcement Officer and current Director of the Alabama Marine Resources Division since 2017, Colonel **Scott Bannon**, a U.S. Coast Guard veteran and Reserve Command Master Chief, was honored as the 2021 Fisheries Conservationist of the Year. He spearheaded and coordinated efforts to provide safe and convenient access to fishery resources in coastal Alabama, including boat ramp improvements at Bayou La Batre, West Fowl River, Dauphin Island, Fort Morgan, Daphne, and Orange Beach. He continues to lead the State's efforts to ensure proper management and access to important reef fish, continuing to move these fisheries from federal control to State management. Two years ago, Colonel Bannon recommended changes to the size and creel limits for flounder and speckled trout, which, at the time, were controversial in the fishing community. However, stocks of both species have since shown tremendous improvement. Alabama Department of Conservation and Natural Resources Commissioner Chris Blankenship remarked, "His steadfastness on doing the right thing, even in the face of dissent, has proven to make positive differences in these fisheries." He has worked hard to expand the Alabama artificial reef zones. In 2021 he secured a U.S Army Corps of Engineers permit to expand seven nearshore reef zones by over 12,000 acres, adding over 51 square miles to the current Swingle Reef Zone south of Dauphin Island. He and his MRD staff have contracted to invest more than $8 million constructing inshore and offshore reefs in 2021. His staff will oversee construction of an oyster hatchery at the Claude Peteet Mariculture Center in Gulf Shores and expansion of the remote set facility on Dauphin Island. Oyster spat produced at these new and expanded facilities will be used to supplement and encourage oyster recruitment in Mobile Bay. With many facilities damaged by Hurricane Sally in 2020, Colonel Bannon has undertaken extensive repairs and renovations to MRD facilities on Dauphin Island and in Gulf Shores to ensure a safe, productive work environment for his staff.

Recently retired Executive Director of the Dog River Clearwater Revival and founder and leader of The Peninsula of Mobile, **Debi Foster** was honored as the 2021 Water Conservationist of the Year. From a background in broadcast and print media and City government, her passion for the City of Mobile, Mobile Bay, Dog River, and coastal Alabama's natural resources drew her into leadership. Recognizing the importance of planning, she participated in developing the City's Map for Mobile and the Mobile Peninsula Corridor Master Plan, which prescribes expanded access and water and land trails for hikers, bikers, paddlers, and other outdoor enthusiasts. She served on Steering Committees for the development of management plans for both the Dog River and Western Shore watershed complexes and was involved in the developing both the 2013-18 and 2019-23 updates to the MBNEP's CCMP. Debi also tirelessly implements good plans. She led Parkway Pride in planting hundreds of trees along Dauphin Island Parkway in the Peninsula, founded and served as Captain of the Alabama Coastal Cleanup McNally Park zone, helped secure Transportation Alternatives Program grants to install sidewalks and stormwater best management practices, led several of the DRCR's Annual MudBottom Revival Music Festivals, participated in MLK Days of Service, and helped secure a significant wetlands tract on Halls Mill Creek. Debi Foster is tireless. She recently secured an EPA Gulf of Mexico Program grant for Comprehensive Trash Abatement Program for the Dog River Watershed and managed a successful effort to assess trash sources and routes and reduce trash at a watershed scale. The Western Shore of Mobile Bay has benefited greatly from her presence and will miss her.

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 Mobile Bay and the 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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Celebrating the 52nd Earth Day Around Mobile Bay

Discovery Day at the Dauphin Island Sea Lab will feature virtual and limited in-person events during the week of April 18-23. Its theme is *Invest in our Planet. Act Boldly. Innovate Broadly. Implement Equitably.* Stay tuned to http://www.disl.edu for updates.

The first **Love Your Community Earth Day Celebration** hosted by Mobile County, Love Your Community, and Keep Mobile Beautiful will be held from 6 p.m. until 8 p.m. on Friday, April 22 at the Mobile Japanese Gardens across Ziegler Avenue from Langan/Municipal Park. It will include educational booths, food (with recyclable containers), games, and crafts for kids of ALL ages. Love Your Community teams will be acknowledged for their neighborhood cleanup efforts.

On Saturday, April 23, the 32nd **Annual Earth Day Mobile Bay 2022**, sponsored by the City of Fairhope and Sierra Club of Mobile will be held at the Fairhope Pier Park. Enjoy environmental displays and activities and interactive educational opportunities for children and adults from 10 a.m. until 6:00 p.m. Live music will be featured and continue until 7 p.m.

On Saturday, April 30 from 4 p.m. to 7 p.m., visit the **12th Annual Bald Eagle Bash** at Tonsmeire Weeks Bay Resource Center for food, drinks and music. Call the South Alabama Land Trust at 251-990-5004 for tickets.

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