



Mobile Bay National Estuary Program Project Implementation Committee

June 15, 2023, 1:00 pm – 3:00 pm
Five Rivers Tensaw Theater



Agenda

Meeting Objectives:

- a) Share updates on ongoing and proposed restoration and monitoring activities in coastal Alabama

1. Welcome and Introductions

PIC Co-Chairs:

- Judy Haner, The Nature Conservancy
- Patric Harper, U.S. Fish & Wildlife Service

2. Review and Approval of Minutes

3. Old Business

- a) Management Conference Committee Status Updates

4. New Business

- a) Committee Member Updates
 - a. Watershed Management Plan Assessment Results – Christian Miller, MBNEP
 - b. Point Aux Pines Living Shoreline Monitoring – Carl Ferraro, Stantec
 - c. Little Lagoon Living Shoreline – Carl Ferraro, Stantec
 - d. Perdido Watershed Management Plan Management Measures – Wade Burcham, 50 20 Engineering
 - e. Shoreline Projects – Contractor Procurement Discussion (if time allows)
- b) MBNEP Restoration Update (if time allows)
- c) Other partner updates
- d) Off-cycle topical meeting – scheduling October oyster management with MRD
- e) Next meeting **TBD**

5. Adjourn



**Please sign-in out in
the hallway and in
the chat**

This presentation provides minutes of the June 15, 2023, Project Implementation Committee. Additional notes are included with each slide as needed.

Attendees In Person: Cade Burgin, Wade Burcham, Herb Bullock, Ashley Campbell, Jannell Clampett, Emma Cochran, Walter Ernest, Jay Estes, Carl Ferraro, Casey Fulford, Judy Haner, Rob Howell, Patric Harper, Webb Jackson, Andy James, Jeremiah Kolb, Cody Ledet, Ken Leslie, Eliska Morgan, Chris Nix, Steve O’Hearn, Ray Richardson, Sawyer Shotts, Lance Slater, Suzanne Sweetser, William Walker, Lee Walters, Jesi Ward, Connie Whitaker, Lee Yokel

Virtual Attendees: Mark Berte, Mike Eubanks, Amy Hunter, Shannon McGlynn, Leslie Lott, Ryne Smith, Tim Thibaut, Chris Warn

MBNEP Staff: Bethany Hudson, Jason Kudulis, Marti Messick, Christian Miller, Blair Morrison, Vanessa Romero, Roberta Swann

Project Implementation Committee Agenda



Welcome and Call to Order:

Co-Chairs: Judy Haner, The Nature Conservancy, & Patric Harper, U.S. Fish and Wildlife Service

Review and approval of March 2023 minutes

Old Business:

Management Conference Committee Updates

New Business:

- Project Updates and Discussion
- MBNEP Watershed Planning and Project Implementation Updates
- Next Meeting TBD



The meeting was called to order at 1:03pm.

Minutes from the March 2023 meeting were distributed for review prior to the meeting. Andy James motioned to accept the minutes; Lance Slater seconded the motion.

Old Business: MBNEP staff provided updates for the other Management Conference committees.

- The Community Action Committee met on March 22. They discussed goals and objectives of CAC and methods to increase committee growth as well as retention of new and current members. The committee talked about bringing in fresh ideas for meetings and not focusing solely on water monitoring.
- The Business Resources Committee toured Admiral Oyster Company recently to learn more about the aquaculture industry and the potential to become a major sustainable seafood industry on the coast.
- The Science Advisory Committee is scheduled to meet April 6.
 - Wrapping up and summarizing changes in responses to the stressor matrix (2012-2022)
 - Discussing 20 Questions feedback from Bays and Bayous
 - Launching into *State of the Bay*
 - Evaluating indicators used in the 2008 publication and discussing emerging topics

to include in this iteration of the document

- The Government Network Committee will meet on March 31.

New Business:

Presentations focused on monitoring, planning, and restoration activities on the Eastern Shore. This continues our theme of focusing on different geographic sectors around coastal Alabama. Slides from presentations follow and supplemental notes are included as needed.

Project Implementation Committee Agenda



- Watershed Management Plan Assessment Results – Christian Miller, MBNEP
- Point Aux Pines Living Shoreline Monitoring – Carl Ferraro, Stantec
- Little Lagoon Living Shoreline – Carl Ferraro, Stantec
- Perdido Watershed Management Plan Management Measures – Wade Burcham, 50 20 Engineering
- Shoreline Project Contractor Discussion (if time allows)

Watershed Plan Assessment

- **Purpose** – Guide future MBNEP program development in response to common needs and recommendations identified in WMPs
 - **Goal:** Improve delivery of service in the implementation of WMP recommendation
 - **Goal:** Improve prioritization of investments across all watersheds to address greatest needs
 - **Goal:** Increase leverage of funds available for implementation by providing strategic guidance for improving overall environmental conditions

Serve as a foundational and guiding document for CCMP development

Mr. Christian Miller with the MBNEP share an update on the Watershed Plan Assessment currently underway.

Recall that ten years ago the PIC and partners charged MBNEP with completing comprehensive watershed management plans for all intertidal watersheds. Now that nearly all watershed plans have been completed, this assessment process is to synthesize individual plans and the voluminous information produced into one report. This summary will be a technical report to reference and guide the next Comprehensive Conservation Management Plan.

**TABLE 3-2
PRIORITY WATERSHED IMPAIRMENTS AND ISSUES**

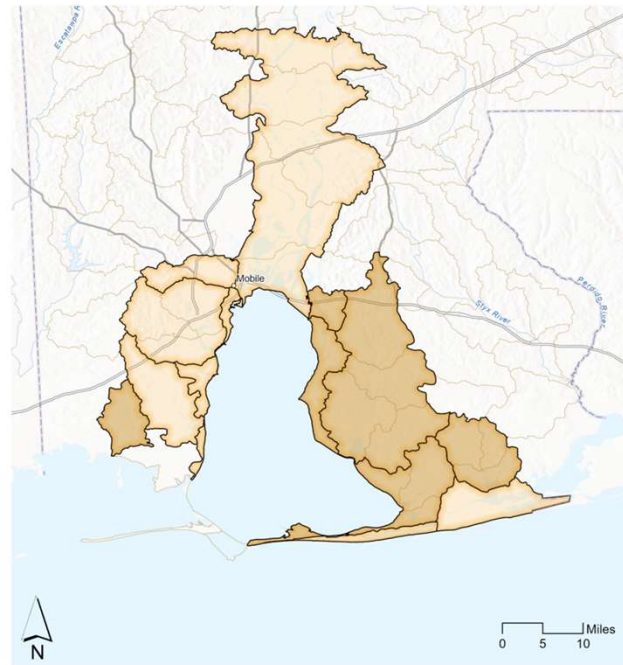
Watershed	Water Quality Impairments					Habitat Degradation Issues		
	Sediments	Nutrients	Pathogens	Litter	Habitat Loss	Degraded Streams	Invasive Species	Shoreline Erosion
D'Olive	P	√	P	√	√	P	√	√
Three Mile Creek	√	P	P	P		√	√	
Bon Secour	P	√	P	√	√		√	P
Dog River	√	P	P	P	√	√	√	√
Fowl River	√	P	P	√	P	√	√	√
Weeks Bay	P	√	P		√	P	√	√
Bayou La Batre	P	√	P	√		P	√	√
West Fowl River			P	P		√	√	P
Wolf Bay	P	√	P	√	√	P	P	√
Western Shore	√	√	√	√	√	√	√	P
Gulf Frontal	√	P	P	√	√		√	P
Mobile Tensaw Delta	√	P		√	P	√	P	P
Dauphin Island			√	√	P	√	√	P
Eastern Shore	P		P		√	√	√	P
Western Perdido Bay		√	P		P		√	P

NOTE: P = Identified as priority issue in watershed management plan (WMP)

This table boils down each watershed to three priority issues per watershed. Three is difficult considering some have a multitude of issues but focus areas are critical.

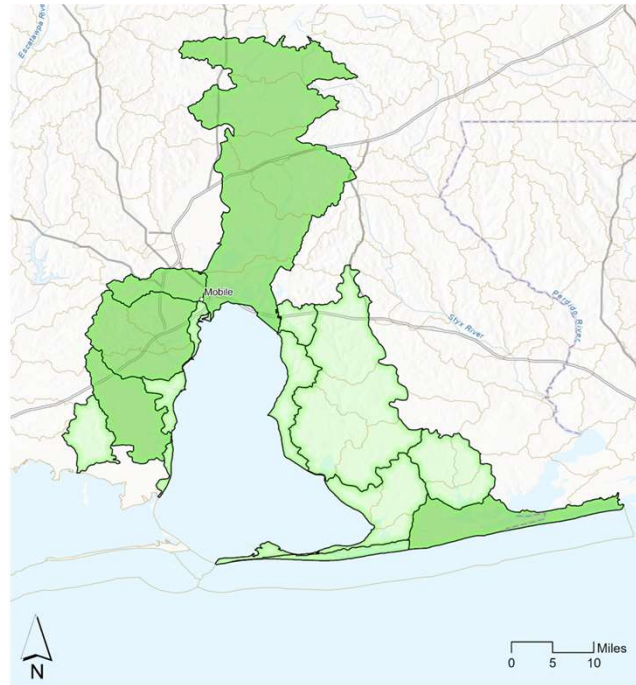
*this table and the following maps are drafts and have not been finalized.

Sedimentation



Dark shading the watershed ranked as a top three priority
Light shading the issue was identified in the watershed management plan

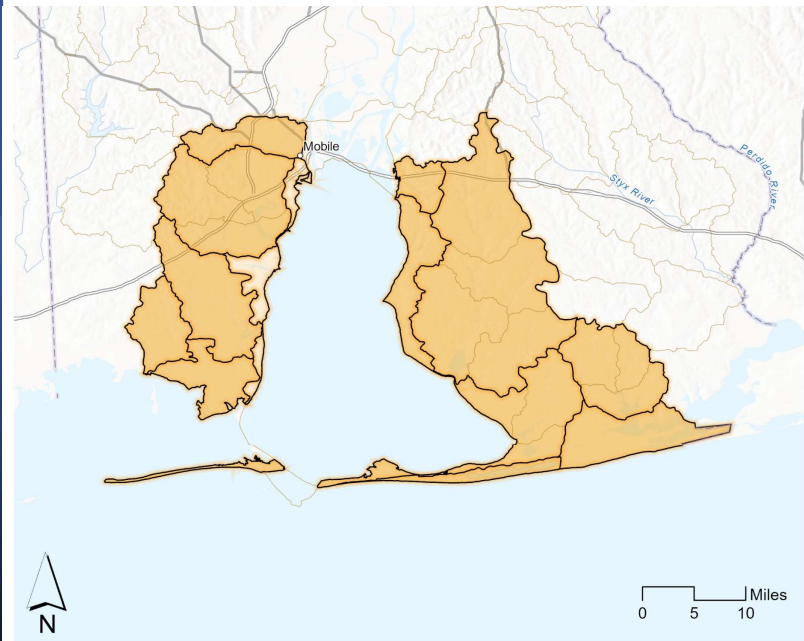
Nutrient Enrichment



Dark shading: the watershed ranked as a top three priority

Light shading: the issue was identified in the watershed management plan

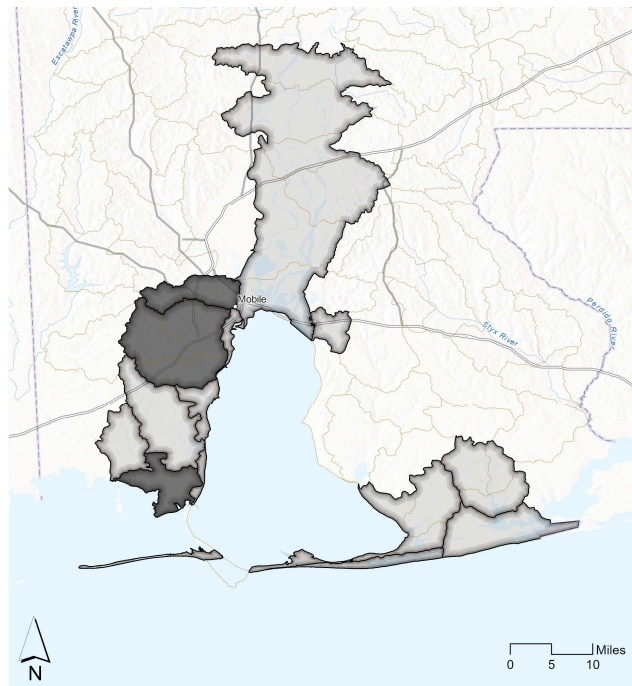
Pathogens



Dark shading: the watershed ranked as a top three priority

Light shading: the issue was identified in the watershed management plan

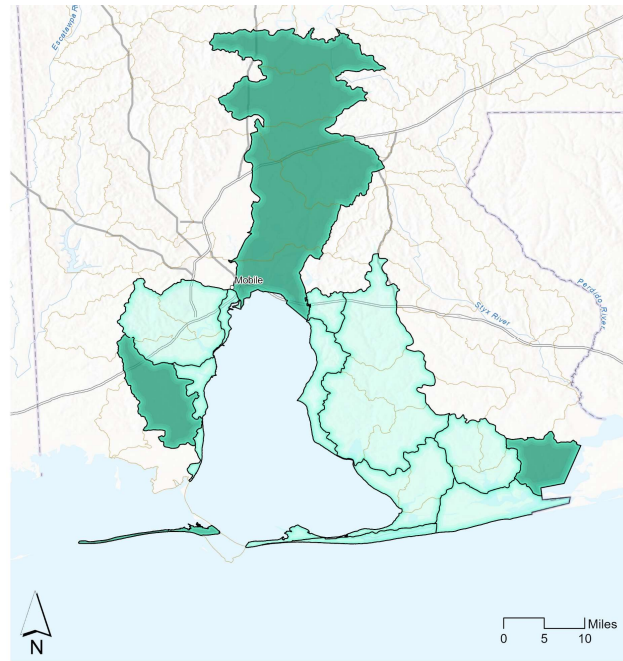
Litter



Dark shading: the watershed ranked as a top three priority

Light shading: the issue was identified in the watershed management plan

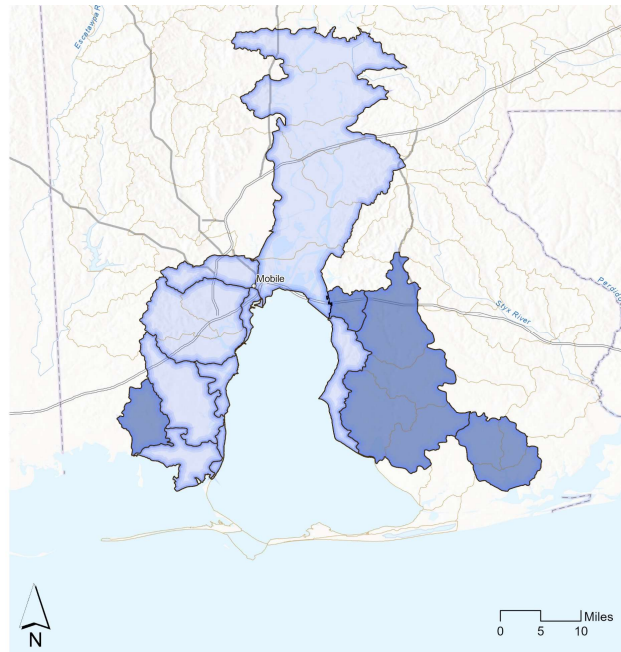
Habitat Loss



Dark shading: the watershed ranked as a top three priority

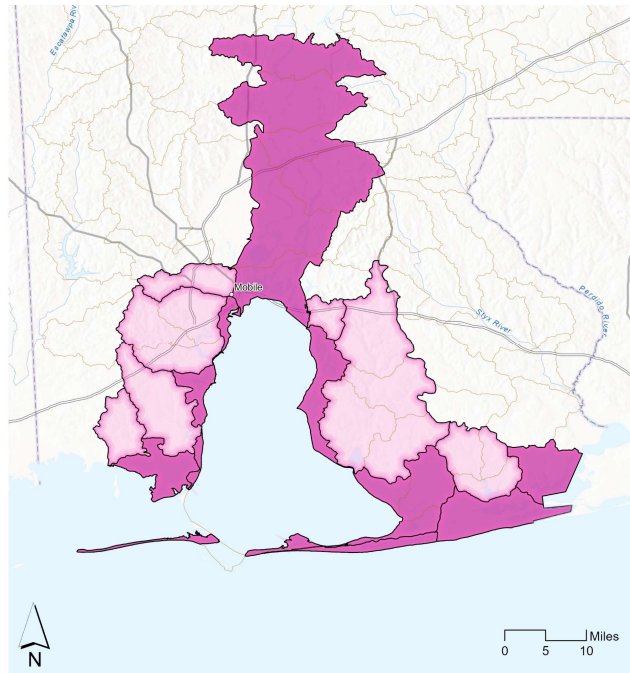
Light shading: the issue was identified in the watershed management plan

Stream, Riparian, Wetland Degradation



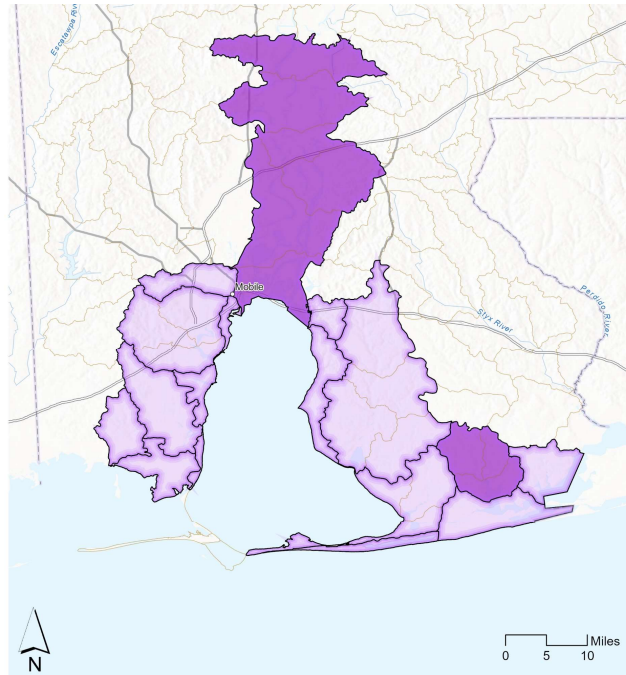
Dark shading: the watershed ranked as a top three priority
Light shading: the issue was identified in the watershed management plan

Shoreline Erosion



Dark shading: the watershed ranked as a top three priority
Light shading: the issue was identified in the watershed management plan

Invasive Species



Dark shading: the watershed ranked as a top three priority

Light shading: the issue was identified in the watershed management plan

At this time, the committee participated in a feedback exercise using menti-meter virtual polling.

Participants were asked a series of questions to evaluate effort versus impact of addressing each impairment/issue from the previous slides (e.g., shoreline erosion, habitat loss, litter, etc.) ; rank mitigation efforts that would be the most impactful over the next ten year (e.g., stream degradation: policy, outreach and education, additional data, in-field projects); rank water quality and habitat impairments based on the PIC's ability to reduce pollutions loads over the next 10 years (e.g., sedimentation, litter, pathogens, nutrients);



Mr. Carl Ferraro with Stantec provided an update on monitoring activities at Point aux Pins and a forthcoming little lagoon restoration project.



Agenda

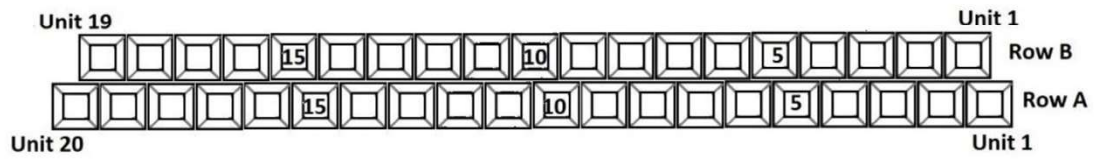
1. Project Overview
2. Monitoring Plan Overview
3. Results

Project Overview

- ADCNR Sponsored
- DWH-NRDA Early Restoration Framework Funded
- Primary Goal: Offset injuries to salt marsh habitat and benthic secondary productivity (and in particular, the net production of mobile and sessile invertebrate infauna and epifauna).
- Located along Northeastern Shoreline of Point aux Pins
- 15 Breakwater Segments
- 39 Wave Attenuation Units (WAUs) per Segment
- WAUs are 10 ft x 10 ft (3 m x 3 m) with 6" thick walls, weighing 12,500 pounds.
- Installed by Gulf Equipment corporation in the Fall of 2020



Segment Layout



Not to Scale

Dauphin Island Sea Lab is a partner on this project.

Constructed Project



Monitoring Plan Overview

Project Objectives:

Objective 1 - Support habitat utilization of breakwater segments by bivalves and other invertebrate epifauna.

- Performance Criterion: At year 5, 90% of breakwater segments have invertebrate epifauna present

Objective 2 - Support habitat utilization of nearby breakwater segments of invertebrate infauna.

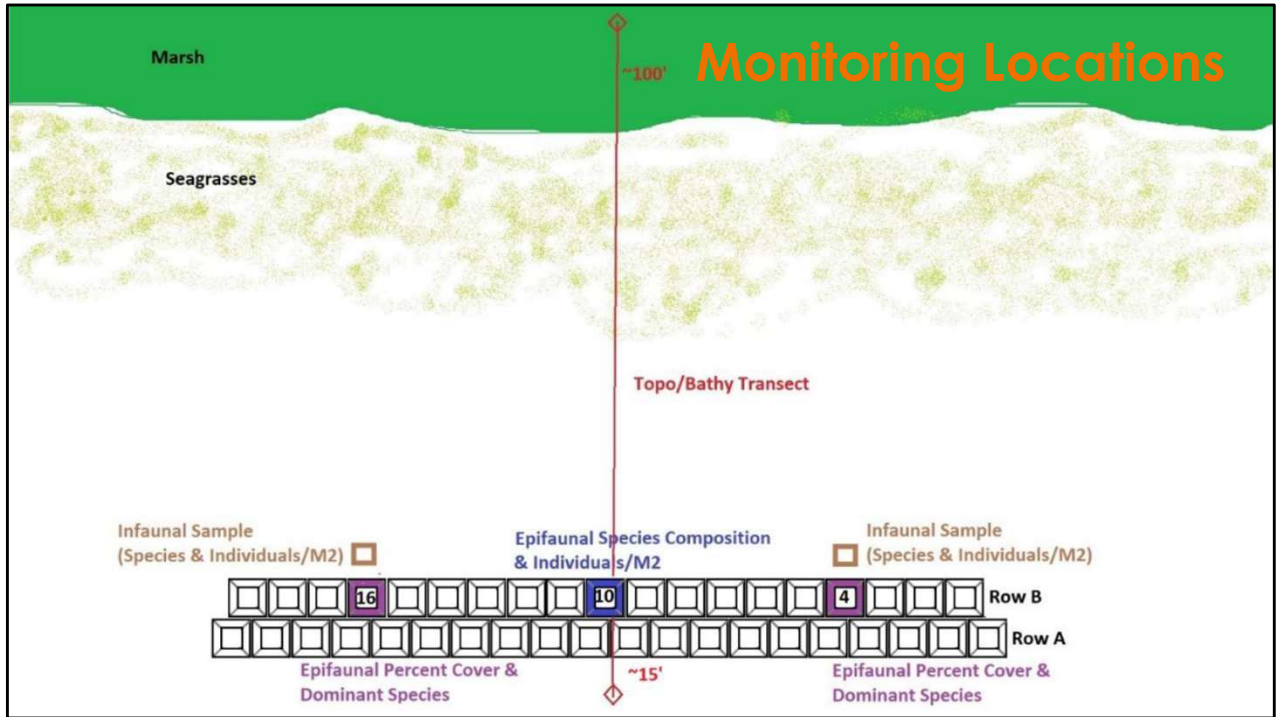
- Performance criterion: Over 5 years, collect data on invertebrate infauna density and composition.

Objective 3 - Reduce shoreline erosion.

- Performance Criterion: Over 5 years, the cumulative shoreline loss is less than pre-project average loss per year.

Monitoring Plan Field Data Collection Parameters

- Epifauna
 - 0.25 m² quadrats on selected WAUs
 - Species Composition and Abundance
 - Percent Cover and Dominant Species
- Infauna
 - 0.25 m² quadrats, 2 – 7.4 cm cores (10cm deep) per quadrat
 - Density, Dry Weight and Dominant Species
- Bathymetric/Topographic Profiles
 - RTK –Survey of Center Point of Each Segment
 - Offshore to Onshore Profile
 - Shoreline Position



**Sample
Epifauna
Quadrat**



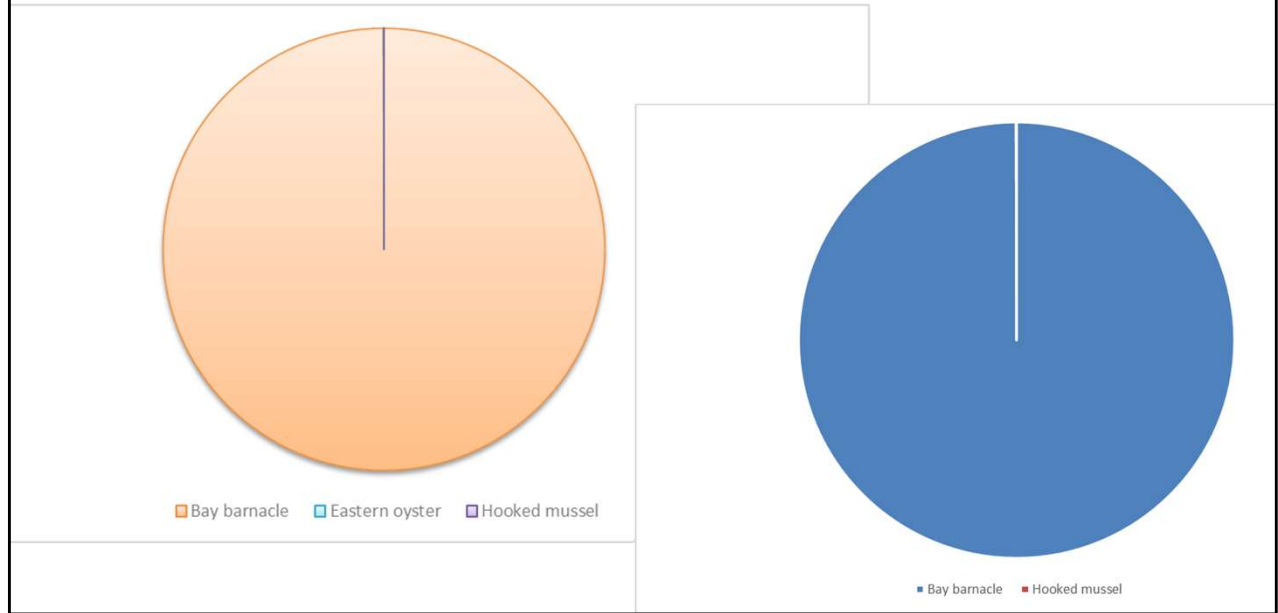
**Sample
Epifauna
Quadrat**



**Sample
Infauna
Quadrat**

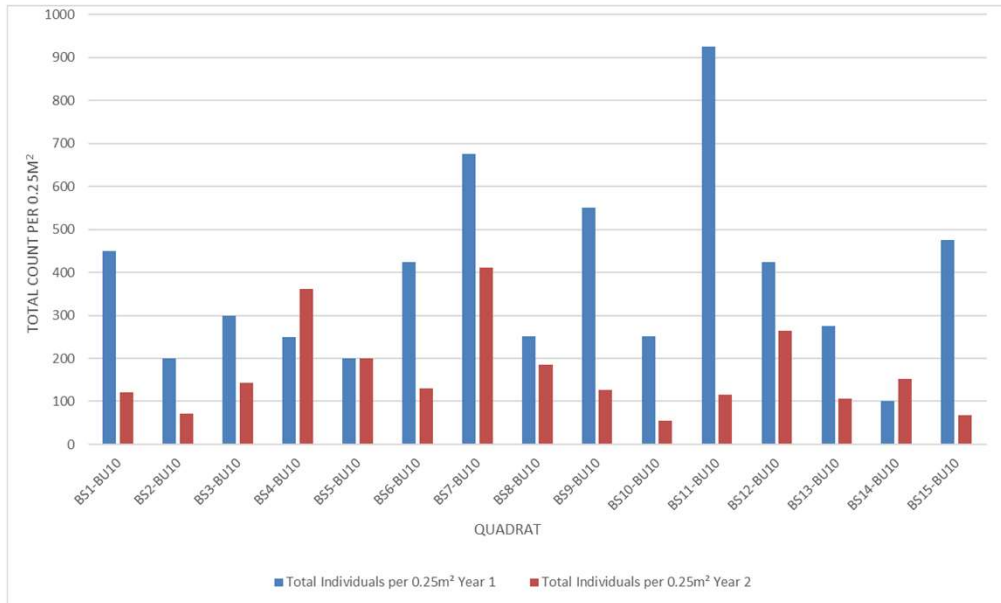


Results, Years 1 & 2: Epifauna Species



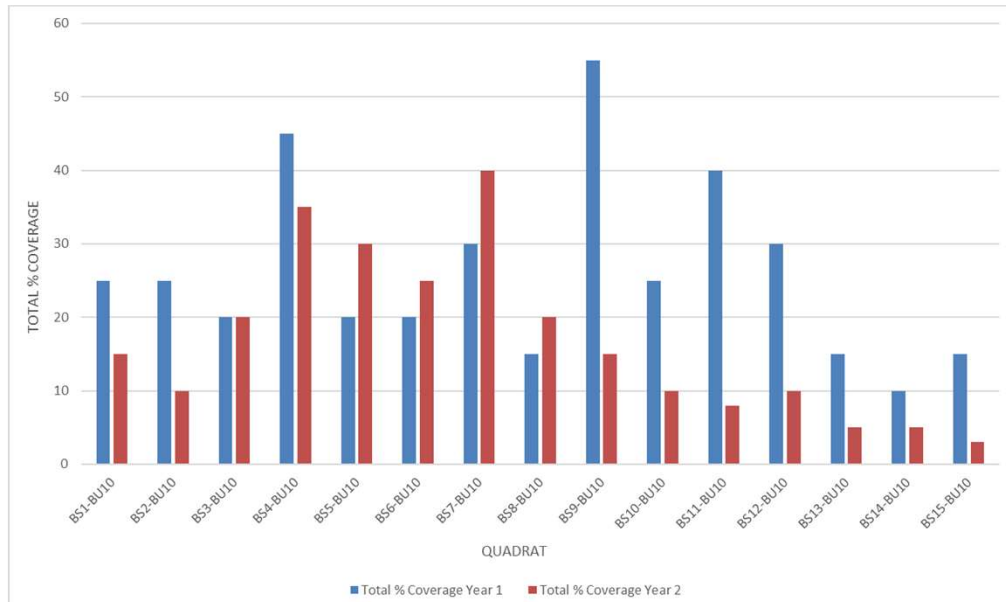
Not sure why, but vast majority of results indicate only barnacles are recruiting.

Results, Years 1-2: Epifauna Total Individuals



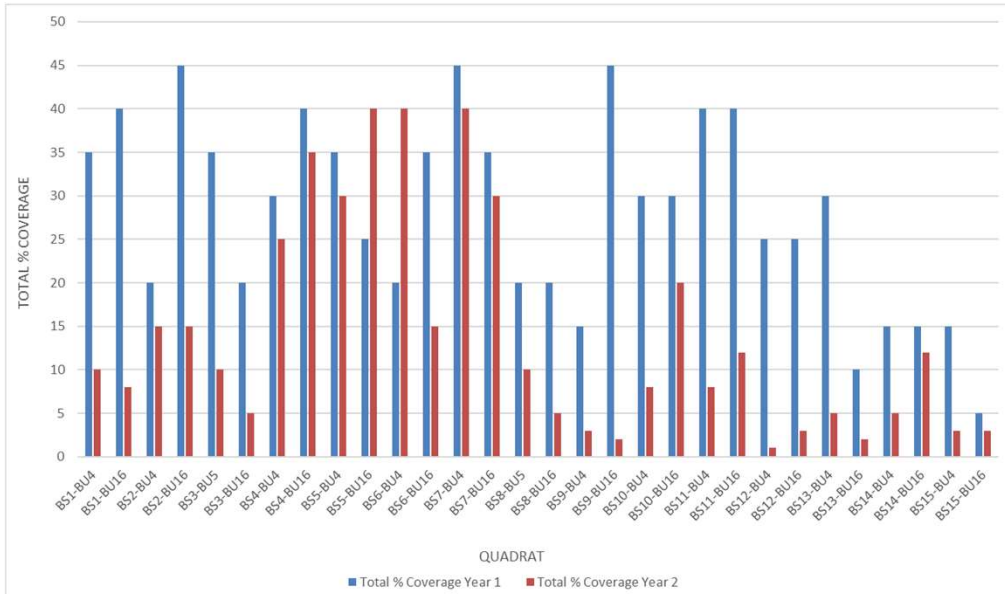
Consistent drop from Year 1 to Year 2.

Results, Years 1-2: Epifauna % Cover

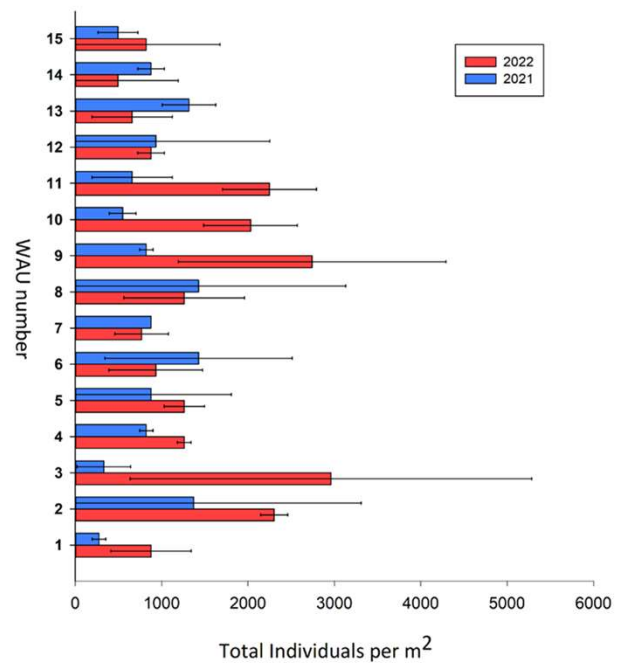


Consistent drop from Year 1 to Year 2.

Results, Years 1-2: Epifauna % Cover

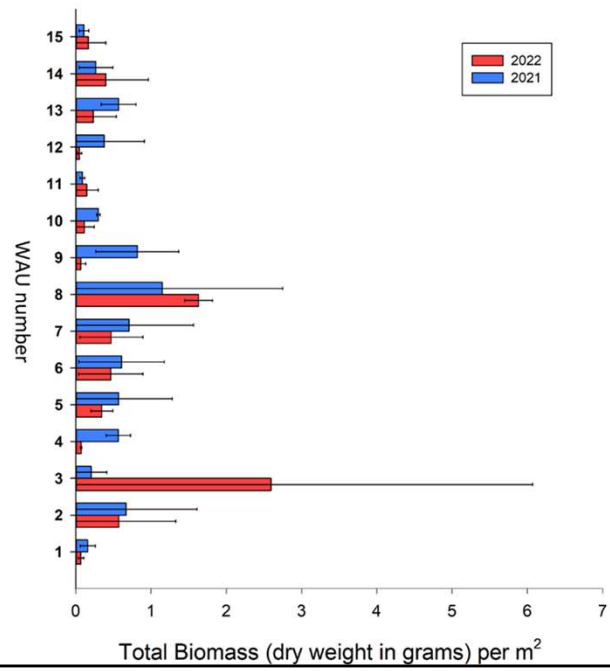


Results, Years 1-2: Infauna Total Individuals

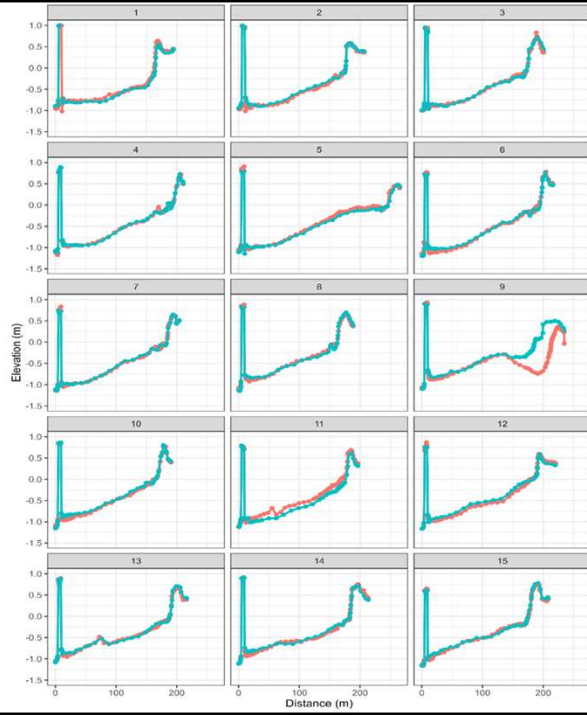
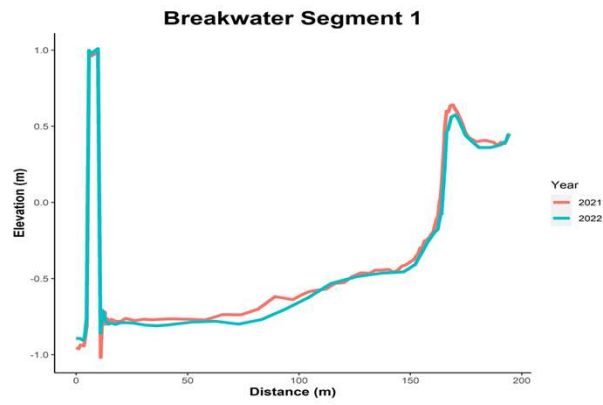


Infauna was opposite of epifauna. Most in Year 2.

Results, Years 1-2: Infauna Total Biomass



Results, Years 1-2: Topo/Bathy Profiles

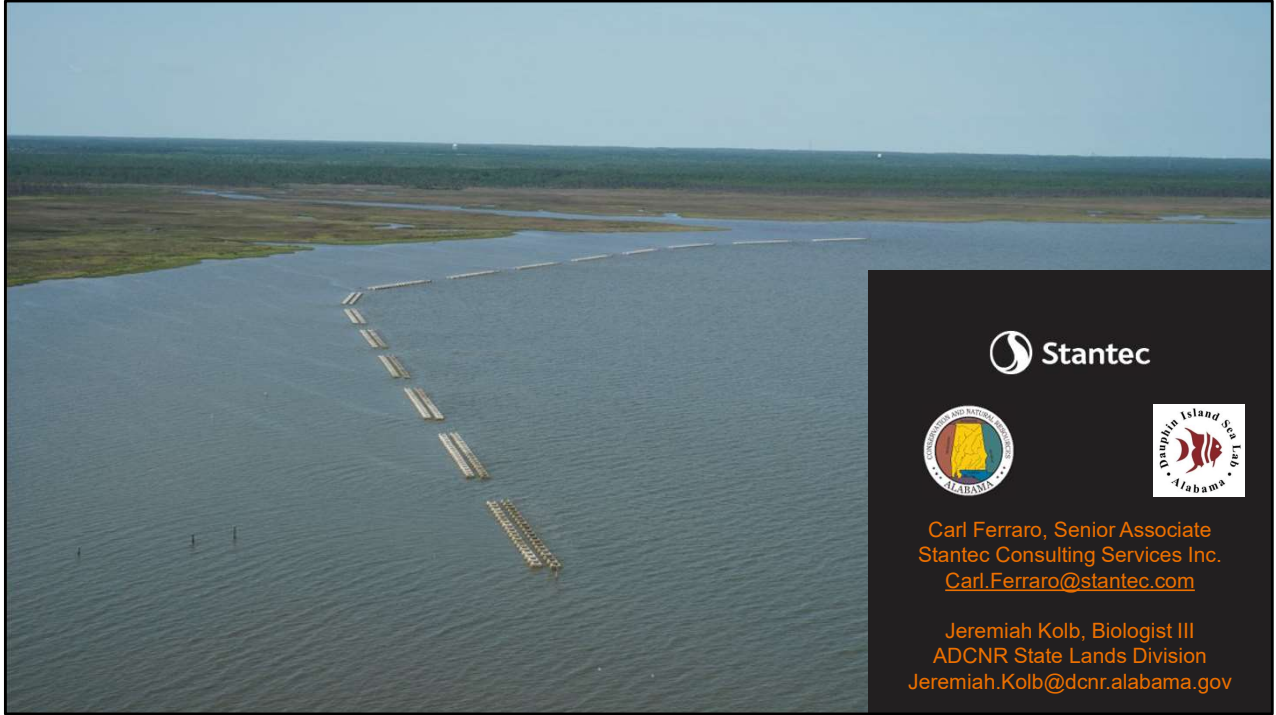


Results, Years 1-2: Summary

- Epifauna
 - All WAUs have Epifauna Present
 - Dominated by Barnacles
 - Lower % Cover & No. of Individuals in Year 2 vs, Year 1.
- Infauna
 - Number of Individuals Increased 1.5-fold Year 2 vs. Year 1.
- Bathymetric/Topographic Profiles
 - Some Settlement of WAUs
 - Apparent Issue with Alignment of Transect 9
 - Some Areas of Accretion and Some Areas of Erosion
 - No Apparent Shoreline Position Change
- 3 More Years to Go! (2 point make a line, 3 points make a trend)

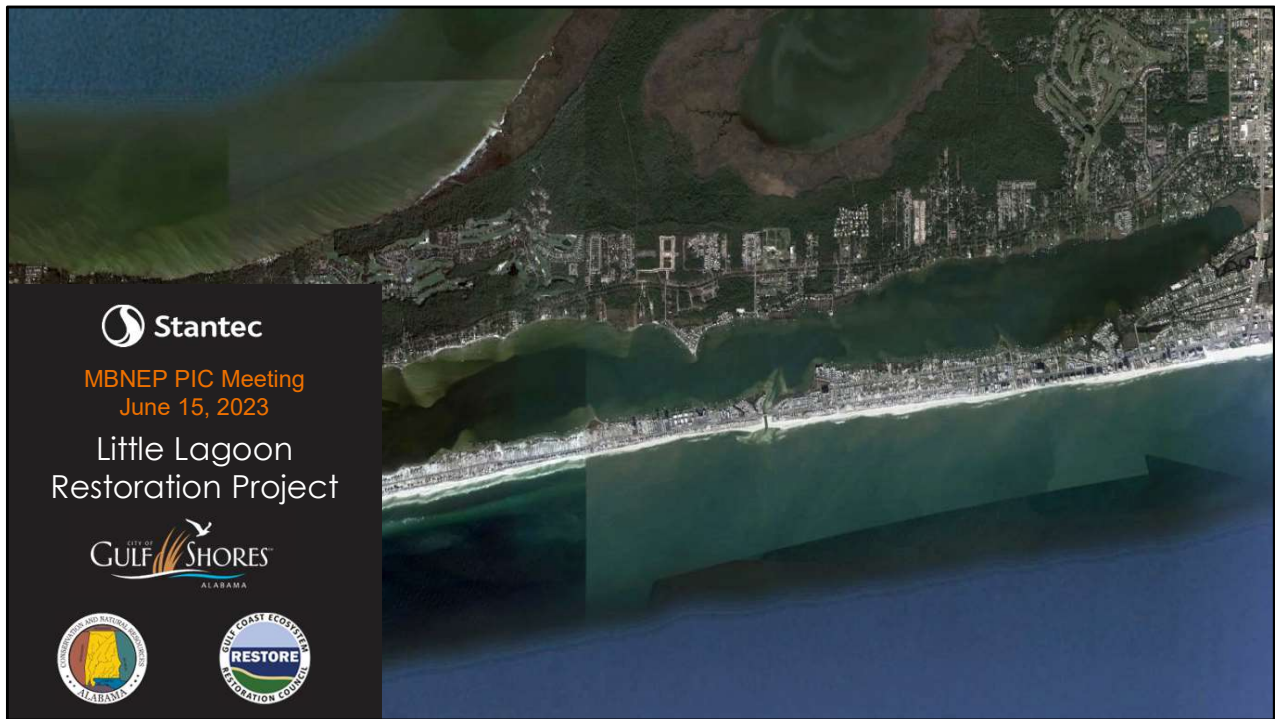
**Remembering
Sharon "Cissie" Havard**





Carl Ferraro, Senior Associate
Stantec Consulting Services Inc.
Carl.Ferraro@stantec.com

Jeremiah Kolb, Biologist III
ADCNR State Lands Division
Jeremiah.Kolb@dcnr.alabama.gov



Project Overview

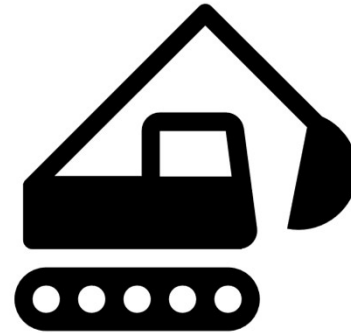
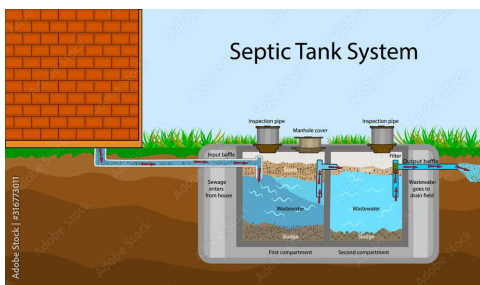
- AL RESTORE Funded
- Overall Objectives:
 - Construct 1,000 feet of living shorelines;
 - Improve hydrologic connectivity of the existing canal system;
 - Convert approximately 200 individual septic systems to city sewer;
 - Create shellfish restoration programs;
 - Restore marsh and seagrass;
 - Create fish habitat structures; and
 - Conduct baseline surveys, hydrodynamic modeling, ecological research, and long-term monitoring.
- Other Project Partners include Auburn University, MS State, DISL and MS/AL Sea Grant
- Stantec will handle 3 project components for the City.



Multi-prong restoration effort – this presentation covers the three components Stantec is handling for the City of Gulf Shores - living shoreline; septic tank conversion; hydrologic re-connectivity.

Septic to Sewer Program

- Connect existing homes w/septic systems to existing sewer mains
- Funding for up to 200 StS conversions
- Overarching goal is to reduce nutrient inputs into the canals and the Lagoon.



Living Shorelines Demonstration Project

- Shoreline Restoration at Mo's Landing
- Anticipate around 200 linear feet of breakwater, sandy fill and plantings.
- Education Signage & Observation Pier



Hydrological Restoration Project

- Replace failed culverts at 6 locations
- Improve water circulation in east-end canals



Construction timing with anticipated road closures will be critical.

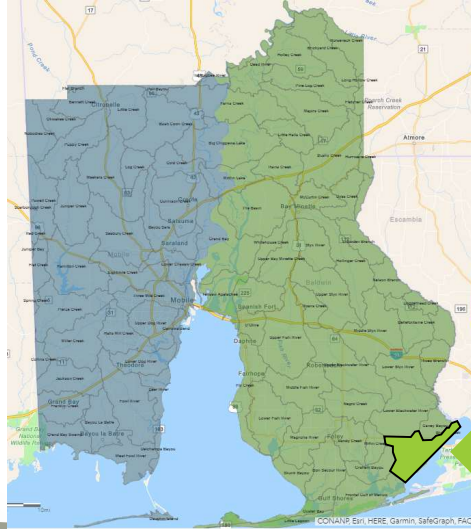


Carl Ferraro, Senior Associate
Stantec Consulting Services Inc.
Carl.Ferraro@stantec.com



Western Perdido

Watershed Management Plan Update



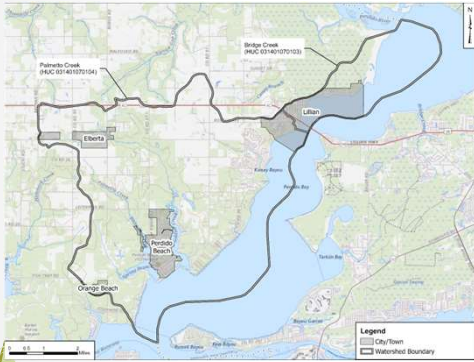
Geosyntec
consultants



FIFTY-TWENTY ENGINEERING
50 20 ENGINEERING
RESOURCE GROUP INCORPORATED

Mr. Wade Burcham with 50-20 Engineering provided an update on watershed management plan activities in the Western Perdido Watershed (Bridge and Palmetto Creek HUC 12).

Bridge and Palmetto Creek HUC



- Primarily Baldwin County, Town of Perdido Beach, and the Community of Lillian
- Currently in draft form by Geosyntec
- This project was supported wholly or in part by the Mobile Bay National Estuary Program as part of a grant from the Alabama Department of Conservation and Natural Resources (ADCNR)

Steering Committee

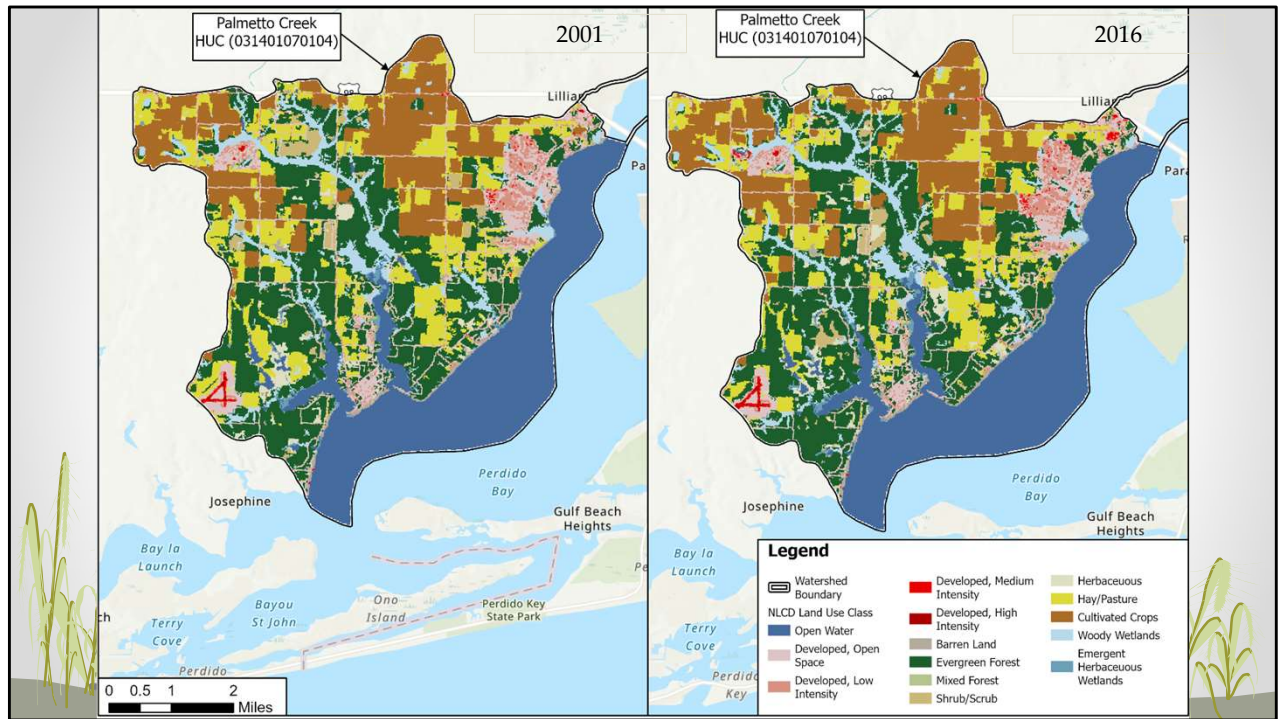
Nathan Baril (Town of Lillian and Town of Elberta)	John LaGrone (Town of Perdido Beach)
Madison Blanchard (MBNEP)	Billy Lovelace (Town of Lillian)
Mary Kate Brown (The Nature Conservancy)	Gerry Manus (Baldwin County)
Lani Cameron (Town of Lillian)	Christian Miller (MBNEP)
Ashley Campbell (Baldwin County)	Matt Posner (Escambia County, Florida)
Hope Cassebaum (Town of Lillian and Town of Elberta)	Lucy Smith (Town of Lillian)
Mike Cleveland (Town of Lillian)	Brent Spears (Town of Perdido Beach)
Peter Garafola (Soldier's Creek)	Roberta Swann (MBNEP)
Judy Haner (The Nature Conservancy)	Jenny Williams (Baldwin County)
Cindy Rae Jones (Town of Lillian)	

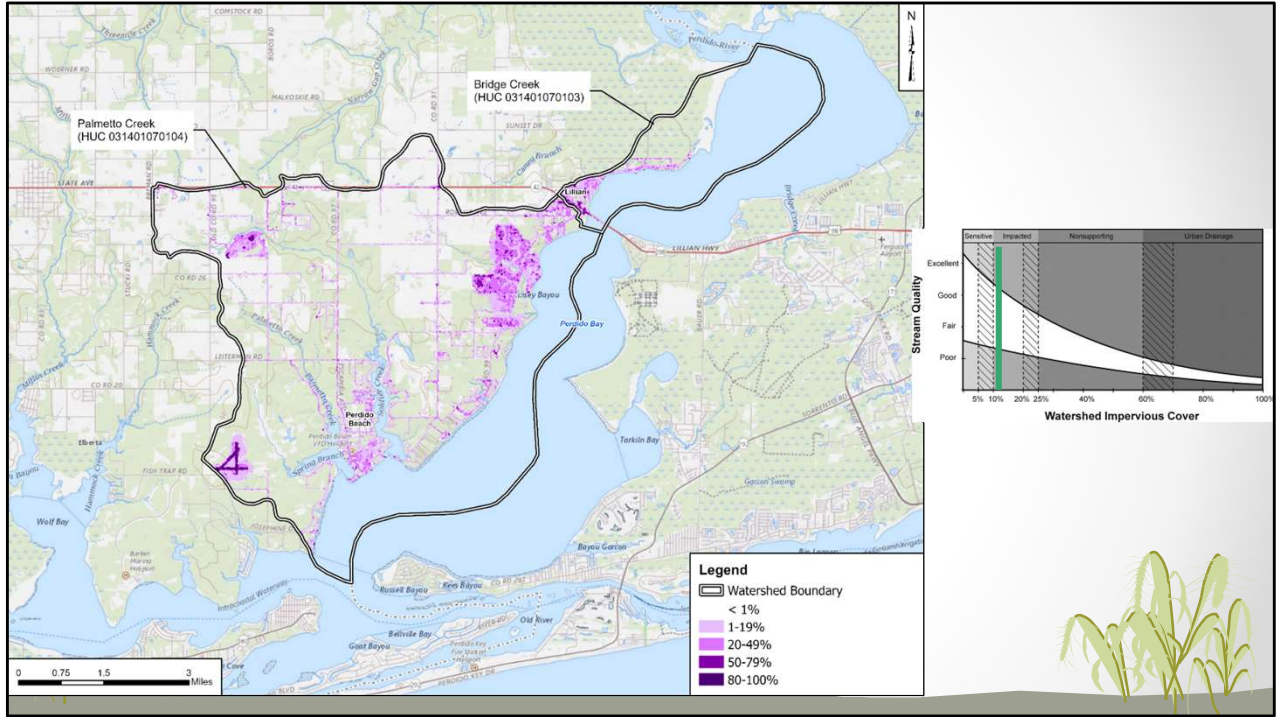
Grass Root Organization

- First Public Meeting
- August 28th, 2023
- Lillian Volunteer Fire
- 6:00 PM



The community started a grassroots organization. They are meeting regularly and could use additional support from partners to elevate their capacity.





Measure of imperviousness in the watershed.

The composite image consists of several elements:

- Photograph:** A landscape view of a coastal area with dunes, sparse vegetation, and a body of water under a clear blue sky.
- Word Cloud:** A large, dense cloud of words generated from survey responses. The most prominent words include "Developers", "Pollution", "Runoff", "Sewer", "Industrial", "Sav", "Sewer", "Pollution", "Runoff", "Sewer", "Industrial", "Sav". Other visible words include "Wildlife", "Erosion", "Housing", "Legacy", "Bacteria", "Septic", "Traffic", "Dredging", "Government", "Water Quality", "Fishing", "Dunes", "Bulkheads", "Sav", "Sewer", "Pollution", "Runoff", "Sewer", "Industrial", "Sav", "Sewer", "Pollution", "Runoff", "Sewer", "Industrial", "Sav".
- Handwritten Notes:**
 - Note 1 (Top Right):** Titled "Erosion, Fill, & effects in some...". It lists several points: "wilderness infrastructure at Florida Cove", "large wetlands / reduce runoff", "increase US dam making / fishing", "Schedule / decommission", "enhanced or replacement of levees that will improve for long term", "dredge vessels", "final population of development", "small infrastructure", "develop good practice", "low volume of storm water", "redevelopment / decommission projects", "erosion / fill / dredging".
 - Note 2 (Middle Right):** Titled "What did we miss?". It lists: "How well is current infrastructure functioning?", "What is happening in Bay (real access) water making", "Access (not as big as other in town)", "SLR (sea level rise)", "Development (e.g. PA, 91, 95, 98, 100) (trucks)", "Effects to Wildlife & Fisheries", "Lack of funding", "more zoning". The signature "Geosyntec Group" is visible.
 - Note 3 (Bottom Right):** Titled "Development". It lists: "1) Dispersed development - no check in what we're doing", "2) Dispersed development - no check in what we're doing", "3) Dispersed development - no check in what we're doing", "4) Dispersed development - no check in what we're doing", "5) Dispersed development - no check in what we're doing", "6) Dispersed development - no check in what we're doing", "7) Dispersed development - no check in what we're doing", "8) Dispersed development - no check in what we're doing", "9) Dispersed development - no check in what we're doing".

Word Cloud generated from responses about things which threaten the Western Perdido Bay Watershed.

Ask people what is wrong there.

Summary of relative surface water quality in the WPBW

Parameter Class	Surface Water Body				
	Lillian Bridge	North Perdido Bay	Palmetto Creek	Peterson Branch	Soldier Creek
Field Parameters					
Dissolved Oxygen (DO)	Fair	Poor	No Data	Poor	No Data
Hardness	No Available Water Quality Standard				
pH	Good	Good	Poor	Fair	Good
Salinity	No Available Water Quality Standard				
Total Dissolved Solids (TDS)	No Applicable Water Quality Standard				
Total Suspended Solids (TSS)	No Available Water Quality Standard				
Turbidity	Good	Good	Good	Good	Good
Water Temperature	Good	Good	Good	Good	Good
Sediment					
Total Organic Carbon (TOC)	No Data	No Data	No Data	No Data	No Data
Nutrients					
Total Nitrogen	No Data	Fair	No Data	Good	No Data
Total Phosphorus	No Data	Fair	No Data	Good	No Data
Planktonic Primary Producers					
Chlorophyll <i>a</i>	No Data	Fair	No Data	Fair	No Data
Pathogens					
Enterococcus	Good	Good	Good	Good	Good
Harmful Algal Blooms	No Available Water Quality Standard				
Other					
Metals	Undetermined*				
Organics	Undetermined*				

Snapshot of water quality data (abundant but dated).

Pathogens likely primary concern.



Several shoreline project opportunities have been identified. Residences are interested in nature-based solutions.

Critical Issues

- Low-Impact Development and Green Infrastructure
- Agricultural
- Watershed Water Quality (nutrients/pathogens)
 - Impairment in Bay for Bacteria and other Microbes
- Stormwater Runoff (flooding/nutrients / pathogens)
- Onsite Sewers
- Access
- Awareness (lack of data/misconceptions)
- Shorelines



Management Measures

- Grass Roots Organization - Western Perdido Bay Watershed Action Committee
 - Strategy Coordinator
 - Action Cards and the Watershed Heroes Program
 - Activity #M-1: Attendance at a public meeting, with a report submitted to the PIT describing the activities of that meeting. Relevant organizational meetings include those convened by the PIT, the Baldwin County EAC, the Wolf Bay Watershed Watch, the MBNEP Management Conference (including the PIC), the PPBEP, the International Paper Environmental Advisory Board, the Alabama Coastal Foundation's Sustainability Summit, and other related or similar entities.
 - Activity #E-1: Organize a Living Shorelines Field Trip. Identify three dates where approximately ten people can commit to attending an onsite presentation to hear a shoreline property owner describe their experiences in creating a living shoreline on their property.

Draft Management Measures

Management Measures

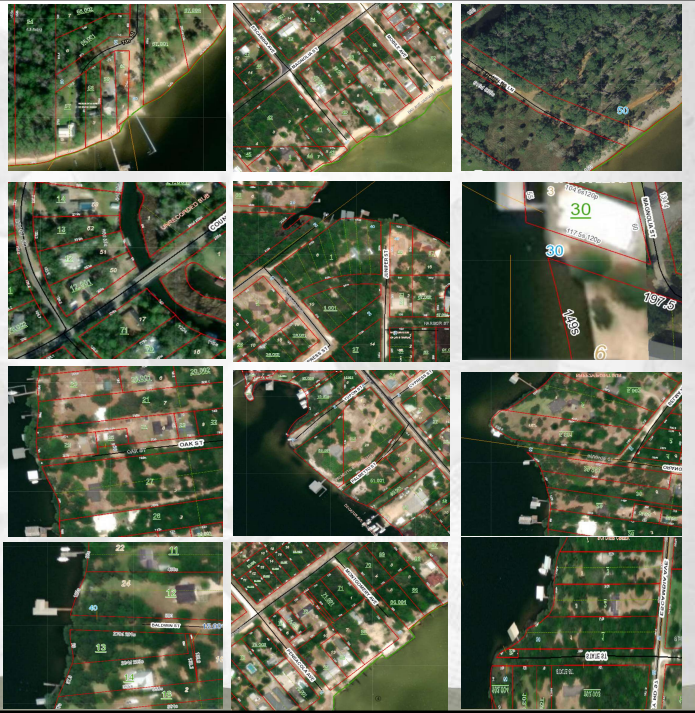
- Good Neighbor Policies

- Employ green infrastructure practices to treat stormwater as close as possible to where it falls and permit the smaller infrastructure necessary to convey the reduced runoff, thereby decreasing construction costs.
- Retain the first one inch of runoff during any rain event.
- Or retain runoff from any 85th percentile storm (e.g., 1.5 inches or less), or if not feasible, remove 80% of solids from runoff associated with that event.
- Protect the downstream channel by detaining runoff from any one-year rain event for 24 hours.
 - 2-Year 24-Hour Storm – 99th Percentile
- Demonstrate that flows are not increased downstream to a point where the site represents only 10% of the drainage area.

Photographed in 1980 given in Pittsburgh Post-Gazette source Published by 1981, the last year Old Friends New Friends aired Open Source

Management Measures

- Access

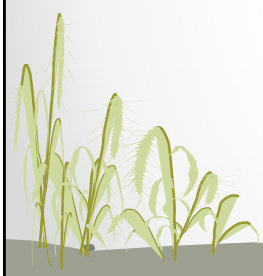


GI / LID Demonstration



Photographed in 1980 given in Pittsburgh Post-Gazette source Published by 1981, the last year Old Friends New Friends aired Open Source

Wade Burcham
(251) 402-4146
Wade@5020Eng.net



Project Implementation Committee Agenda



Welcome and Call to Order:

Co-Chairs: Judy Haner, The Nature Conservancy, & Patric Harper, U.S. Fish and Wildlife Service

Review and approval of March 2023 minutes

Old Business:

Management Conference Committee Updates

New Business:

- ~~Planning Activities and Updates~~
- **MBNEP Watershed Planning and Project Implementation Updates**
- **Next Meeting TBD**



At this time MBNEP staff offered to organize an off-cycle meeting to brainstorm opportunities to reach more contractors and increase competitive bids/respondent RFQ/RFP submittals for Coastal Alabama projects. This is an issue many of us deal with. There is so much work going on or planned and the timing and scale, and number of qualified contractors can be challenging to ensure every project gets the interest they deserve.

A poll will be sent out to the committee and interested parties can voice their interest to participate.

MBNEP Restoration Update

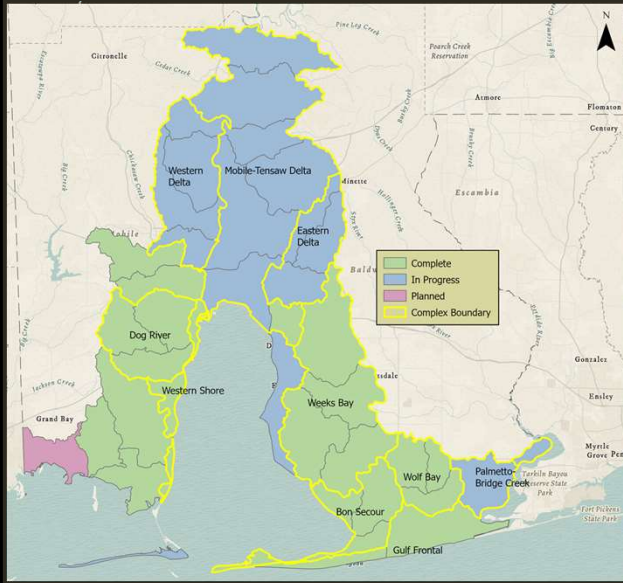


- **D'Olive**
 - Pine Run - on hold pending new ownership
 - Tour 6/22
- **Lower Fish River**
 - Marlow - warranty and maintenance
 - Magnolia River Watershed - landowner access continues
- **Fowl River**
 - 100% design and final permit review
- **Three Mile Creek**
 - 12-Mile Warranty
 - Apple snail treatment continues
 - COM portion to begin soon
- **Deer River**
 - Advertise re-bid this month



MBNEP staff provided brief updates on current restoration project activities.

Watershed Planning Update



Watershed	Status
Western Shore	Complete
Gulf Frontal	Complete
D'Olive Update	Complete
MTA Delta	Out for Comment
Eastern Shore	Out for Comment
Dauphin Island	Complete
Perdido	In Progress
Western Delta	In Progress
Eastern Delta	In Progress
Grand Bay	On Deck
Eight Mile Update	On Deck

Meeting activities finished at 2:53pm.

Carl Ferraro made the motion to adjourn, Lee Walters seconded the motion.