



**PENSACOLA  
& PERDIDO BAYS  
ESTUARY PROGRAM**

# **Pensacola Bay Oyster Restoration Initiative**

**Whitney Scheffel, Senior Scientist  
April 17, 2025**

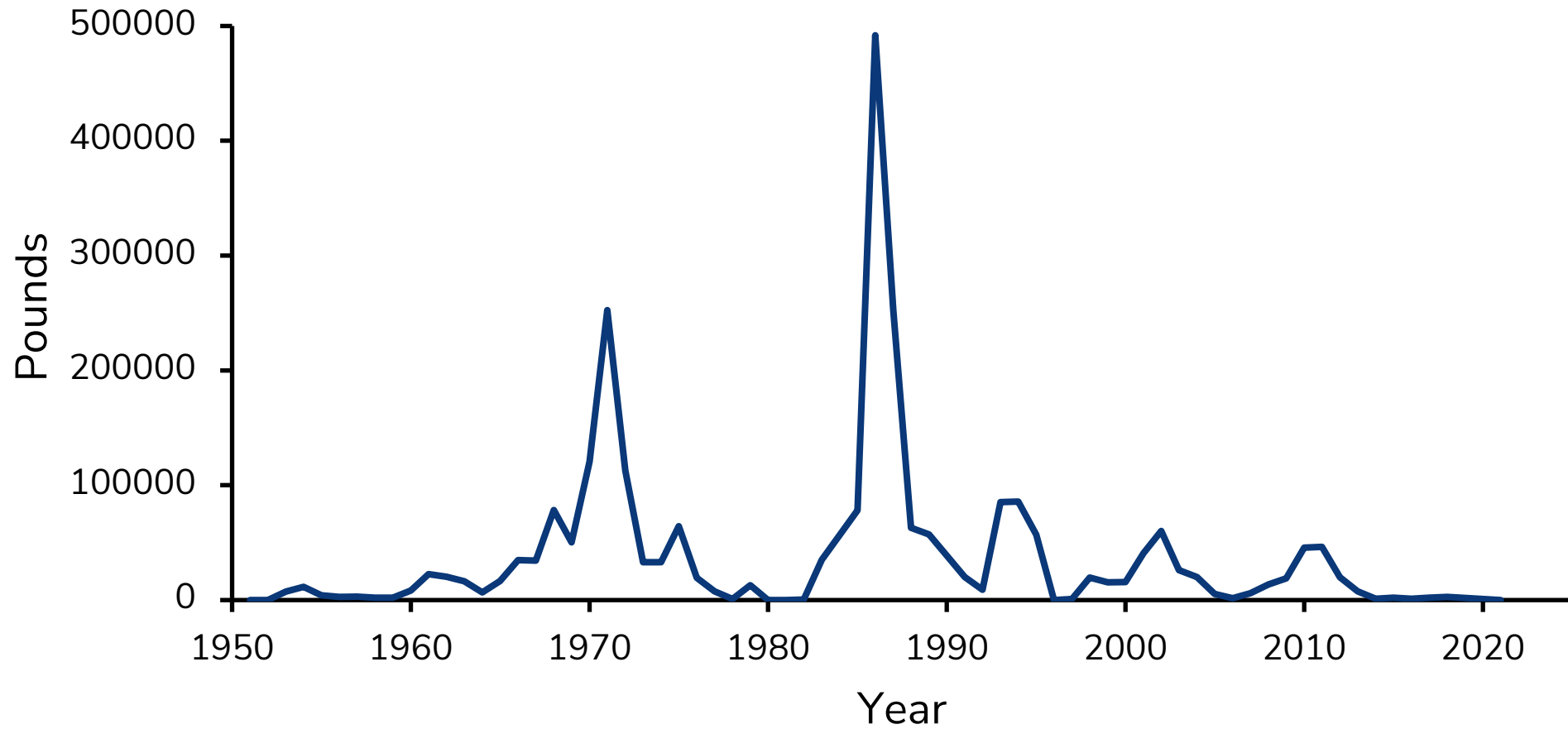


# Historical Oyster Reef Extent





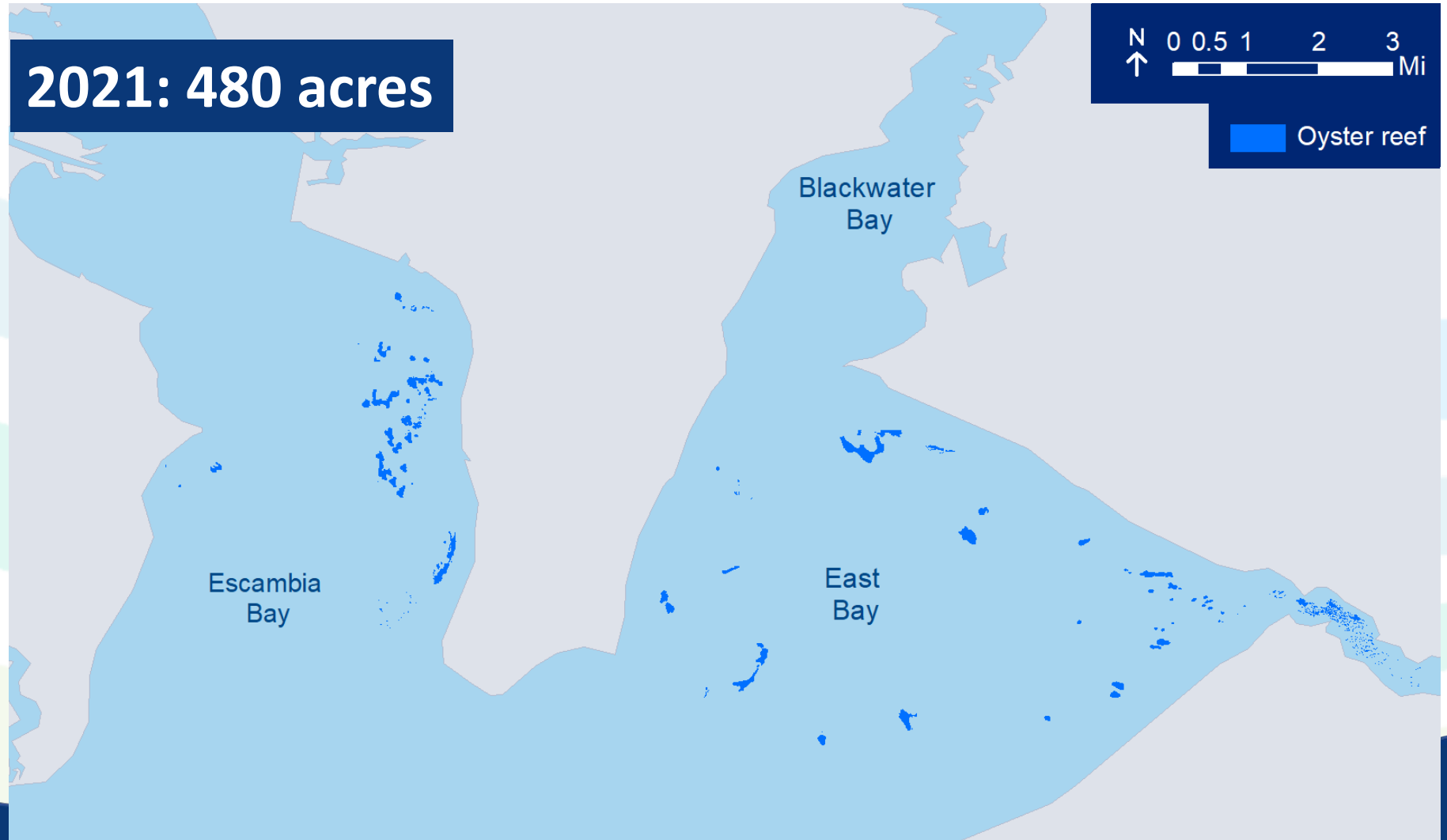
# Oysters Harvested from Pensacola Bay



# Oyster Reefs in Critical Condition



**2021: 480 acres**



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# Co-Developing a Plan for the Future

- 78 Stakeholder Interviews
- 27 Working Group Members/ 14 Alternates
  - 3 In-Person Meetings
  - 9 Virtual Meetings
  - 2 Watermen Workshops
  - 7 Watermen Members attended meetings/workshops
- 24 Presentations by invited experts/TNC staff
- 18 Months of Working Group meetings (Oct. 2019-March 2021)
- >800 Combined hours of time spent by meeting participants



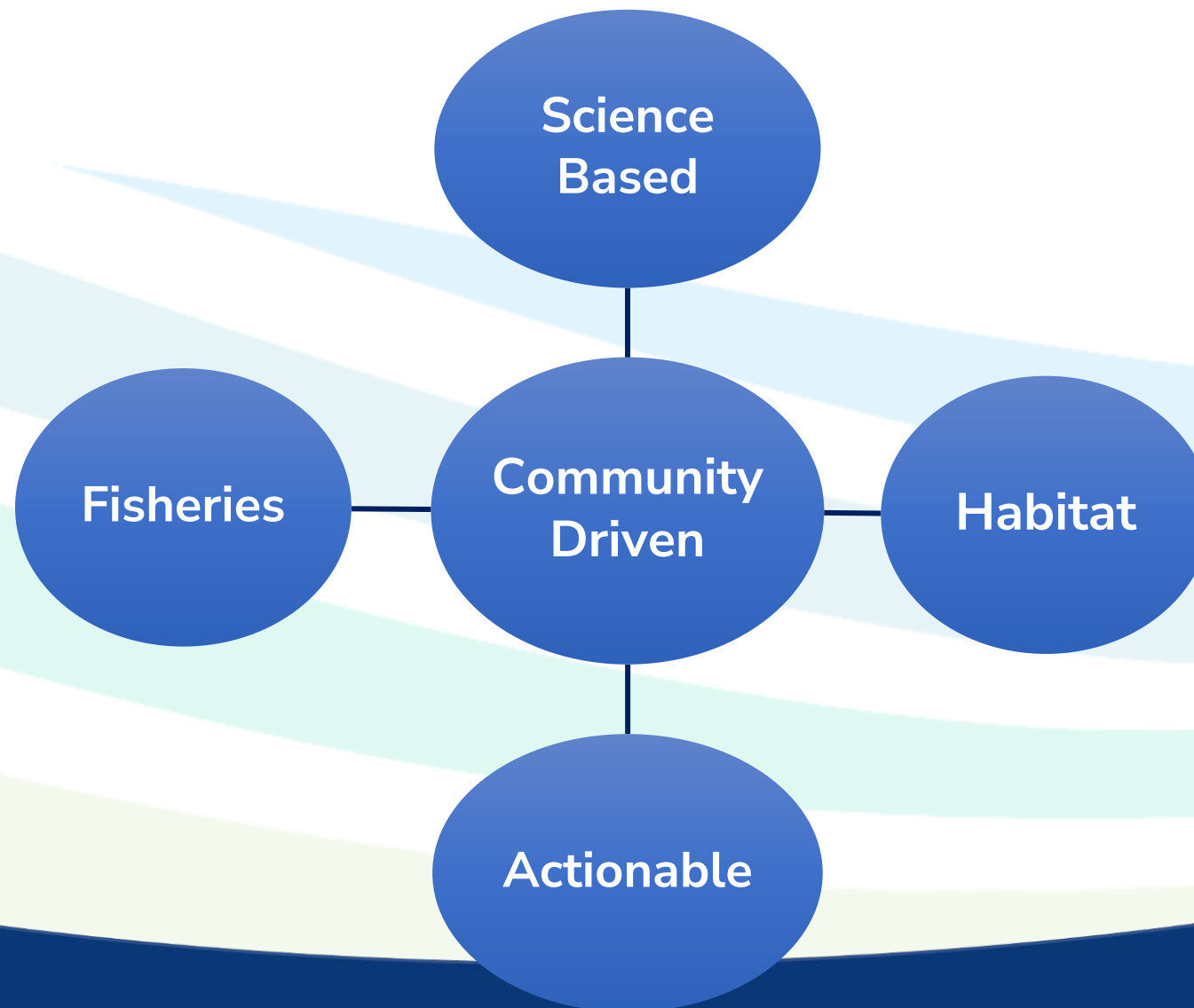


# Cross-Sector Community Representation



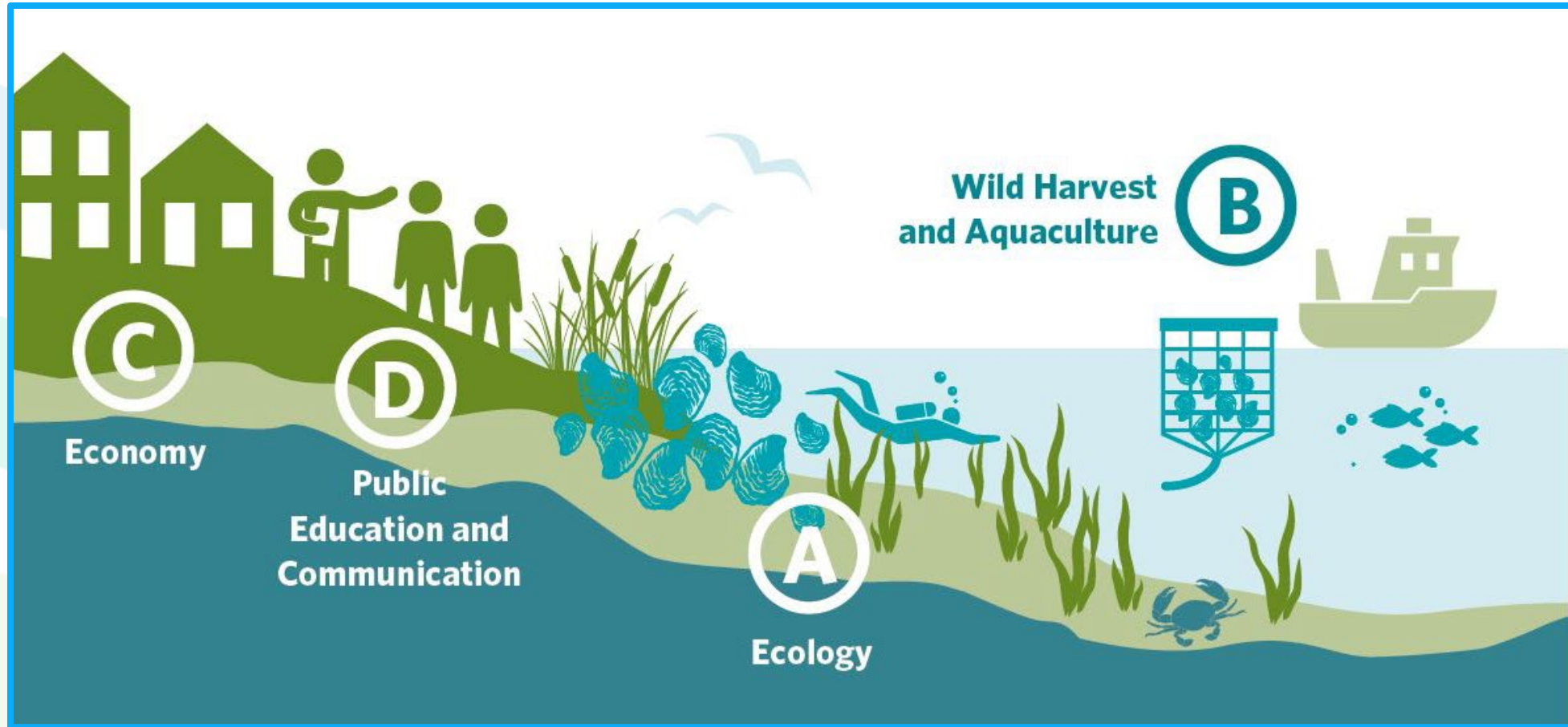


# Ecosystem-Based Fisheries Management





# Pensacola Bay System Oyster Fisheries and Habitat Management Plan





# Implementing the Plan

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# CCMP Goals



**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**



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# Data Collection Efforts



Bottom Type Mapping



Habitat Suitability Model



Water Filtration Model



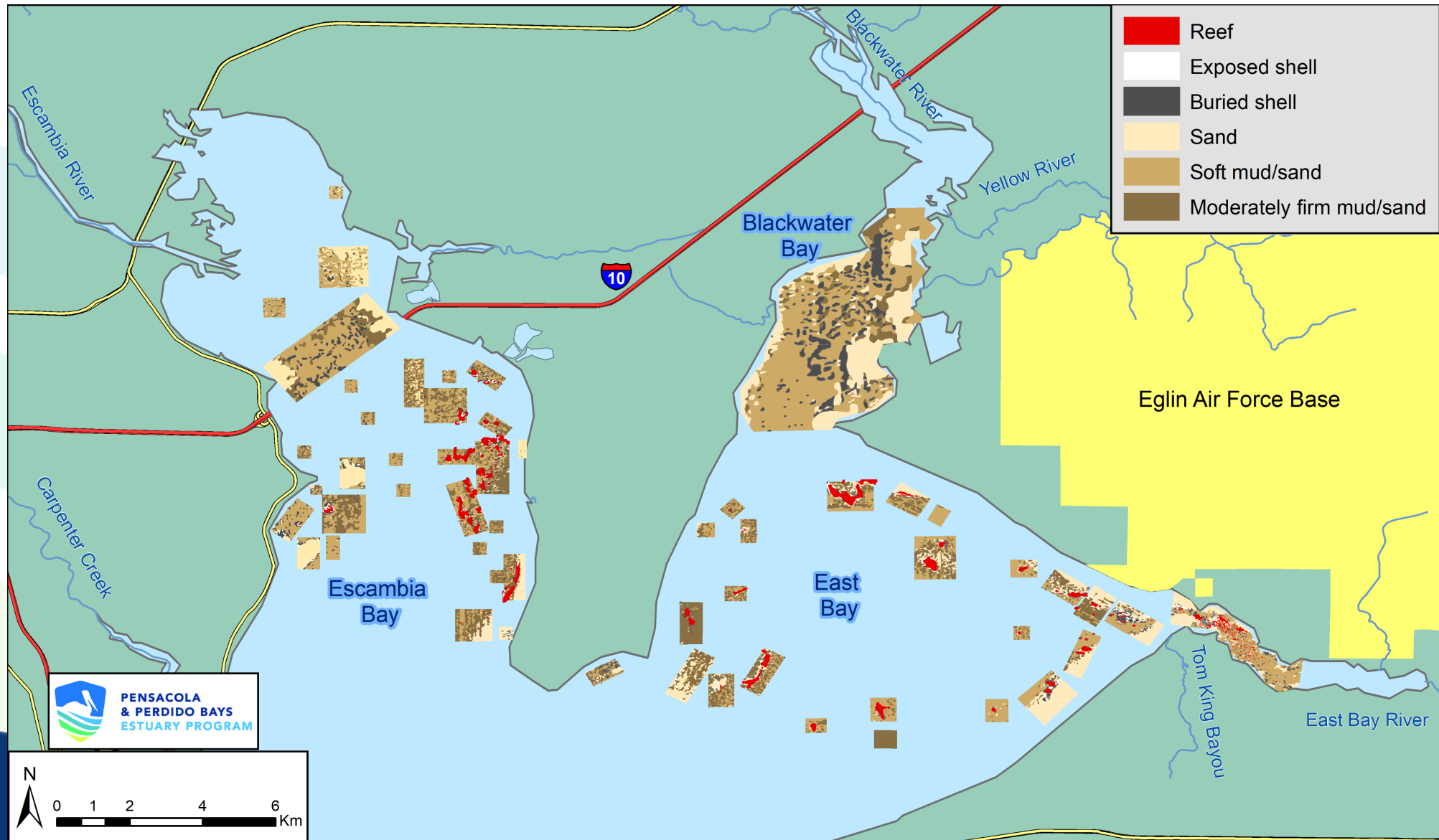
Vision Mapping & Stakeholder Input



Oyster Spat and Larval Monitoring

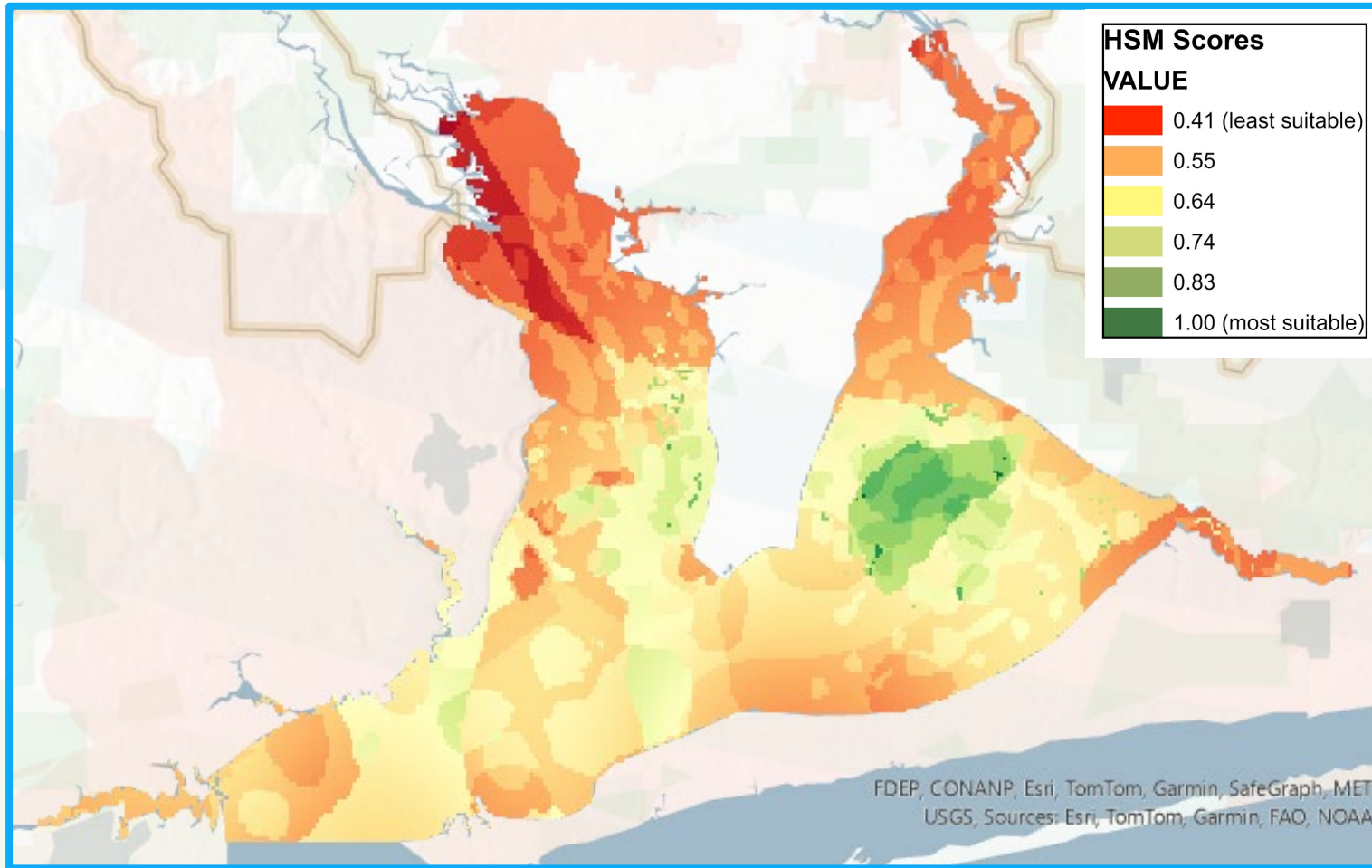


# Bottom Mapping and Condition Assessment





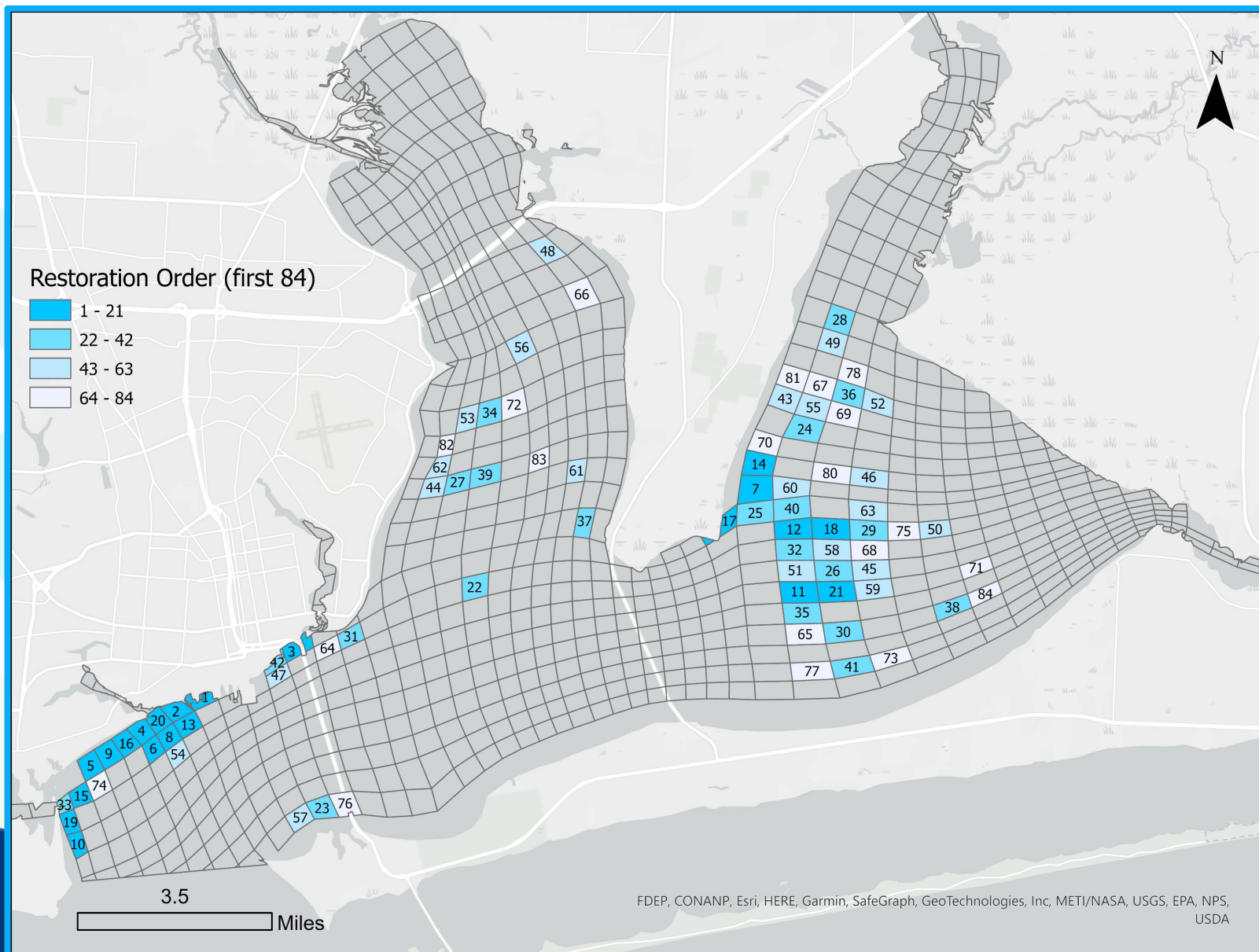
# Where is it most suitable for oysters?



- Salinity
- Current oyster reefs
- Dissolved oxygen
- Substrate type
- Larval recruitment
- Historical oyster reefs
- Temperature
- Turbidity
- Chlorophyll-a



# Water Filtration Model

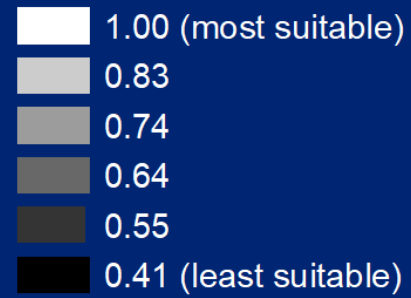




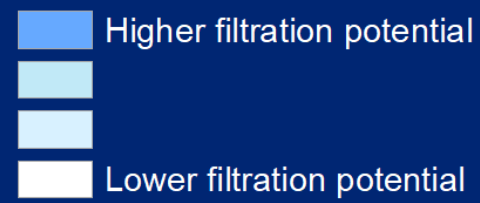
# Oyster Vision Mapping



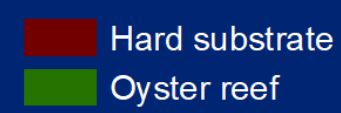
### Habitat Suitability



### Filtration Capacity



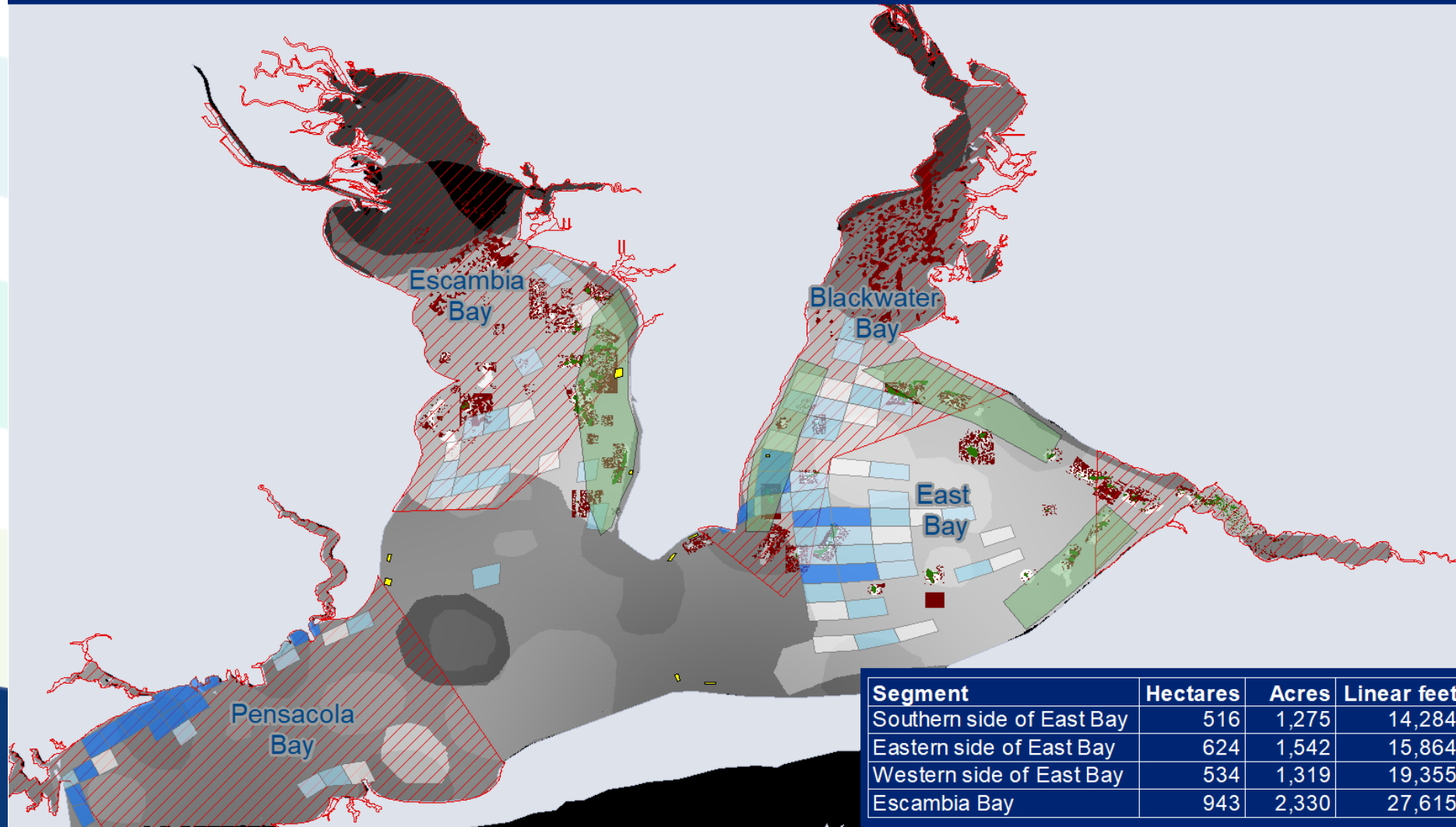
### Suitable Substrate



FDACS prohibited harvest

Priority restoration locations

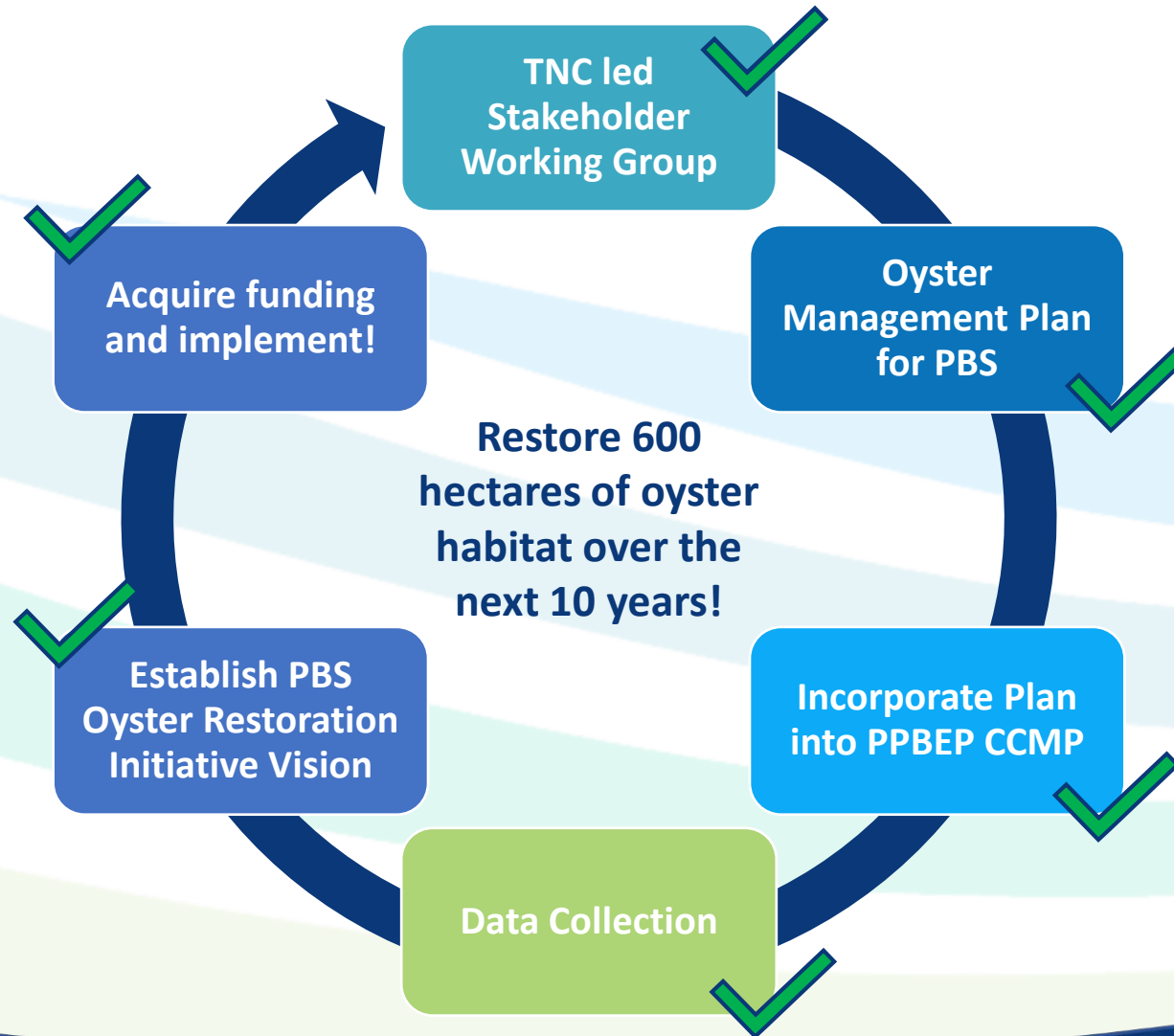
Aquaculture leases



Segment	Hectares	Acres	Linear feet
Southern side of East Bay	516	1,275	14,284
Eastern side of East Bay	624	1,542	15,864
Western side of East Bay	534	1,319	19,355
Escambia Bay	943	2,330	27,615



# How Did We Get Here?



# Where are We Now?

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# Pensacola Bay Oyster Restoration Initiative

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**Awarded: \$10.9 M**

## Long - Term Target

Restore 600 ha (~1,500 acres) over 10 years

## Short - Term Target

Restore up to 100 ha (~250 acres) over 4-5 years



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# Guided by Interdisciplinary Project Advisors

- Special Project Action Team (SPAT)
- Oyster Sub-Committee
- Wild Harvesters, Aquaculture Farmers, Tribal Members



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- One bay-wide permit

# Part 1: Design and Permitting

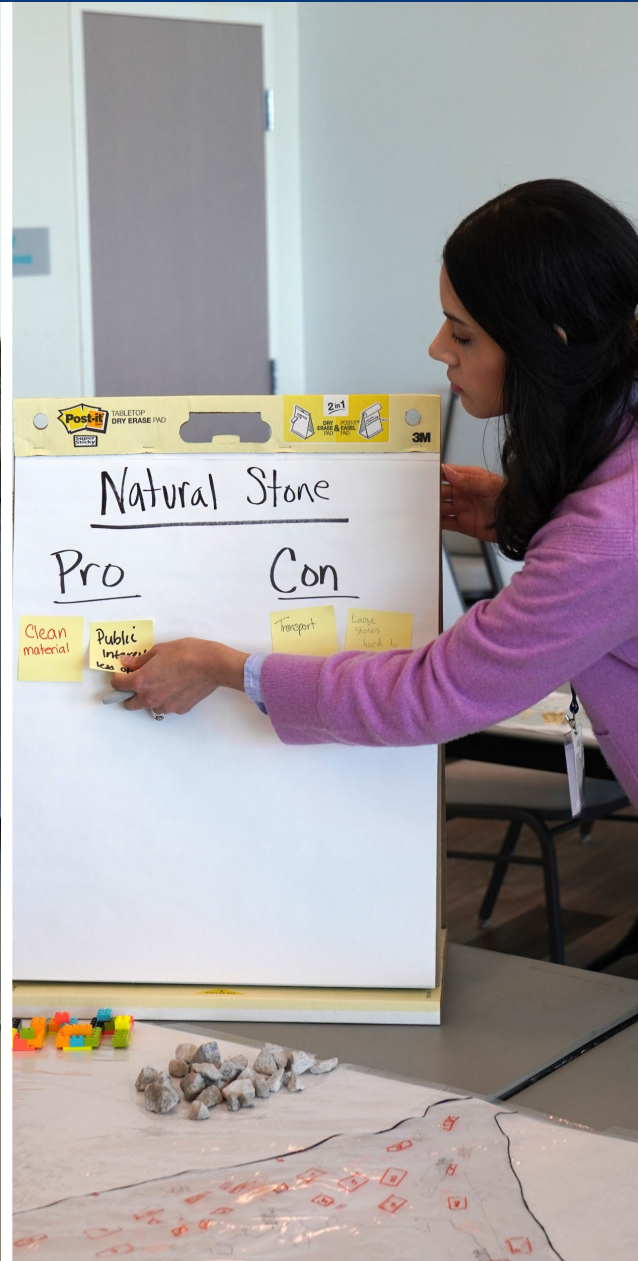
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- Jacobs Engineering
- Stakeholder Meeting #1 refining reef placement and materials
- Next steps: 30, 60 and 90% designs and continued community engagements





# Oyster Restoration Design Workshop





# Part 2: Restore Up To 250 acres

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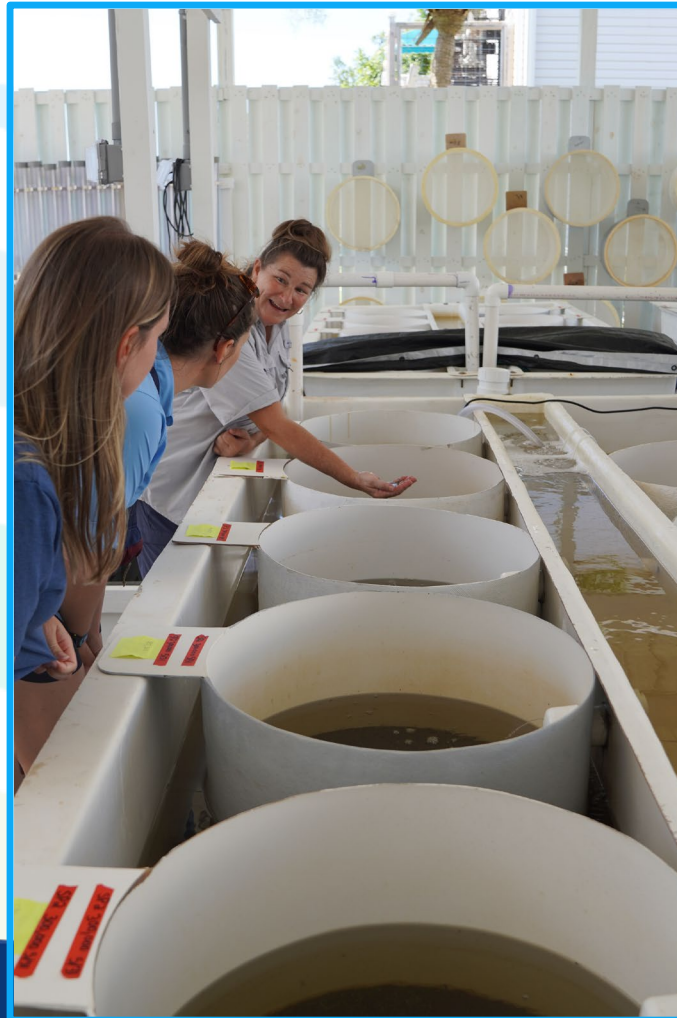
- Restoration will include both **harvestable and non-harvestable reefs**
- **Partnering with** local oyster industry, volunteers, Oyster Corps, marine contractors, etc.





# Supporting Local Industry

Local oyster farmers and harvesters will be compensated to provide their expertise and knowledge on various project aspects





# Part 3: Addressing Root Causes

Focus on resolving the **CAUSE** of the problem, not putting a band-aid on the **EFFECT** of the problem.

@LouisMassaro



Sandy Hollow Gully Restoration

Combined Target: 100,000 tons annually



This Spring: RFP for Sediment Reduction Prioritization Action Plan



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SANTA ROSA  
COUNTY FLORIDA



# It Takes A Village!



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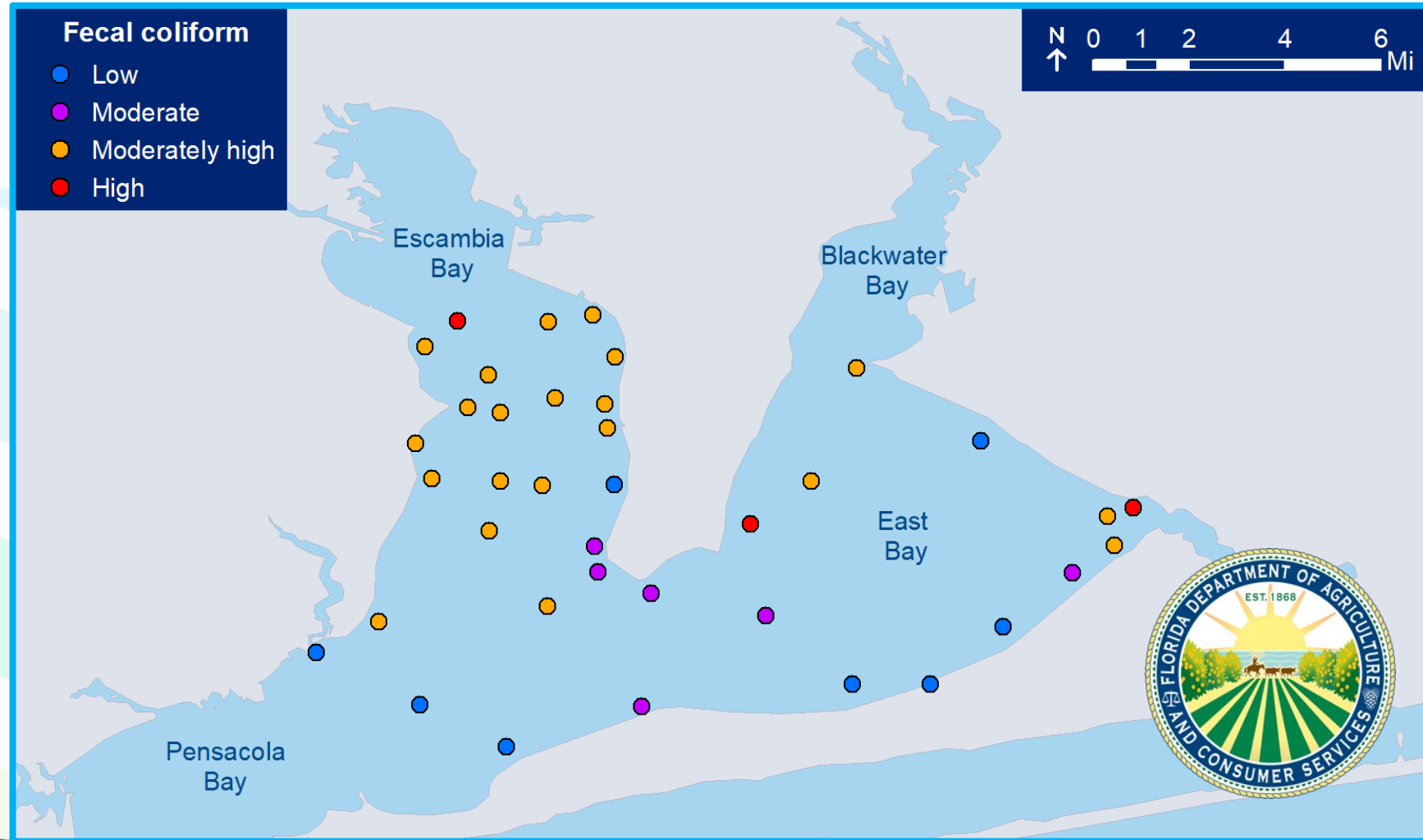
# Questions?

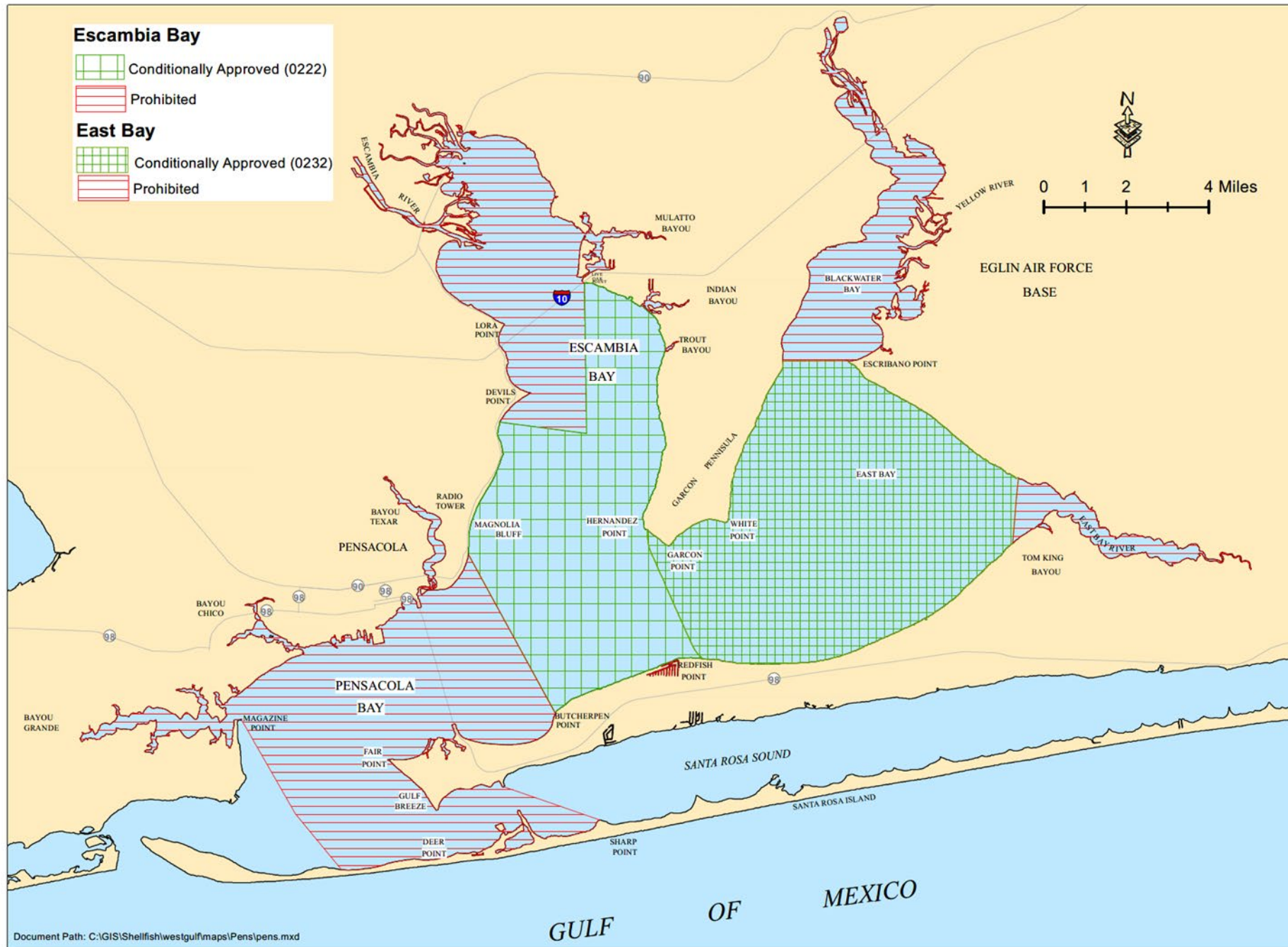




# Fecal Coliform Monitoring

- Long-term trends determine which areas are approved or prohibited for harvest
- Prohibited area expanded in 2022 due to consistently high bacteria levels







PROPOSED SHELLFISH HARVESTING AREA CLASSIFICATION MAP  
Pensacola (#02) Shellfish Harvesting Area in Escambia and Santa Rosa Counties

2022

**Escambia Bay**

- Conditionally Approved (0222)
- Prohibited

**East Bay**

- Conditionally Approved (0232)
- Prohibited

