

St. Andrew & St. Joseph Bays Estuary Program

Science & Technical Committee
February 20, 2025



**ST. ANDREW &
ST. JOSEPH BAYS
ESTUARY PROGRAM**
at FSU PANAMA CITY



Agenda

- Welcome
- East Pass
- Grant Updates
- Group Announcements



Darryl Boudreau

An aerial photograph of a coastal landscape. On the left, a large area of brown, textured wetlands with numerous small, winding waterways. A single, dark, winding road or causeway cuts through the wetlands, extending from the bottom right towards the center. To the right of the road is a large expanse of dark blue water, likely a bay or ocean. The overall scene is a mix of natural coastal beauty and human-made infrastructure.

East Pass



Letter of support:

- Provide a letter of support that would:
 - Outline where this project could be supported in the CCMP
 - E.g., what goals and action plans could be related to the project
 - Outline the science

CCMP alignment

- WSQQ Goal 5: Establish an understanding of fresh and saltwater balance to maintain a resilient estuarine ecosystem
 - WSQQ 5.1: Understand the currents and flows of both fresh and saltwater necessary to maintain a resilient estuarine ecosystem
- NRSC Goal 1: Conserve, restore and maintain seagrass cover to support diverse species and ecosystem services
 - NRSC 1.1: Restore and conserve seagrass in the Bays
- NRSC Goal 2: Conserve, restore and enhance self-sustaining native shellfish populations that support the provision of ecosystem services and sustainable harvest
 - NRSC 2.1: Restore scallop populations

How do other programs do it?



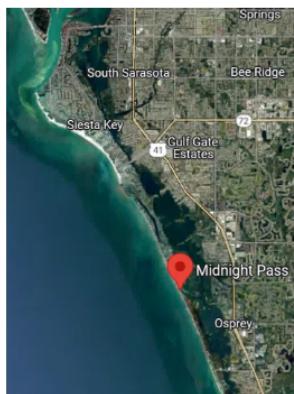
Midnight Pass: what does the science say?

January 9, 2025

Storms in September (Helene) and October (Milton) of 2024 opened Midnight Pass, located at the south end of Siesta Key/north end of Casey Key. This pass now allows water from the Gulf of Mexico to exchange and flow into Little Sarasota Bay, an exchange that hasn't happened since the pass was closed in 1983. Below, we explore what this means from a water quality and habitat standpoint, and what the options are moving forward.

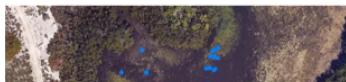
Jump to:

- [1. Florida's Unique Barrier Island System](#)
- [2. Health of Little Sarasota Bay Before Midnight Pass was Open](#)
- [3. Expected Changes with an Open Midnight Pass](#)
- [4. Options Moving Forward](#)



Imagery ©2025 Google. Data SIO, NOAA, U.S. Navy, NGA, GEBCO, Airbus, Imagery ©2025 TerraMetrics, Map Data ©2025 Google

Midnight Pass before 2024 storms



Midnight Pass after Helene



Midnight Pass after Milton



Science

- Water quality pre/during/post the pass being opened
- Land use changes
- Seagrass cover
 - Prop scars
- Scallop densities
- Shorebird nesting
- Sea turtle nesting

The background image is an aerial photograph of a coastal wetland. It features a complex network of blue water channels and yellowish-brown marshy land. A long, narrow boardwalk extends from the bottom right towards the center of the image. In the distance, a bridge with a white railing spans across one of the water channels. The horizon shows a line of trees and a clear sky.

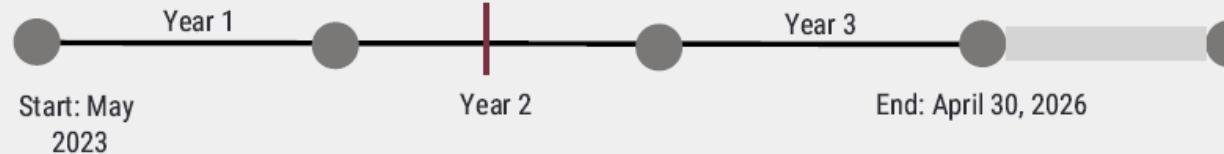
Grant Updates

Assessing restoration success and ecosystem services across the Panhandle Region to assist in restoration target setting

This project will monitor 10 existing living shoreline sites in each bay (SAB, Choctawhatchee, and Pensacola) to evaluate if they are stopping erosion, providing habitat, and reducing nutrients. The economic impact of these living shorelines will also be evaluated and messaged across the area to increase adoption of living shorelines.

\$1,640,996

Category	Budget	Remaining
Salary	\$649,650	\$387,445.64
Travel	\$13,000	\$6,044.72
Materials	\$32,000	\$15,487.64
Other	\$11,945	\$11,724.12
Indirect	\$149,181	\$120,995.20
Subawards	\$785,220	\$706,403.40

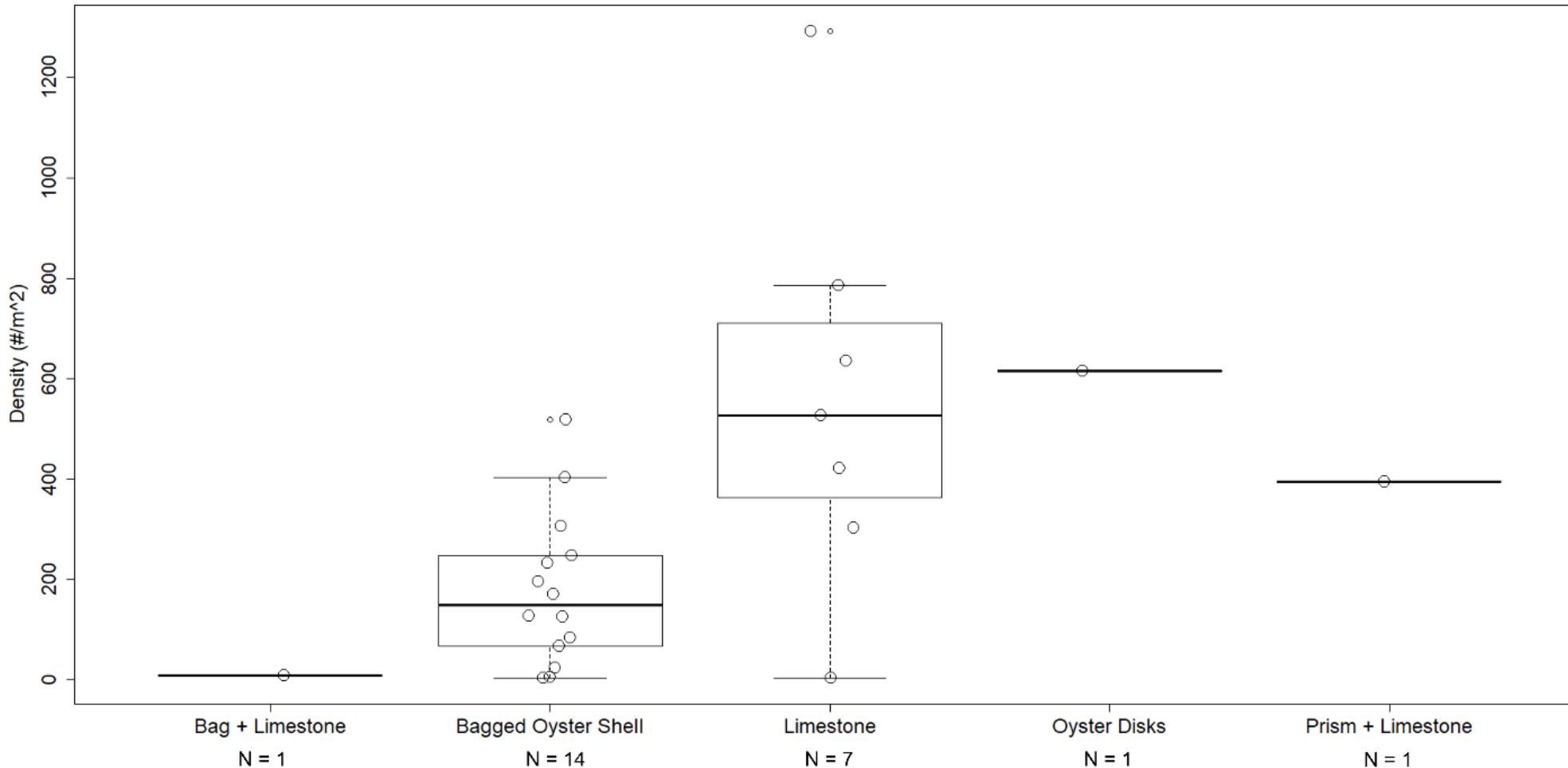


2025

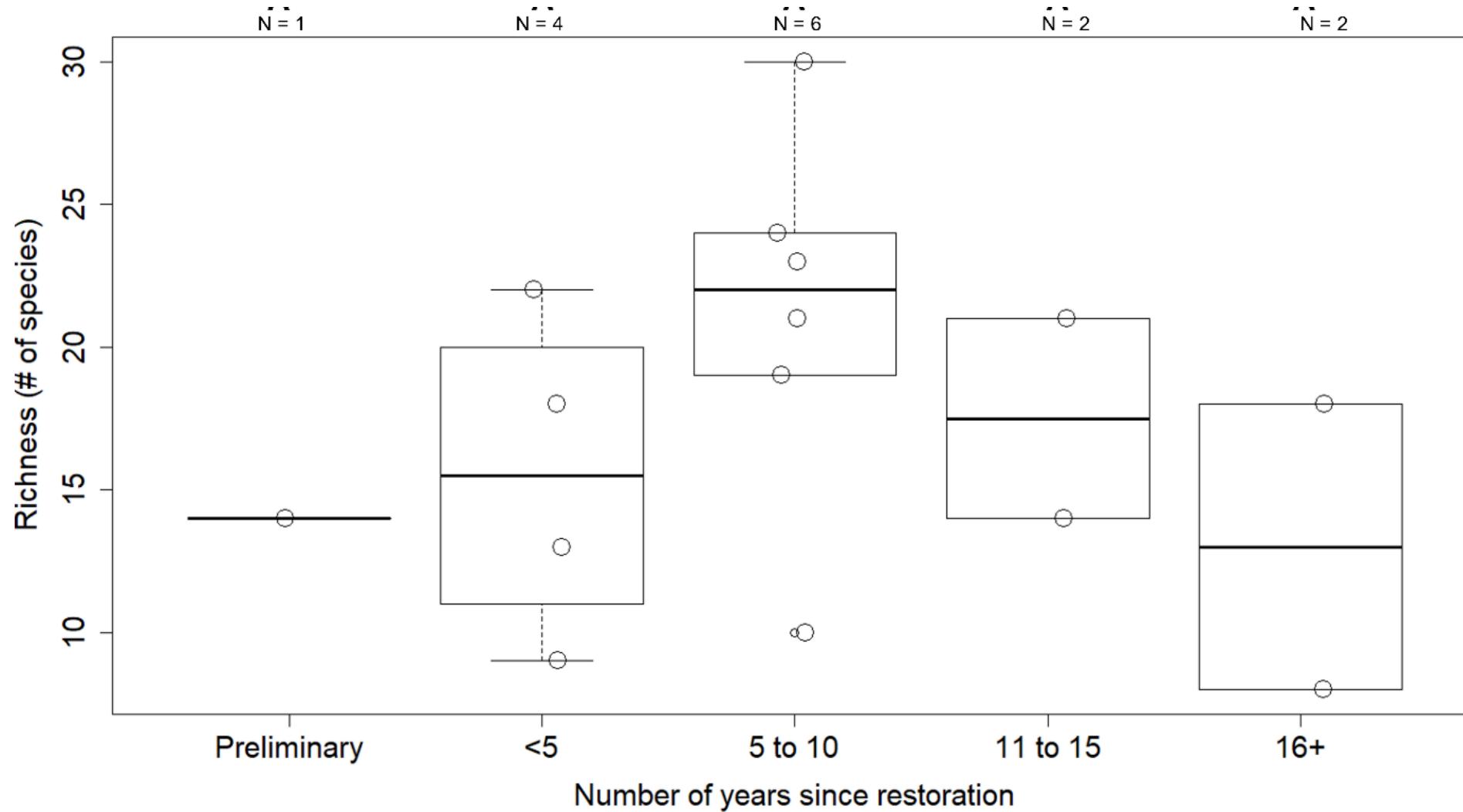
- Continue monitoring
- Prelim analyses (ecosystem services & others)
- Updated Homeowner Reports
- Soil analyses
- Shoreline change analyses



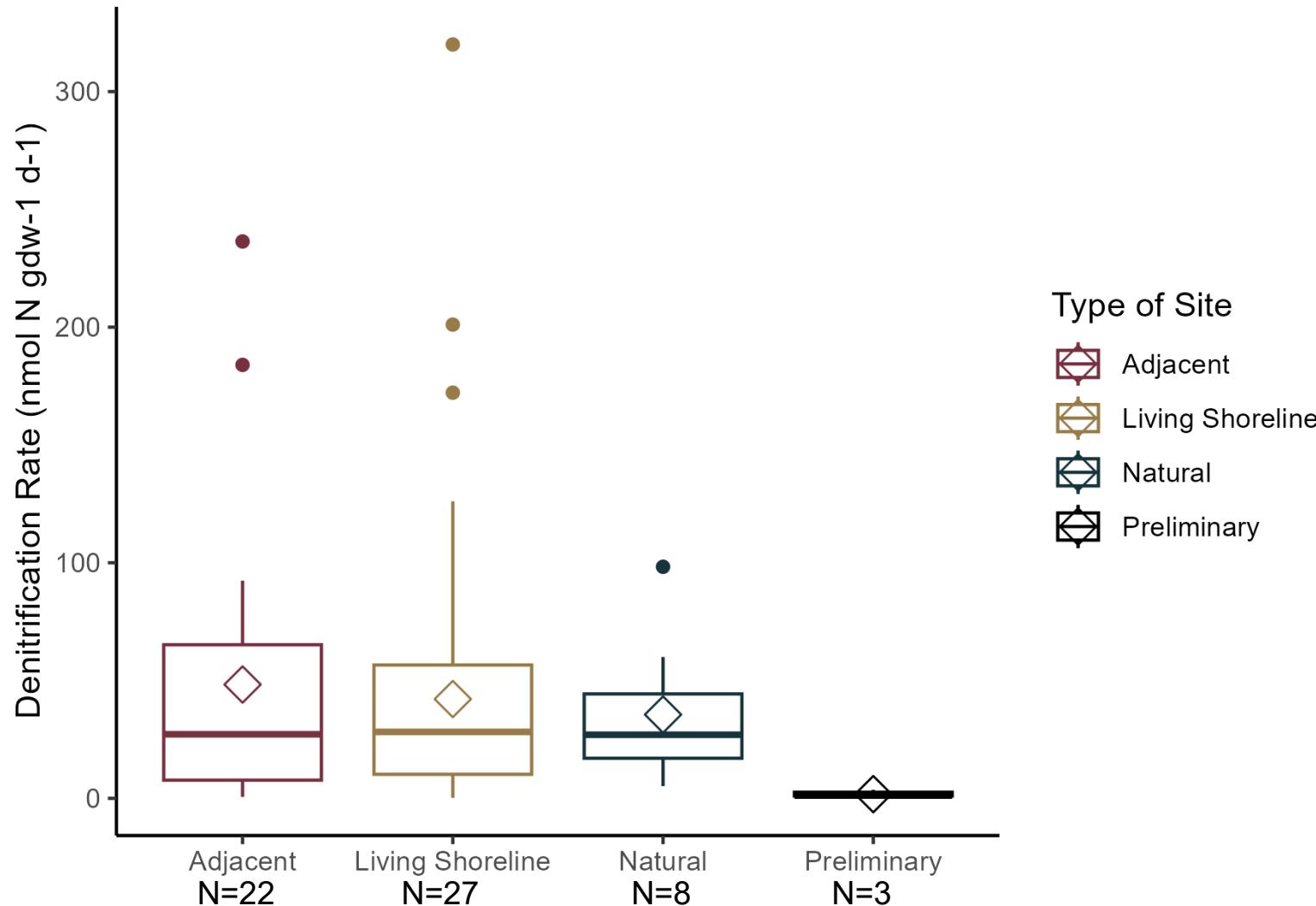
Are there differences in oyster density across construction materials?



Does fish species richness vary with time since restoration?



Does denitrification vary between types of sites?



Benefiting water quality across the Panhandle Estuaries - assessing benthic indicators in St. Joe Bay

This is a large collaboration with our program, Choctawhatchee Basin Alliance, and Pensacola and Perdido Bays Estuary Program, University of West Florida and a private corporation - SAS to create an online dashboard for water and habitat quality. SASJBEP will work with FSU CML to sample sediment in St. Joe Bay and analyze benthic communities.

\$100,000		
Category	Budget	Remaining
Salary	\$18,054	\$13,640.90
Travel	\$2,822	\$2,822
Materials	\$574	\$557
Other	\$200	\$3,757
Indirect	\$5,549	\$5,235.23
Subawards	\$69,259	68,986



2025

- Analyses completed
- Updating H2O Report Cards, SOWR as data is available





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St. Andrew Bay Watershed Data Viewer

This data viewer serves as a companion to the State of the Watershed Report (SOWR) and is a tool that provides access to condition maps and data for metrics in the SOWR. On the home page you can select buttons that will link you to the SASJBEP website or Comprehensive Conservation and Management Plan (CCMP). Select one of the sections below to explore data used in the SOWR more closely,

scroll down to view a short introduction, or use the collapsible navigation bar on the left to access a user guide and move between sections. To read the full SOWR, visit

<https://sasjbep.org/library/sowr2024/>.

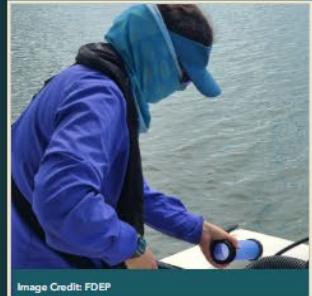


Image Credit: FDEP

Water & Sediment Quality & Quantity

- Nutrients
- Bacteria
- Water Clarity
- Harmful Algal Blooms
- Sanitary Sewer Overflows
- Salinity



Image Credit: John Brucker

Ecosystem Extent & Quality

- Seagrass
- Longleaf Pine (LLP)
- Fire Return Interval for LLP
- Beaches
- Wetlands



Image Credit: John Brucker

Wildlife

- Oysters
- Scallops
- Shorebirds
- Sea Turtles
- Invasive Species
- Fish



Image Credit: Saint Andrew Bay Watch

Nature Based Solutions

- Nature Based Solutions Implementation



Image Credit: Darryl Boudreau

Natural Infrastructure

- Conservation Lands in Public Ownership
- Greenspace
- Tree Canopy Cover



Image Credit: National Hurricane Center

Risk Reduction

- Compound Flood Risk
- Wildfire Risk



Image Credit: Saint Andrew Bay Watch

Stewardship

- Volunteer Interest
- Event Attendance
- Partner Engagement
- Reach



sasjbep.org

Scroll for Introduction and Acknowledgements

CCMP

SOWR Dataviewer

Strategically reforesting Bay County through assessing stormwater potential and existing infrastructure

This project will synthesize existing data for each of the identified indicators possible to provide a baseline condition of the St. Andrew Bay watershed. Indicators include water quality, long leaf forest condition,

Start: July 2024

End: Mar 2025

End w/ 6 month extension-
Sept 2025

\$56,662		
Category	Budget	Remaining
Salary	\$52,310	\$24,903.84
Travel	\$0	\$0
Materials	\$4,500	\$4,500
Indirect	\$0	\$0

2025

- Field ground truthing
- Analysis of stormwater potential
- Identification of problem areas
- Prioritization of areas for tree planting
- Creation of storymap/tool with results



Stormwater PERCEPTIONS SURVEY

Help us understand stormwater perception's by completing this short survey!



Take the Survey:



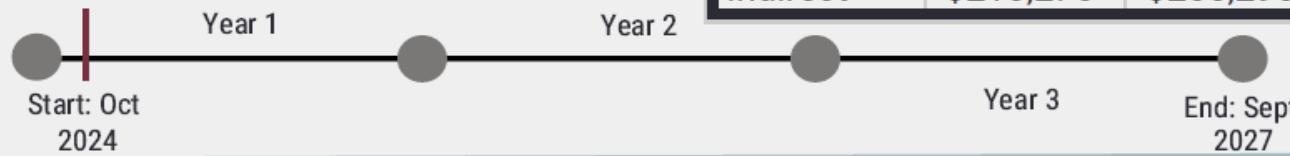
www.lnk.bio/s/sasjbep/stormwatersurvey

Ground truthing results

- 4% error in outfall locations
 - In most cases, there was no evidence of an inlet or outfall and the location was a ditch

Safeguarding Bays: A Joint Effort to Reduce Debris with Municipalities

Project will take a 2-pronged approach to address man-made debris by 1) using littatrap interception technologies and 2) developing an awareness and education campaign focused on reducing marine debris pollution. Murals will be painted at locations across walkable areas that highlight the importance of keeping stormwater clean. Up to 60 LittaTraps will be installed and maintained for three years.



\$677,554		
Category	Budget	Remaining
Salary	\$352,279	\$336,563.52
Travel	\$4,000	\$4,000
Materials	\$68,000	\$68,000
Contracts	\$35,000	\$35,000
Other	\$8,000	\$8,000
Indirect	\$210,275	\$205,295.52

2025

- Inlet measurements
- LittaTrap Ordering
- Install
- Monitoring
- Prevention Plan



Measured over 60 inlets



- 42 look viable for install
- Working with municipalities to prioritize install locations

An aerial photograph of a coastal wetland. The foreground is dominated by a winding, light-colored road that cuts through a landscape of brown and green vegetation. To the right of the road is a large body of water with visible ripples. The overall scene is a mix of natural and human-made elements.

Other Updates

VOGs

Monitoring will
resume in
February!



**BECOME AN
Oyster Gardener!**

Do you live on St. Andrew Bay? You can become an oyster gardener with the St. Andrew and St. Joseph Bays Estuary Program!

IMPROVE WATER QUALITY
One oyster can filter up to 50 gallons of water a day! By participating in this program, you are helping to improve water quality in St. Andrew Bay.

RESTORE OYSTER POPULATIONS
One vertical oyster garden can host dozens of oysters! Become a gardener and play a part in increasing oyster populations.

PARTICIPATE IN CITIZEN SCIENCE
Oyster gardeners will have the opportunity to participate in monthly monitoring of their vertical oyster gardens and watch them grow!

Scan here to apply!

Go to SASJBEP.ORG/VOGS for more information.

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of FSU PANAMA CITY

Three small photographs are displayed on the right side of the page. The top photograph shows a close-up of many oysters. The middle photograph shows a vertical oyster garden hanging from a string in the water. The bottom photograph shows a close-up of oysters growing on a structure.



Jan 16- Recreational Fishing



Feb 13- SOWR



March 13- Seagrass



April 10- Shorebirds and Sea turtles



May 8- Open House

Tides & Talks
2025

Group Announcements

Let us know of any events, projects, jobs you would like to share!



2025 STC Meetings

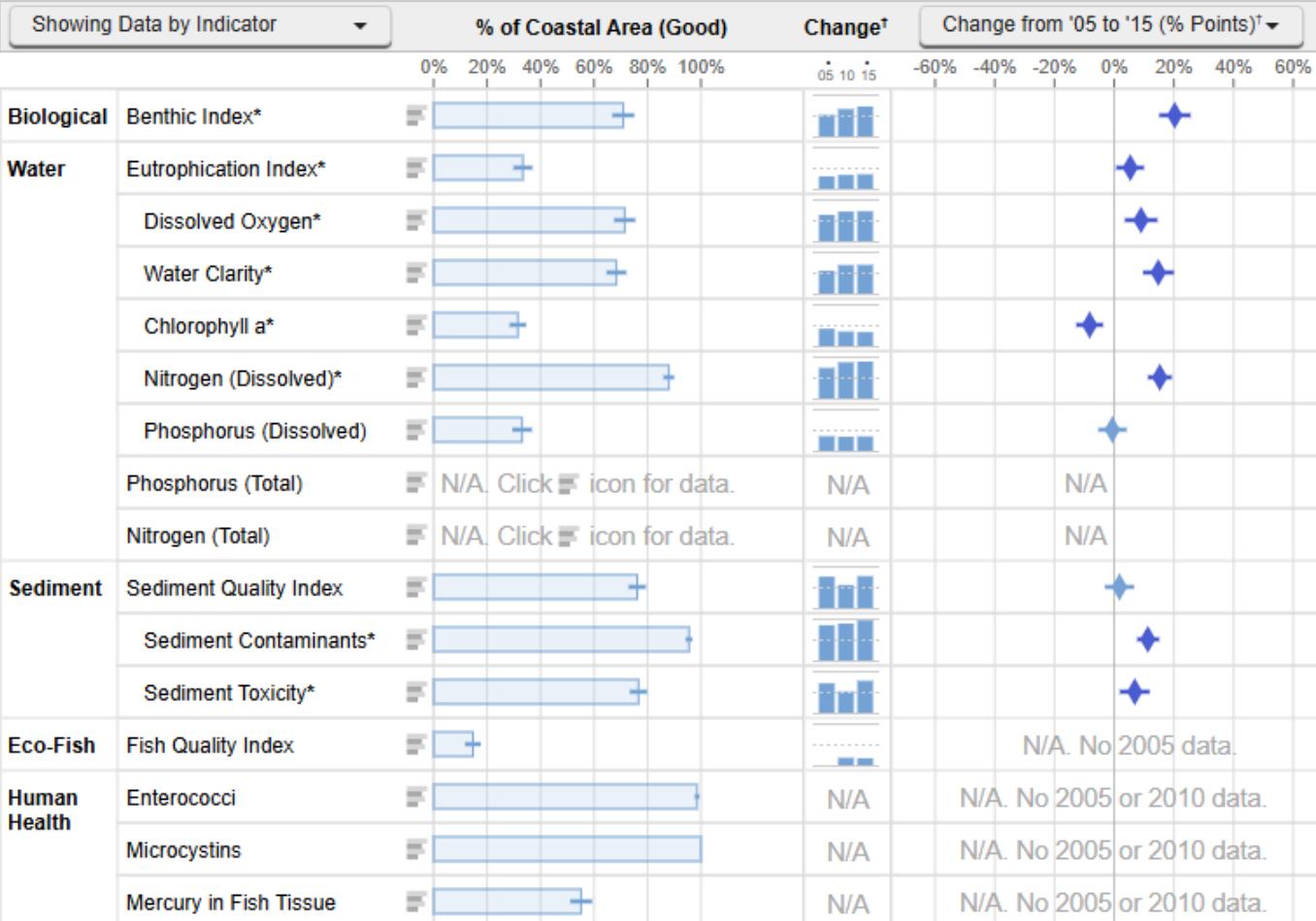
January 16	Guest Presentation: "Monitoring Waterbodies through Spatially Balanced Surveys: National, State, and Local Perspectives"
February 20	Grant Update(s) (1 hour meeting)
April 17	Guest Presentation: TBD
August 21	Guest Presentation: TBD
October 16	Grant Update(s) (1 hour meeting)
December 18	Guest Presentation, Year in Review

Thank you!

U.S. EPA National Coastal Condition Assessment 2015

Percentage of Estuarine Coastal Area in Good Condition (2005-2015)

2015 Estimates and Change Over Time | All Estuaries



[†] Notation of time periods for the three assessments: 2005-06 (shown as "05" here for brevity), 2010 ("10"), and 2015 ("15"). Estuaries were surveyed beginning in 2005-06. Great Lakes were surveyed beginning in 2010.

* Indicates statistically significant difference (95% confidence) between time periods compared. This difference is also represented by a darker-colored long-term change symbol.

Please see the NCCA 2015 Technical Support Document on the <a href