



## The BFA January 2018 NEWSLETTER

Hope Everyone finds themselves and their loved ones doing well as we bring in this New Year.

Please mark your calendar for the next General Membership Meeting

**Wednesday, 7 February 2018**

This will be an Eating Meeting with a Guest Speaker! Doors open at 5:30 PM.

Dinner will be provided by the Apple Market  
and will include some vegetarian options.

Dinner Cost \$10.00/person  
1615 East LaRua Street, Pensacola

Please join us in welcoming back Dr. Jane M. Caffrey, Professor of Coastal Ecology at the University of West Florida's (UWF) Center for Environmental Diagnostics and Bioremediation. Her presentation is entitled: **Roadblocks to Seagrass Recovery: Results from 2016 Studies**. Dr. Caffrey has worked on water quality issues and seagrass restoration with local citizen organizations and state agencies. Her research interests include studies of the cycles of oxygen, nitrogen and phosphorus – specifically, how bacteria alter these essential nutrients. Her current research includes water quality and nitrogen cycling in seagrass beds to guide restoration efforts, effects of phosphorus spills on estuarine biogeochemistry and the impact of artificial reefs on primary production, nutrient cycling and fish production.

Dr. Caffrey earned a Ph.D. in Marine Environmental and Estuarine Studies from the University of Maryland, a M.S. in Marine Science from Louisiana State University and a B.A. in Biology from Cornell University. A former Fulbright Scholar with the National Research Council, she completed her post-doc with the U.S. Geological Survey as a research oceanographer before joining UWF in 1999. Among the courses she teaches: Coastal Marine Ecology, Aquatic Botany and an honors course: From Wastelands to Wetlands - Our Changing View of Coastal Marshes.

## BFA Opportunities in 2018

The New Year began with some longer than usual cold snaps, which with any luck will knock back the biting insects a bit this spring and summer. This year also brings together opportunities through an Estuary Program, funding for projects such as the 2010 BP oil spill fines and a groundswell of renewed enthusiasm to build better and healthier communities. Healthy communities create healthy economies which rely on a healthy environment. Here's a quick review:

### Estuary Program

The U.S. Environmental Protection Agency has selected a proposal by the Bay Area Resource Council and Escambia County to establish a new Estuary Program for Pensacola and Perdido Bays. The \$2 million grant is funded through the Gulf Coast Ecosystem Restoration Council as part of the RESTORE Act and will be administered by Escambia County. The Estuary Program will guide the development of a Comprehensive Conservation and Management Plan that will be a fully vetted roadmap for achieving publicly identified goals and outcomes for Pensacola and Perdido Bays.

Stakeholders from federal, state and local agencies and the public will develop a long-term plan that will address water quality and living resource challenges and priorities in Pensacola and Perdido Bays. The Pensacola and Perdido Bays Estuary Program is a non-regulatory program that will seek to build on existing assets, watershed management plans and scientific data to restore and conserve the environment and the economy of Pensacola and Perdido Bays for generations to come. The EPA anticipates that funding will be made available in January 2018. The full proposal can be found on the Escambia County website at <https://myescambia.com/our-services/natural-resources-management/restore/pensacola-perdido-bay-estuary-program>.

### A Community Changed

Our community has undergone a tremendous and positive change since Hurricane Ivan, which dramatically changed the Pensacola community. Had Ivan not damaged the downtown wastewater treatment plant (WWTP), reminding us that coastal development is vulnerable to storms, downtown Pensacola might still be a quiet downtown clouded by a horrendous odor. Ivan was the catalyst for change, as was the 2010 Deepwater Horizon oil spill. For those of you in the community who went through these two events let's hope we can remind newcomers about lessons we have learned, so we do not need to repeat our mistakes.

Our beautiful Pensacola Beach has an antiquated WWTP located in the heart of the tourist center, located on Santa Rosa Sound. Every year we hear about sewage spills, and like most folks assume that someone else is in charge and taking care of the situation, keeping people informed and protecting the resources. Navarre Beach also has a WWTP located on Santa Rosa Sound.

As our beach community grows, not only is traffic a headache and an issue but these systems will continue to fail and usually around the time of greatest need such as the Memorial Day, 4<sup>th</sup> of July and the beloved Blue Angels weekends.

*Here is a citizen account of such a spill not so long ago: we purchased a home in the 500 block of Via de Luna Dr. on Pensacola Beach. The back of our house faced Santa Rosa Sound, and from our second story patio there was an unobstructed view of the small public beach on the sound and of the sound waters. On the west end of the beach, there was a lift station that was maintained by the workmen from the water treatment facility a few blocks to the west. We were able to observe these workmen when they came to work on the equipment inside the shed holding the pump equipment.*

*One morning my sister and I noticed the workman at the pump house. Later in the morning after the workman left, there were strings of debris floating in the water. We walked across the street to see what was floating and found what appeared to be toilet paper and we realized there had probably been a spill from the treatment plant. The next day, we read in the newspaper that there had been a spill of partially treated sewage into the sound water. In an effort to mitigate damages, I understand chlorine was dumped into the polluted water.*

*In the days before the spill, we observed from our second story deck that the dark areas (grasses growing in the white bottom sand) started about 15 to 20 feet from the shore. About a month later, the grasses had receded to about 50 feet from shore exposing the light colored sand. Eventually the sand on the bottom could be seen to about 100 feet from shore. When we sold our house, the seagrass was still nearly 100 feet from the beach. We came to the conclusion that the Chlorine that had been added to the sound water may have killed the seagrass growing near the lift station near the shore.*

As we move forward as a community and try to understand what has happened to our fishery and resources, it is important to understand the role of seagrasses for our future. Perhaps it's time to identify and allocate money to move these antiquated and outdated WWTPs away from vulnerable coastal locations. Today the technology exists to remove pathogens and nutrients, as well as pharmaceuticals but it takes political will and community awareness to get the conversation going and moving in that direction.

### **Memorandum of Collaboration**

Let's face it, while area leaders, elected officials, the Chamber of Commerce and business folks are actively wooing big businesses and employers to move operations to our region for jobs, no one wants to live in an area with poor water quality, mediocre schools, and antiquated – outdated infrastructure or old fashioned mindsets to fixing our issues and past problems. Newcomers attracted to our community first as visitors, who then choose to move here see the value of our natural

resources and revitalized urban neighborhoods. Citizens can promote community health by making urban areas more walk-able and bicycle-friendly ride-able. These collaborative partnerships have started to change our region for the better.

Recently CivicCom, a partnership between the Pensacola News Journal & the Studer Institute hosted an evening with retired FL Governor Bob Graham. Governor Graham's message was to remind our community that we can shape our future by being aware of current conditions, collaborate within our communities about how to make things better, identify solutions and then bring these solutions to our elected officials. Certainly these steps don't happen overnight, but with perseverance and dedication sometimes citizens are able to help move their community towards a better more sustainable future.

### Indian Bayou Update

Residents living on Indian Bayou have spent the last two years watching their bayou turn red after each rain event. Why? Because red clay brought in to stabilize unpaved roads would wash off and enter the bayou through a small feeder creek. Citizens complained to the county, several state agencies, and to the media. As the situation received attention, Santa Rosa County and State of Florida officials debated jurisdictional issues, yet no solutions emerged.

Santa Rosa County invested in and hired a biologist who has helped county staff and elected officials understand the importance of protecting these waterbodies. As the saying goes, **an ounce of prevention is worth a pound of cure.**

How bad is it – if clay enters the bayou? Once the clay enters the water, the lighter components (silts) can stay in the water column and shade out the important seagrasses which depend on sunlight to make their food. Depending on the weather and tides, fine particles can remain floating for days and sometimes weeks. The sand portion of the clay used in road stabilization is relatively heavy and may settle out of the water column quicker. In the case of Indian Bayou, a sandbar or 'sediment tongue' can be observed where the feeder creek enters the bayou. The sediment tongue is roughly 150' long by 35' wide. The third component of the mix is the clay, that red 'iron rich' mineral which normally wouldn't be found in or near a wetland system, but has entered the water – again through stormwater runoff.

Some have said the state needs to implement the laws which are said to protect wetlands and state surface waters; others have said 'clean it up'. The latter will be as difficult as removing the flour component of a mixed cake batter – once all the ingredients are mixed together it's next to impossible to remove one ingredient without ruining the batter.

In an effort to assist the bayou and help residents, the county, state and media understand how important small waterbodies like Indian Bayou are to the bigger system (Escambia Bay), the Bream Fishermen applied for and received a grant from Patagonia (outdoor clothing outfitters) to help bring attention to the issue. Through this opportunity, citizens, researchers and students from UF and UWF, and members of the Francis M Weston Audubon Society are out in the bayou, collecting observations, data, and participating in local community-based conservation efforts.

Indian Bayou is considered a small rural watershed system and can be restored with minimal effort and money compared to urban systems like Bayous Chico or Texar. What's more, this small system has healthy meadows of seagrasses – due in part because it has not been disturbed by more stormwater runoff, additional development or industry discharge. If and when Escambia Bay is able to return to and support a healthy system, these small vestiges which dot the perimeter of the bay system can help provide 'seed stock' for fish, shellfish and the invertebrates that we depend on for our seafood and fishery. These little pocket ecosystems are the hatchery for the bay.

Indian Bayou presents an ideal hands-on involvement for the community to learn from and protect these systems. In doing so, the community can engage with county staff, state agencies and other elected officials to encourage sustainable development. Citizens will hopefully remember the action or inactions of the decision makers during the next election cycle.

### **East Bay River and Bayou**

Another gem in our area watershed is the East Bay River which is often overlooked when we talk about the rivers that feed the bigger Escambia/Pensacola Bay Watershed. This beautiful little watershed borders Eglin Air Force Base to the north and the Holley Navarre region to the south. Although still classified as rural, it is on the cusp of becoming suburban or even urban due to the unbridled growth in the region.

This system presents an interesting conundrum for the Holly-Navarre community, the county staff and the current county commissioners. In mid-Dec 2017, a room full of citizens from the area spoke passionately to the Santa Rosa County Commissioners about the problems their communities have been experiencing including increased flooding, traffic problems, and overcrowded schools. The meeting was to address zoning issues in the county, and the controversial item on the agenda included additional development on one of the remaining larger parcels. These issues and conflicts will only continue to increase as we struggle to balance continued development with more sustainable planning.

While the county will gain revenue from property taxes with increased infrastructure, the current community will lose as property values decrease with more potential flooding, additional traffic, and overcrowding. While it may be an unpopular move for the elected officials, the best option would be

to develop a master plan for the area which takes into account the current concerns and prepares the area for the future. At the current trajectory, the current community loses and the impacts which can be addressed today become expensive complex problems in the future.

### **Carpenter Creek & Bayou Texar Revitalization Project**

Speaking of master plans and water quality, within the next few months the Carpenter Creek - Bayou Texar Revitalization Project will commence and start the process of developing a watershed wide master plan. This project will serve as an opportunity to reconnect many portions of the fragmented system (fragmented by roads and culverts) with the flood plains and riparian zones which serve important functions during our rainy season and provide habitat for a host of birds and animals we share the landscape with. Our community is fortunate to have many residents who still recall the creek and the bayou when it was in a healthy state, and with their help and assistance we may be able to return the system to its former glory.

The creek and bayou currently are on the FL state impaired waters list for bacteria, and would be on the list for sedimentation if there was such a category for this recognized impairment. Escambia County has ramped up bacteriological monitoring at several points along the creek; in addition the county (Thank you Comm. Robinson) purchased several acres of land adjacent to the headwaters for preservation and restoration. Additionally, through the cheerleading efforts of the Emerald Coast Keeper, City Councilwoman Myers and an army of volunteers - the creek has had multiple clean-up efforts and four town hall meetings.

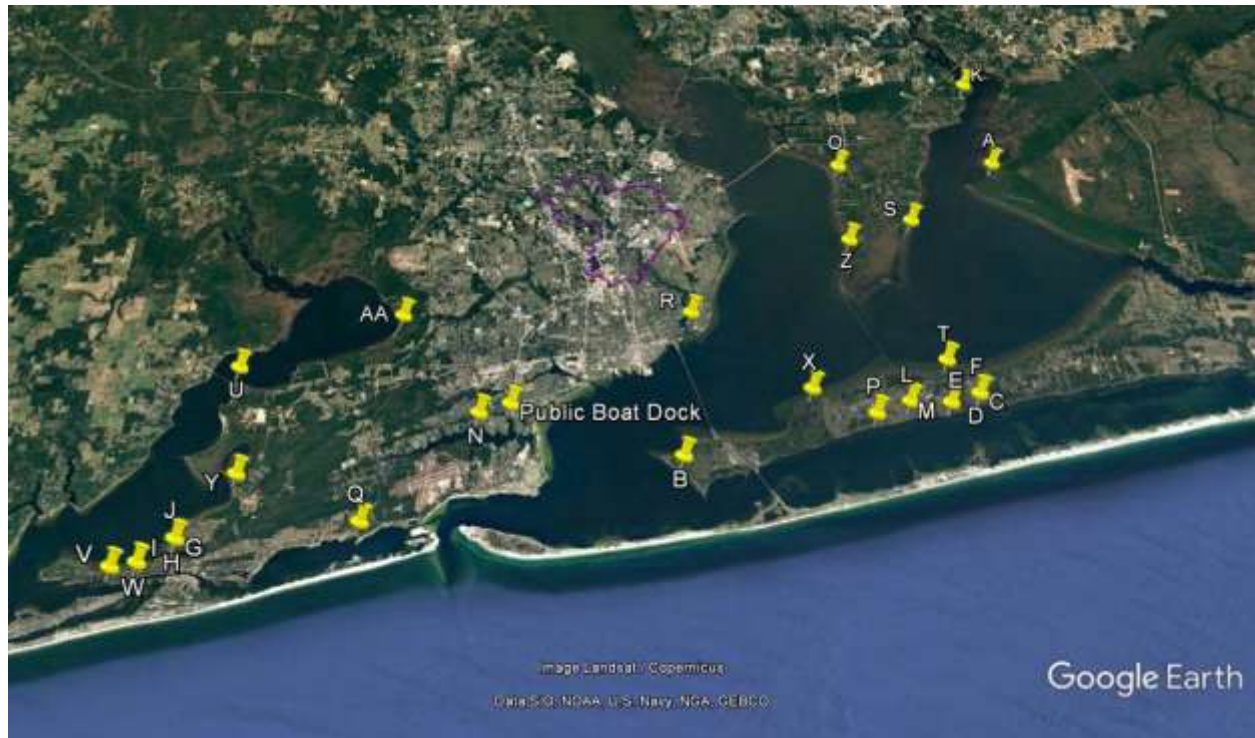
The BFA has sampled the creek and bayou for 50 years and as such has a data record which can be used to correlate the overall demise of the system over time. Washington High School Marine Science Academy Students monitor several stations between the 12<sup>th</sup> Ave (upper bayou) down to the lower bayou at the Oyster Barn restaurant. UF and UWF have several graduate students who are currently monitoring portions of the creek and bayou, and historically many students (several of whom are now retired) began their careers studying this water body. Couple all these efforts with additional projects conducted by researchers from the US EPA, FDEP and IHMC, and this little urban bayou has a fantastic opportunity to become a model of how to restore a watershed utilizing a holistic approach.

### **Project Oyster Pensacola**

Last August, the BFA Membership learned about the Pensacola Bay Oyster Company's loss of their oyster crop due to low salinity from prior months of heavy rains. Don McMahon, owner of the PBOC aquaculture venture, has partnered with the BFA to hang **triploid oysters** in cages throughout our area waters. This effort is a pilot project and a fund raiser for the BFA, and requires several steps with oversight from the state before granting permission to proceed.



There are several educational and outreach components of this project including comparisons of survival and growth rates throughout different waterbodies and opportunities to collect plankton and determine species composition and densities during different times of the year. A well attended workshop was hosted in early Dec 2017, of which those participants will be included in this first pilot study. Chesapeake Bay Foundation mentors advised the BFA through the process and continue to serve as advisors. At the end of 9-12 months, participants will return their oysters for final measurements and then these oysters will be placed in a permitted living shoreline in a waterbody near where they were grown.



Aerial view of Perdido & Pensacola Bay Systems with the location of folks who participated in the Project Oyster Workshop and where oyster cages will be located.

### Native Wild Oysters (diploid) versus Hatchery Reared (triploid) Oysters

**Oysters** found in nature normally have two sets of chromosomes and are Diploid. During reproduction, the egg and sperm each contribute one set of chromosomes to produce the **Diploid oyster**. This diploid oyster is therefore viable and can produce future offspring.

**Triploid oysters** are created under laboratory conditions in which oyster spawning is induced and causes the egg to contribute two sets of chromosomes and the sperm one set, resulting in a Triploid oyster. Triploid oysters can occur naturally, although they comprise only a very small percentage of the natural population. Triploid oysters are sterile and put the majority of their energy towards shell and meat growth. Consequently, these triploid oysters will not contribute any genetic material to the wild population.

To learn more about this project, please consider attending the Escambia County Science Hour on Thurs, 8 Feb, at 6:00 PM at 3363 West Park Place, also known as the Escambia County Office Complex off of Fairfield Rd.

**The Bream Fishermen Association** is a not-for-profit organization dedicated to the promotion of the conservation responsibilities as well as the recreational enjoyment of fishermen, hunters, campers and related outdoorsmen.

It is the objective of the BFA to support, develop, and implement programs that will:

- 1) Improve the quality of our environment;
- 2) Protect and maintain our present wilderness type lakes, rivers, swamps, marshes, bays, forests, and beaches in their natural undeveloped state;
- 3) Advance the causes of plant, marine, and wildlife preservation; and
- 4) Environmental education and outreach.

Membership is open to all individuals who support these objectives. Please join the BFA by sending us your contact information (name, mailing address, phone, and email) be sure to notify us if you prefer to receive notices and announcements by mail or email, and \$20 annual dues to our mailing address:

## Bream Fishermen Association

*1203 N. 16<sup>th</sup> Ave, Pensacola, FL 32503*

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