



# **PENSACOLA & PERDIDO BAYS ESTUARY PROGRAM**

Matt Posner  
Executive Director

# Our Mission

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Restoration





Education

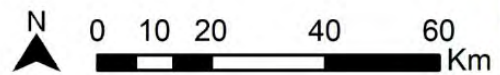


Monitoring

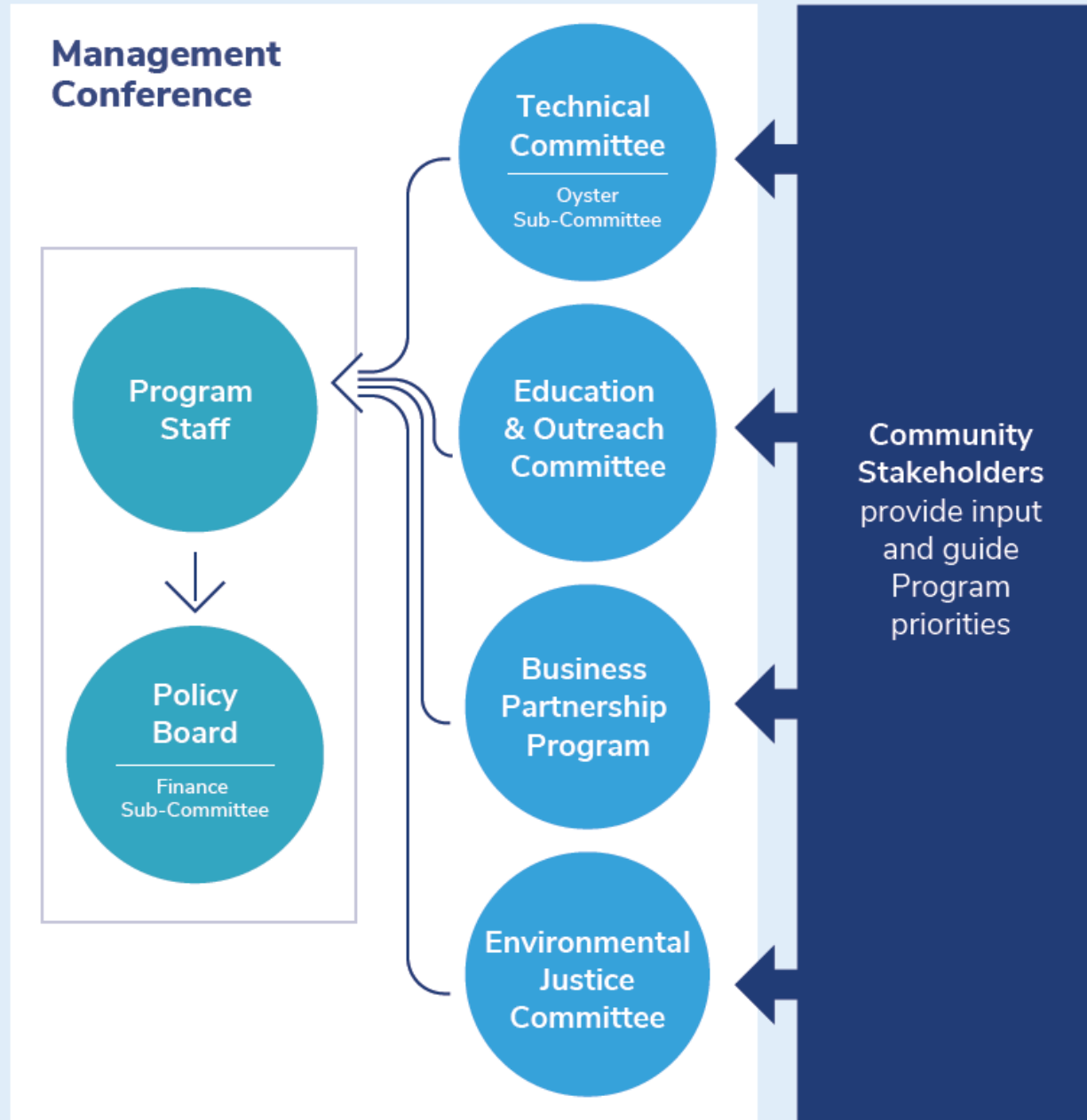


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-  Perdido Watershed
-  Pensacola Watershed



# PPBEP Organizational Structure








## Community Values and Concerns

PPBEP partnered with the University of West Florida (UWF) Haas Center to survey residents and visitors about watershed use, values, challenges, and funding.

**754**  
participants  
completed the  
online survey.

### Most valued aspects of the watersheds:

-  Natural Beauty
-  Ecosystem Services
-  Fishable Water

### Most popular activities:

-  Waterfront Dining
-  Wildlife Viewing
-  Beaching

TOP  
**5**

### Very Important Aspects of Healthy Watersheds:

- Trash Free Land and Water
- Healthy Habitats
- Wildlife Abundance
- Wildlife Diversity
- Natural Riverbanks and Shorelines

TOP  
**5**

### Environmental Challenges:

- Industrial Discharges
- Coastal Development
- Municipal Sewage Treatment Discharges
- Population Increase
- Upstream Development

TOP  
**5**

### Investment Priorities:

- Water Quality Improvements
- Natural Habitat Restoration
- Resilience
- Green Infrastructure
- Community Outreach and Education

# CCMP Goals

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**GOAL 1**  
**SOURCE OF**  
**WATERSHED**  
**INFORMATION**



**GOAL 2**  
**STRENGTHEN**  
**COMMUNITY**  
**RESILIENCE**



**GOAL 3**  
**IMPROVE**  
**WATER QUALITY**



**GOAL 4**  
**REDUCE**  
**SEDIMENT**  
**SOURCES**



**GOAL 5**  
**CONSERVE AND**  
**RESTORE CRITICAL**  
**HABITAT**



**GOAL 6**  
**RESTORE AND**  
**CONSERVE FISH**  
**AND WILDLIFE**







## GOAL 2

### Strengthen Community Resilience

#### Objective 2.1

Inform community planning and development decisions

##### ACTION 2.1.1

Promote the use of smart growth and best land management practices to maximize the health and resilience of local communities in the face of natural disasters

##### ACTION 2.1.2

Restore watershed hydrology by prioritizing the use of nature-based solutions and removal of hardened infrastructure, where appropriate

#### Objective 2.2

Facilitate wastewater management improvements throughout the watersheds

##### ACTION 2.2.1

Extend central sewer service to priority areas near surface waters and retrofit existing failing wastewater infrastructure

##### ACTION 2.2.2

Educate and incentivize the community on the importance of sewer and septic system maintenance and sewer connections

#### Objective 2.3

Promote the use of green infrastructure or other low impact designs in community planning

##### ACTION 2.3.1

Enhance stormwater management by expanding the use of green infrastructure practices

##### ACTION 2.3.2

Promote and facilitate the development of living shorelines as a sustainable alternative to shoreline armoring to reduce erosion and sediment inputs





Perdido Bay  
Darryl Boudreau, NFWMD



### GOAL 3

## Improve Water Quality

### Objective 3.1

Develop a comprehensive water quality watershed monitoring program throughout the Pensacola and Perdido Bays watersheds

#### ACTION 3.1.1

Implement the Comprehensive Monitoring Strategy by establishing a comprehensive watershed monitoring program that encompasses both watersheds across state lines

#### ACTION 3.1.2

Develop water quality targets for Pensacola and Perdido Bays to meet surface water classification designations

### Objective 3.2

Identify root causes of water quality impairments and implement priority projects

#### ACTION 3.2.1

Investigate sources of microbial pollutants in the watersheds

#### ACTION 3.2.2

Evaluate and identify point and nonpoint source hotspots for nutrients in the watersheds

#### ACTION 3.2.3

Implement water quality projects to meet state designated uses

### Objective 3.3

Assess water quality seasonal trends to understand impacts to natural resources, including habitats and fish and wildlife

#### ACTION 3.3.1

Evaluate seasonal trends of nutrients, chlorophyll-a, dissolved oxygen, and harmful algal blooms and their impacts to habitats and fish and wildlife







#### GOAL 4

### Reduce Sedimentation

#### Objective 4.1

Develop a comprehensive watershed monitoring program throughout the Pensacola and Perdido Bays watersheds to assess sediment inputs

##### ACTION 4.1.1

Develop a comprehensive sediment monitoring program that encompasses both watersheds across state lines

#### Objective 4.2

Conduct a sediment study to assess sources of sediments and erosion in the watersheds

##### ACTION 4.2.1

Identify the impact of land use land cover on the rate of soil erosion and sediment loading

##### ACTION 4.2.2

Identify major sediment sources within the watersheds

#### Objective 4.3

Address sources of sedimentation

##### ACTION 4.3.1

Identify unpaved roads and their contributions to water quality impairments and prioritize for paving or low impact designs

##### ACTION 4.3.2

Collaborate with partners to prioritize, develop, design, and implement sediment reduction and remediation projects to address gully and streambank erosion

#### Objective 4.4

Assess the effects of sediment dynamics and resuspension on benthic habitats

##### ACTION 4.4.1

Conduct benthic sediment mapping and synthesize existing data to assess sediment type, grain size, transport, and contours



Red Clay  
PPBEP



# State of the Bays

Coming in May!



Habitats



Water Quality



Bacteria



Wildlife

Scale of ecosystem health:



Improving



Stable



Declining



Critical



Undetermined



# State of the Bays



Habitats

- Oyster Reefs
- Seagrass Beds
- Wetlands
- Upland Habitat Change



Water Quality

- Nitrogen
- Phosphorus
- Chlorophyll-a
- Turbidity
- Dissolved Oxygen



Bacteria

- Beach Advisories
- Sanitary Sewer Overflows



Wildlife

- Manatees





# State of the Bays



# Monitoring Efforts

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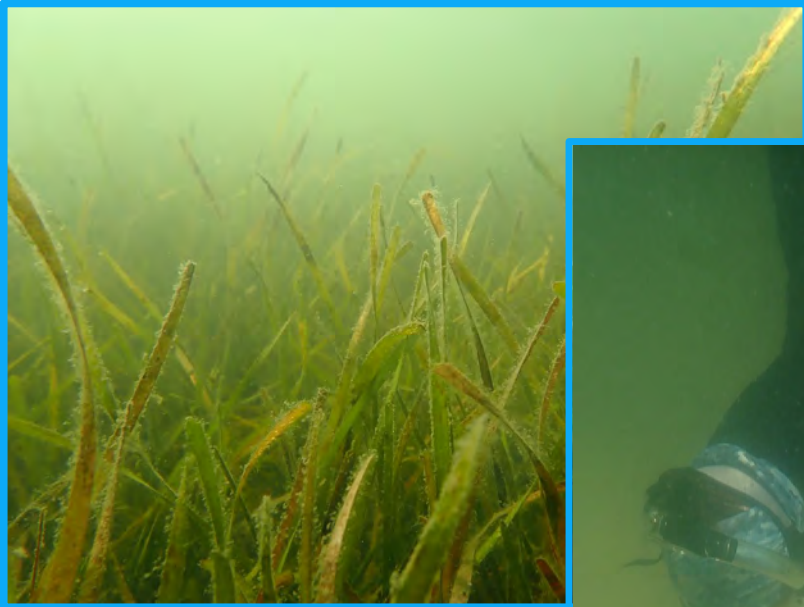
# Juvenile Fish Trawling





# Seagrass Monitoring & Mapping

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# Oyster Spat Monitoring





# Water Quality and Habitat Monitoring

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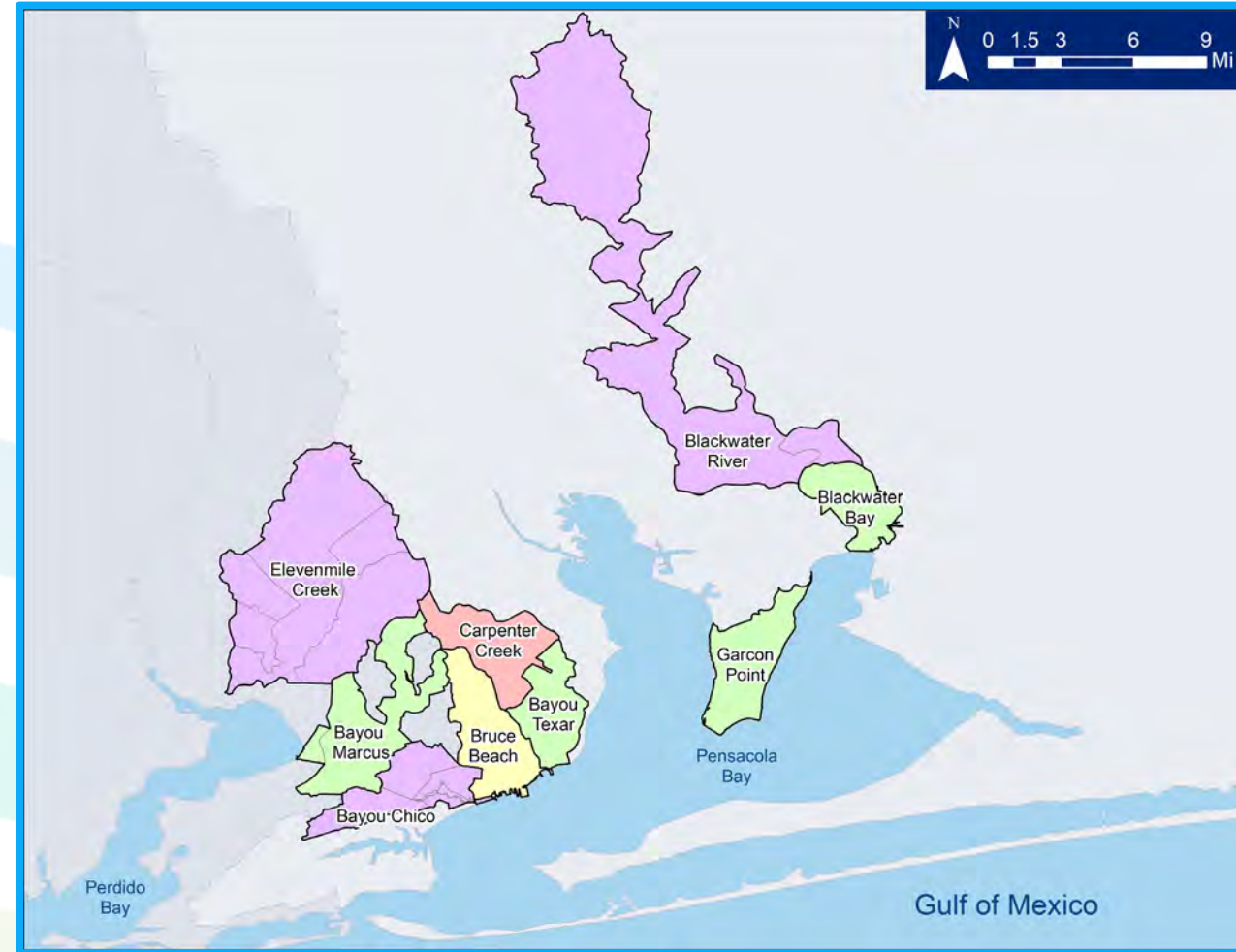


# Microbial Source Tracking

NRDA Grant Proposal (5 yrs.; 2024-2029)

**Request:** \$8.8 M

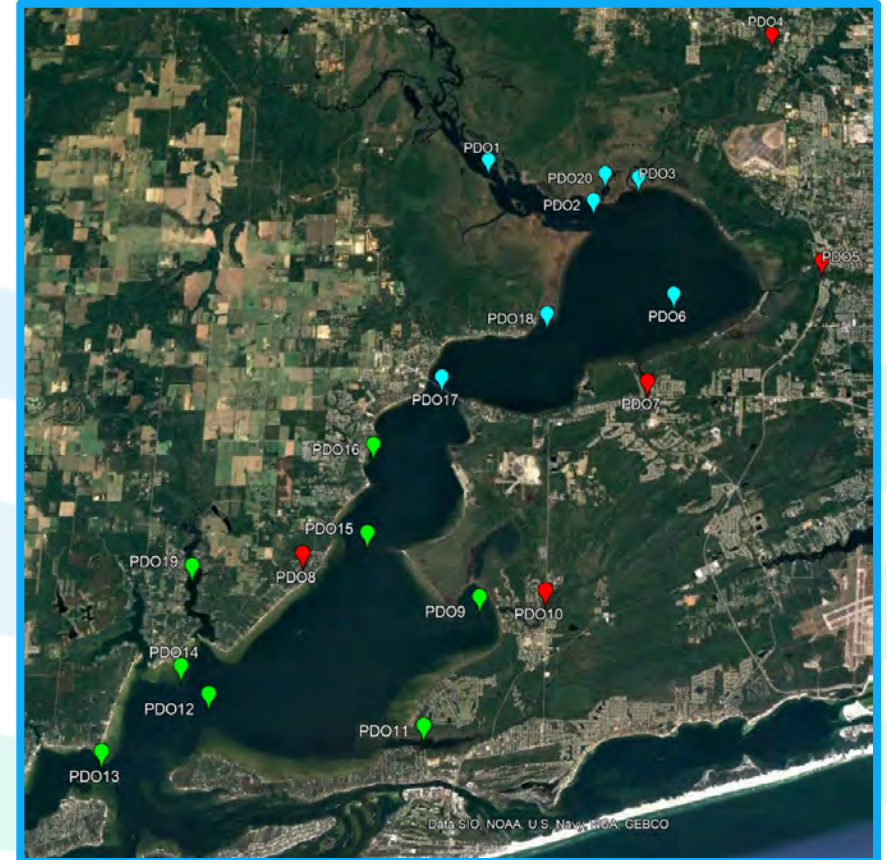
- Partners: Escambia County, Santa Rosa County, ECUA, City of Pensacola
- ID and address bacterial impairments
- 9 sub-watersheds
  - Impaired or recurring bacterial issues



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# Perdido Bay Monitoring

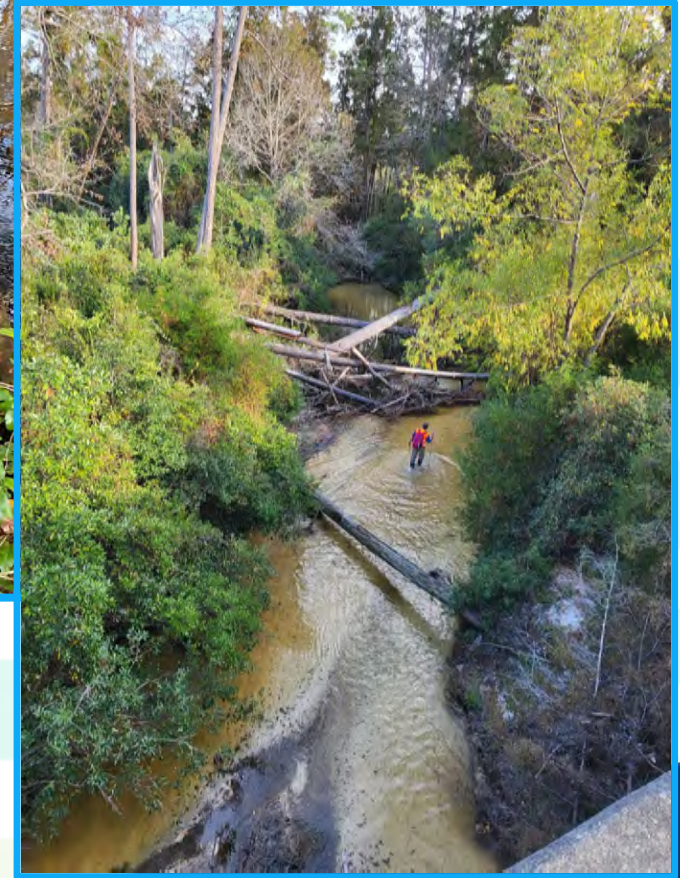
- 22-23 Community Grant awarded to UWF
- Monthly sampling
- Zooplankton & Water Quality Monitoring





# Sediment Monitoring

- 22-23 Community Grant awarded to UWF
- Streambank erosion monitoring
- Perdido River, Hollinger Creek, Joe's Creek, Cowpen Creek, Bellefontaine Creek.





# Economic Evaluation



Businesses within ½ mile of the watershed had nearly **\$8 billion in sales in 2020** and supported **more than 84 thousand workers**.

The estuaries are estimated to contribute **\$2.7 billion** to property values in the area...

and nearly **\$81 million** to consumer spending.



# Restoration

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# Carpenter Creek Restoration

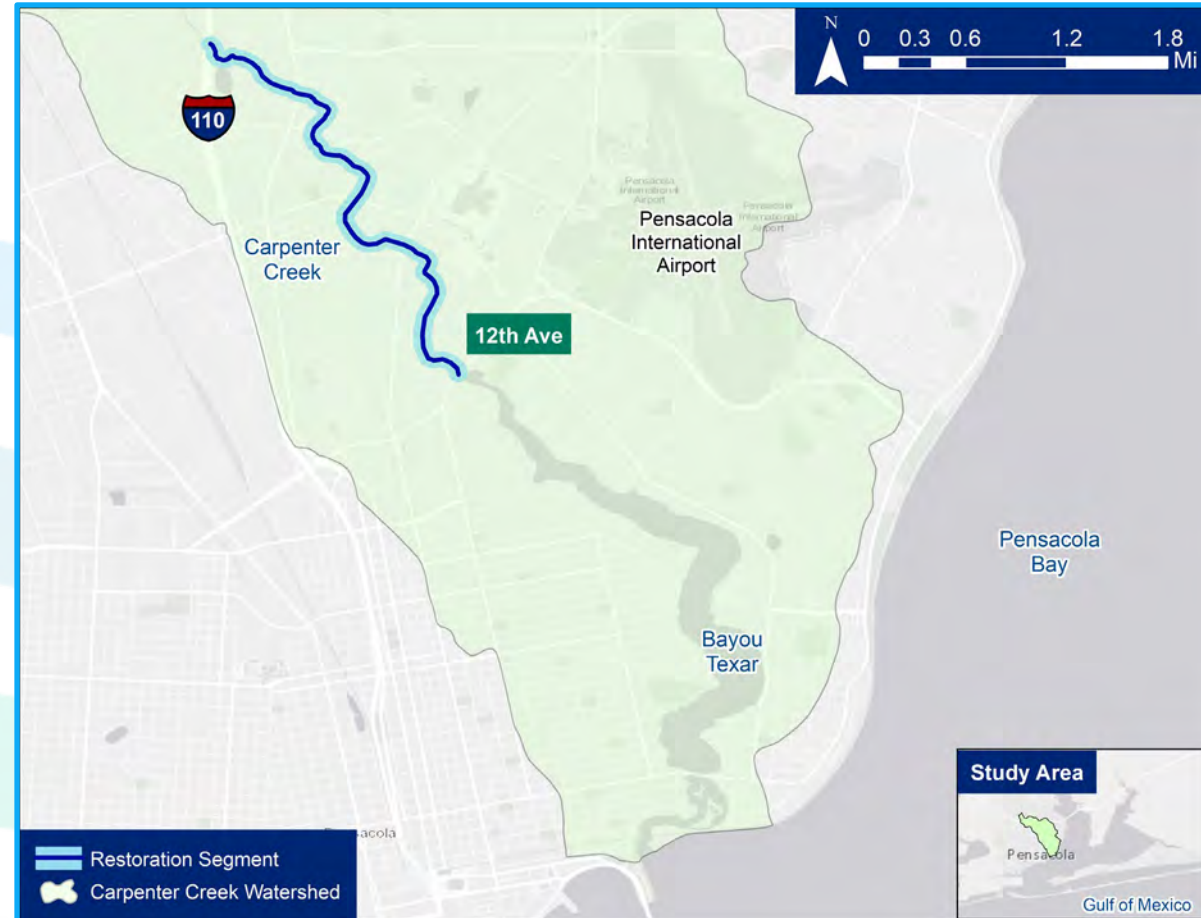
**Funding Source:** DEP FPL3b (2023 – 2025)

**Lead:** PPBEP

**Awarded:** \$2.2M

**Partners:** Escambia and City of Pensacola

- Planning, design, and permitting for 2.5 mi-long stream restoration
- Restore water quality and quantity
- Reduction of 2,000 tons of sediment and remove 2,500 lbs. of nitrogen
- Restore 20 acres of wetlands



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# Operation Clean Sweep

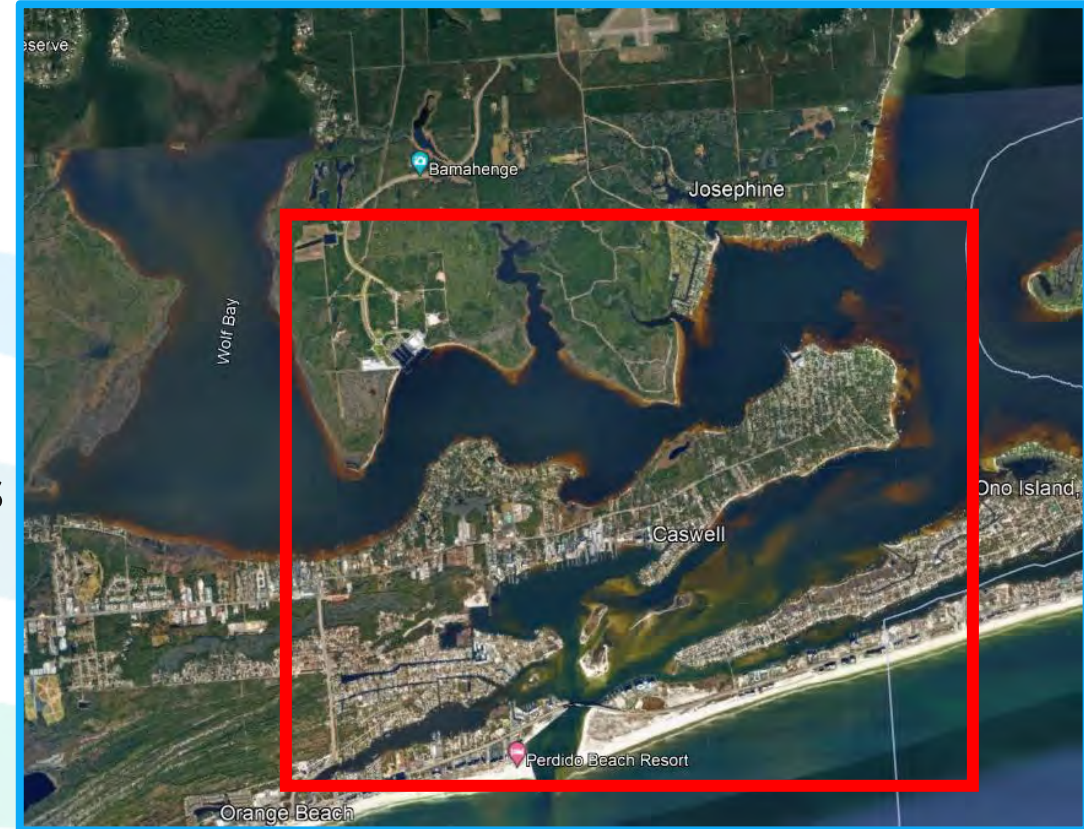
**Funding Source:** NFWF (3 years; 2023-2025)

**Lead:** City of Orange Beach

**Request:** \$367,900

**Partners:** PPBEP, Moffatt and Nichol, TNC AL

- Targets: 900,000 lbs. marine debris removed; 25 acres of habitat restored
- Abandoned, derelict, and damaged structures and gear
- Volunteer clean up and planting 2-day event
  - OB Coastal Arts Center and Public Library
- Best Management Practices guide for coastal contractors and landowners



# Pensacola Bay Oyster Restoration Initiative

**Funding Source:** NOAA IJA (4 years; 2023-2026)

**Lead:** PPBEP

**Request:** \$11 M

**Partners:** TNC, Santa Rosa County, FWC, DEP



- 4 Phases:
  - Oyster restoration design and permitting
  - Oyster restoration Phase I implementation
  - Sediment load assessment
  - Sandy Hollow Gully restoration design and permitting
  - Living Shoreline Cost Share Program



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# Perdido Watershed Initiative

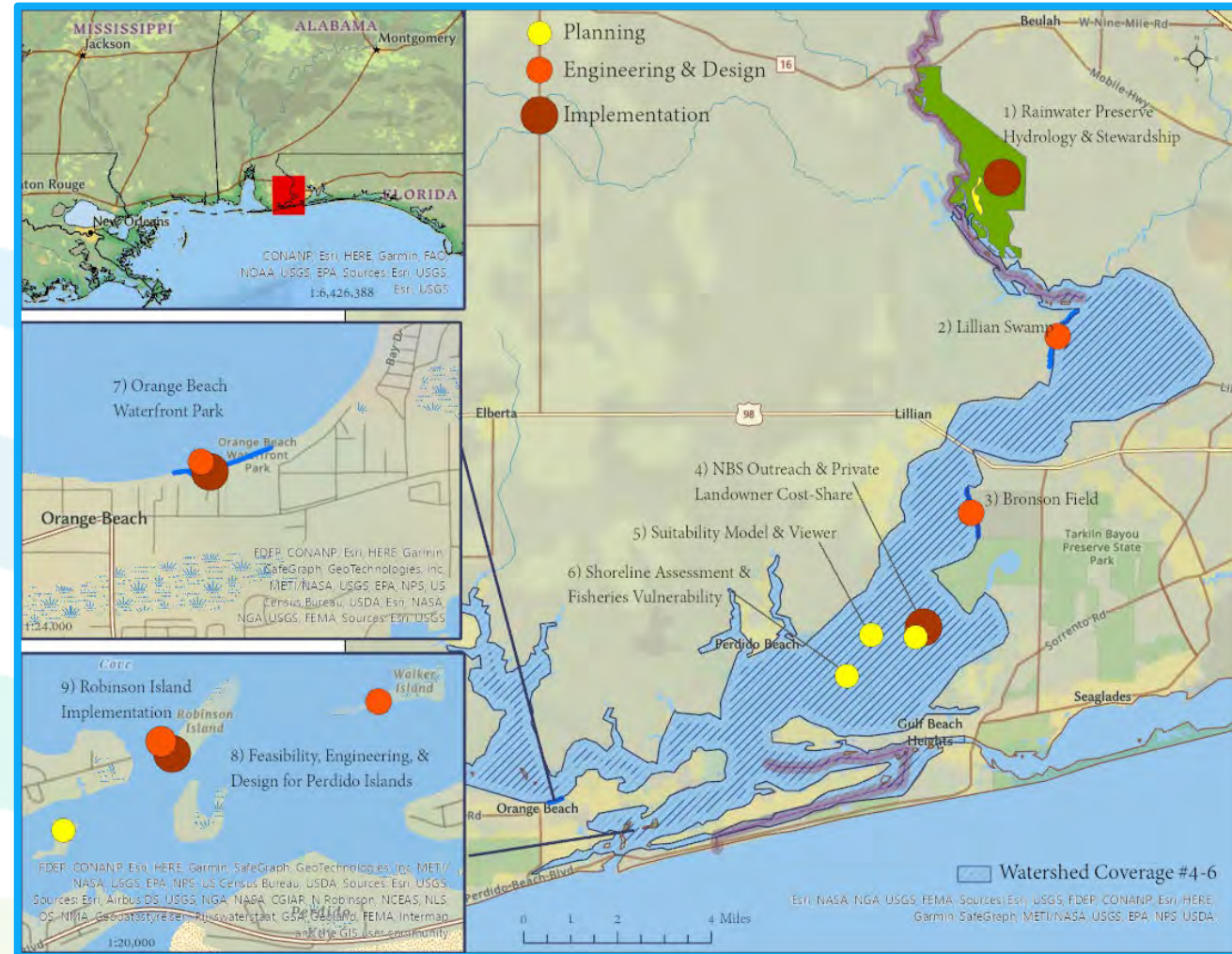
**Funding Source:** NOAA IJA (2023-2025)

**Lead:** TNC

**Request:** \$12.8 M

**Partners:** PPBEP, City of OB, Troy, USA, MSU, DISL, ADCNR, Moffatt and Nichol

- Living Shoreline Suitability Model
- Education and Outreach
- Planning and/or Implementation:
  - OB Waterfront Park
  - Gilchrist, Robinson, Walker islands
  - Lillian Swamp and Bronson Field
  - Living Shoreline Cost Share Program





# Outreach

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# Community Grant Program

\$700k in funding



27 projects



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# NATIONAL ESTUARIES WEEK 2022

THANKS FOR WADING IN WITH US!





# Outreach Efforts







# Pensacola Oyster Discovery

## Paid Teacher Summer Workshop

June 5-9, 2023

**\$1,000 teacher stipend**  
**Funding for 2023-2024 student field trips**



B-WET





# The Humble Oyster Documentary

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**Save the Date:  
May 18<sup>th</sup>**

**at**

**WSRE**

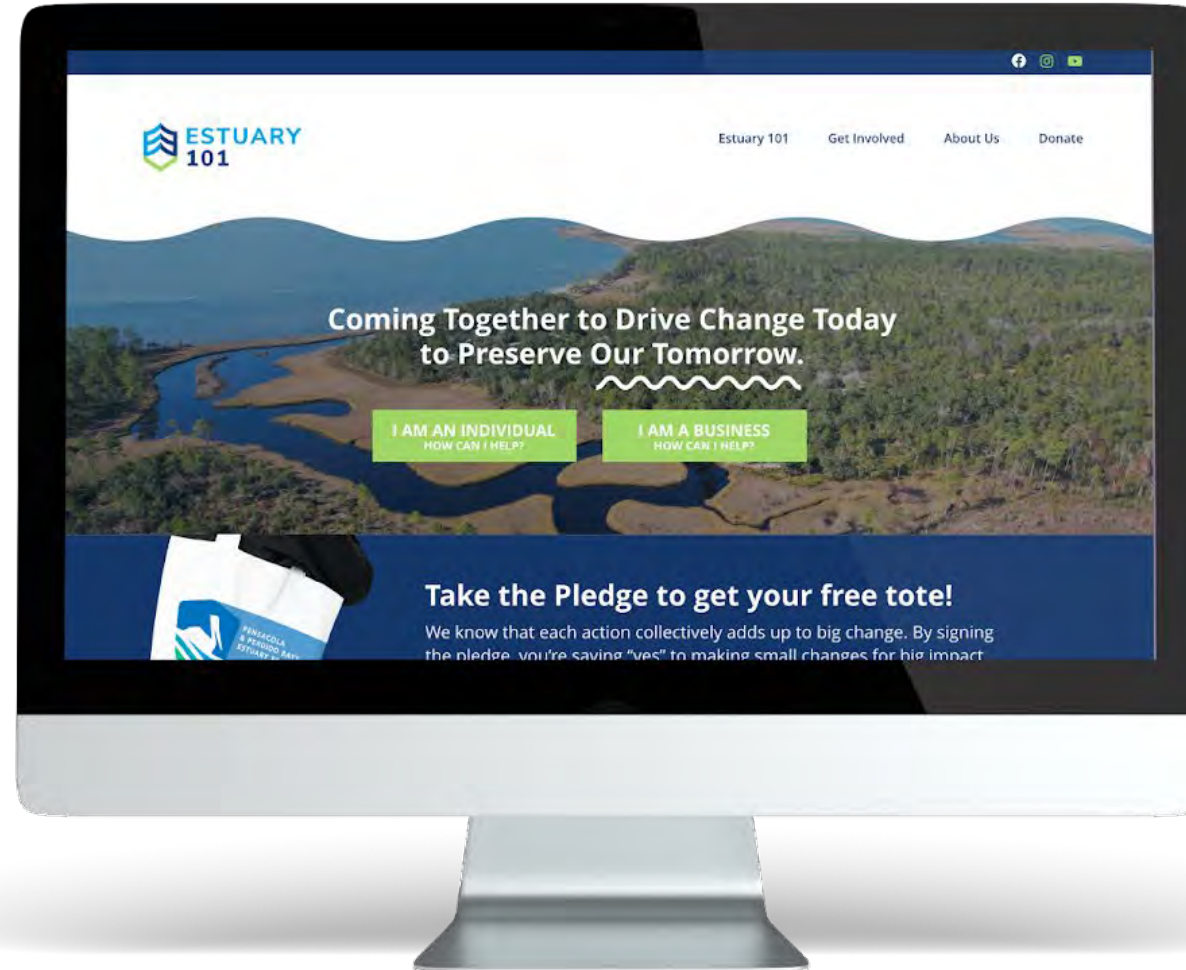
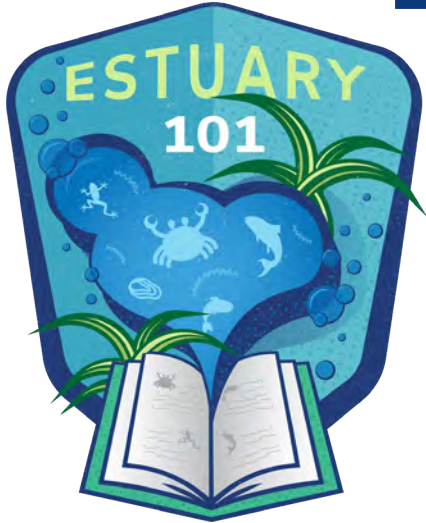
**Jean & Paul  
Amos Studio**



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# Estuary 101 – Coming in March



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# Volunteer Opportunities

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# Bay Ambassadors

Volunteer Training Dates:

- Saturday March 4<sup>th</sup>  
10am-noon
- Thursday, March 9<sup>th</sup>  
6pm-8pm

PPBEP Office  
Downtown Pensacola



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# Critter Catchers

## Volunteer Training Dates:

- Saturday, March 11<sup>th</sup>  
9am to noon
- Saturday, March 18<sup>th</sup>  
9am to noon

Shoreline Park  
Gulf Breeze





# Trash Free Waters Project

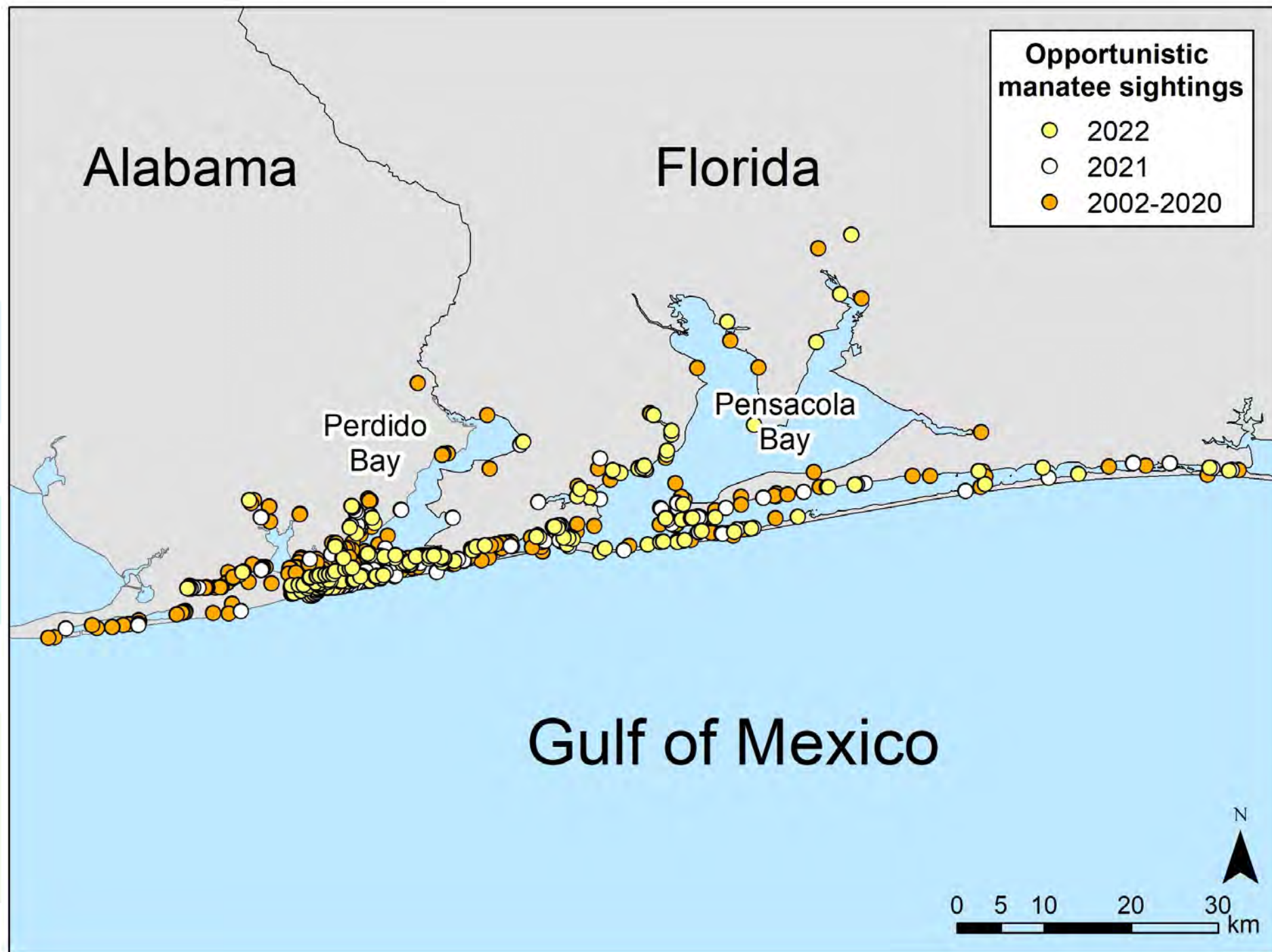




# Panhandle Manatee









# Group Volunteer Days



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# Hope on the Half Shell

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Oyster Social at  
The Well

Thursday, April 6<sup>th</sup>  
6:00-8:00pm

Stay tuned!



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# Contact PPBEP

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@ppbepflal



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