Mapping & Condition Assessment of Oysters in the Pensacola Bay System *Where Are They Now?*

OIMMP & FORS Workshop
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PENSACOLA & PERDIDO BAYS ESTUARY PROGRAM

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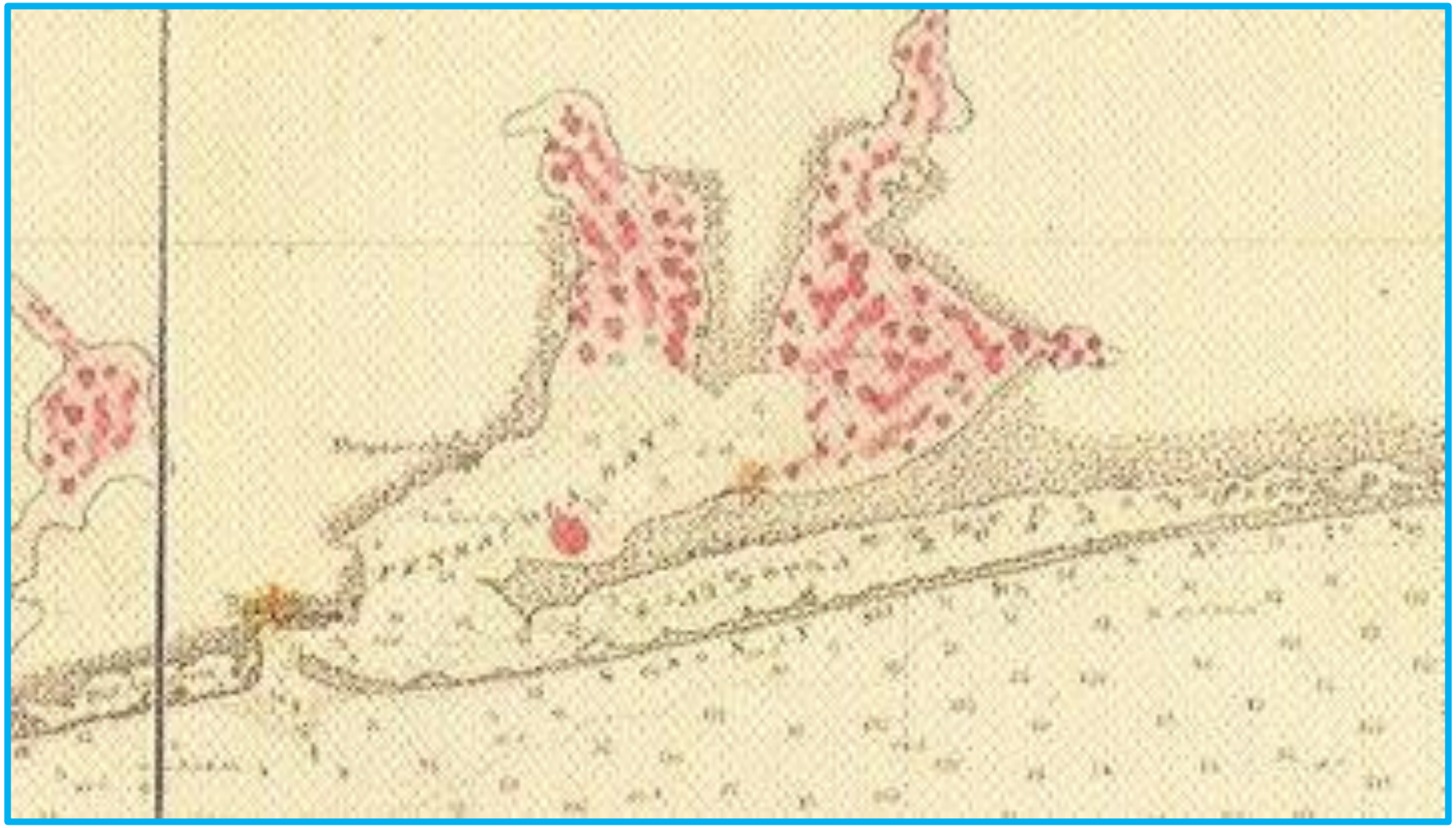
Pensacola Bay Historical Oyster Reefs

US Fish Commission, 1882



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Pensacola Bay System Oyster Assessments

East & Blackwater Bays

Lead: TNC

Completed: December 2021

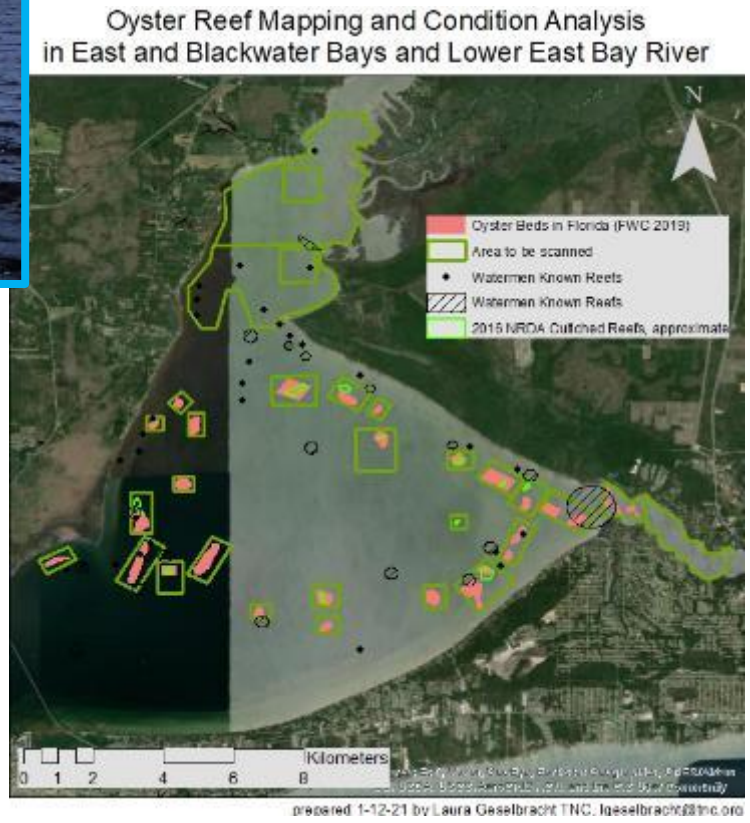
Funding Source: RESTORE

Escambia & Pensacola Bays

Lead: PPBEP

Completed: Fall 2021

Funding Source: Florida State Appropriation



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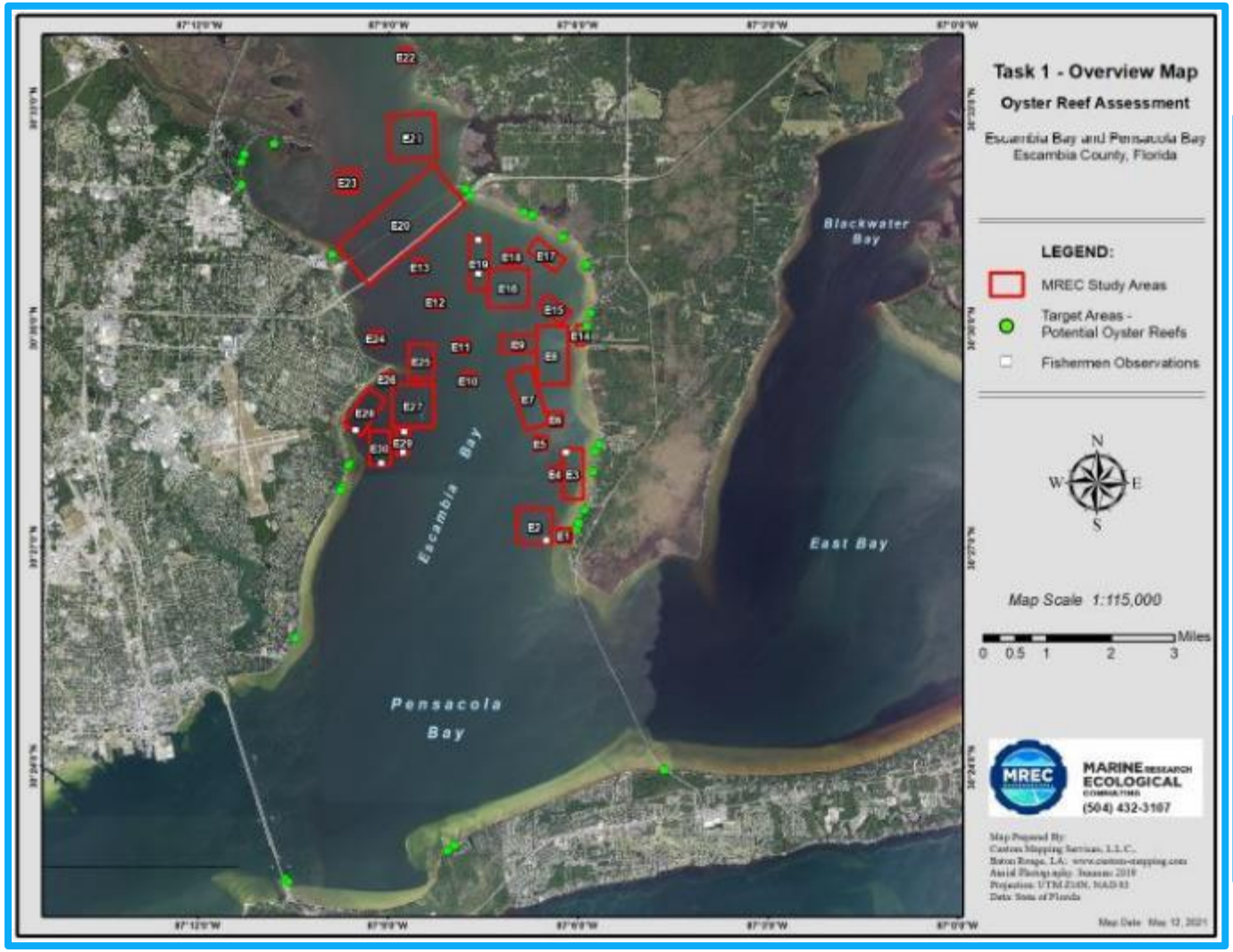
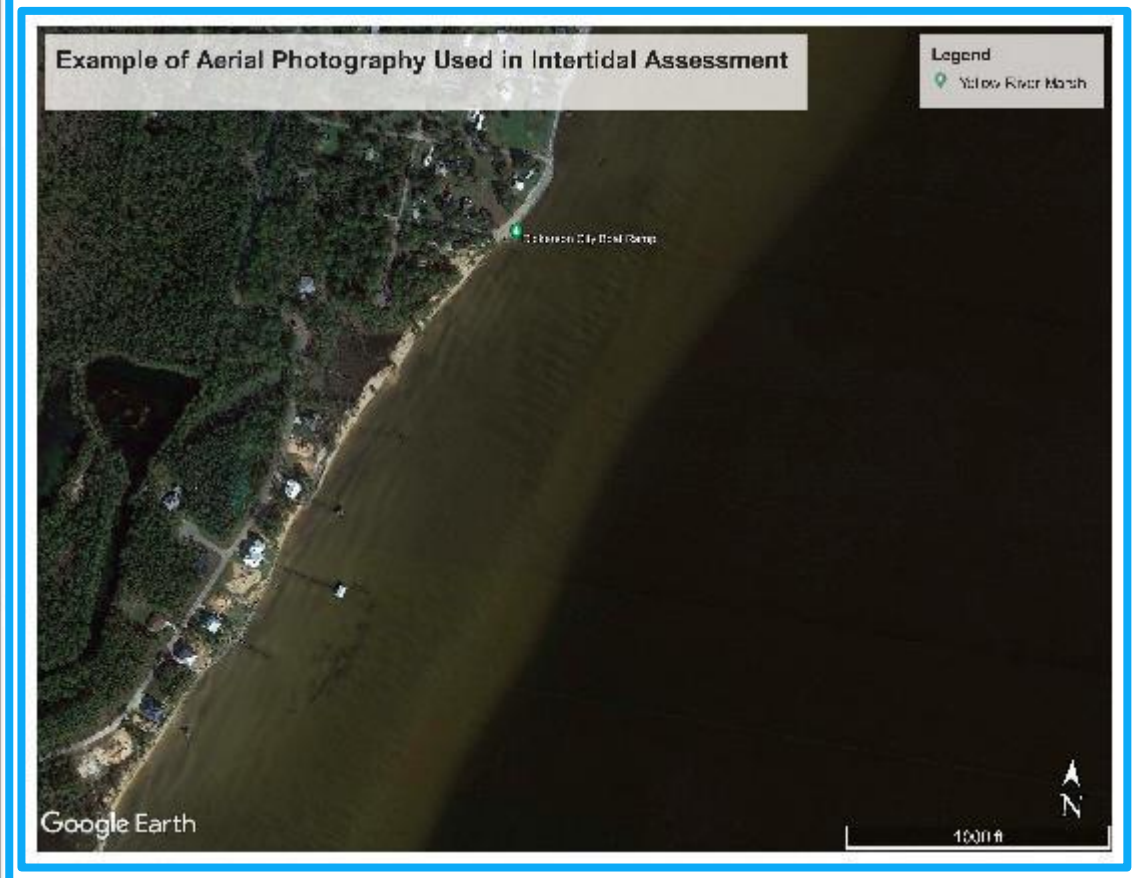
Subtidal & Intertidal Assessments





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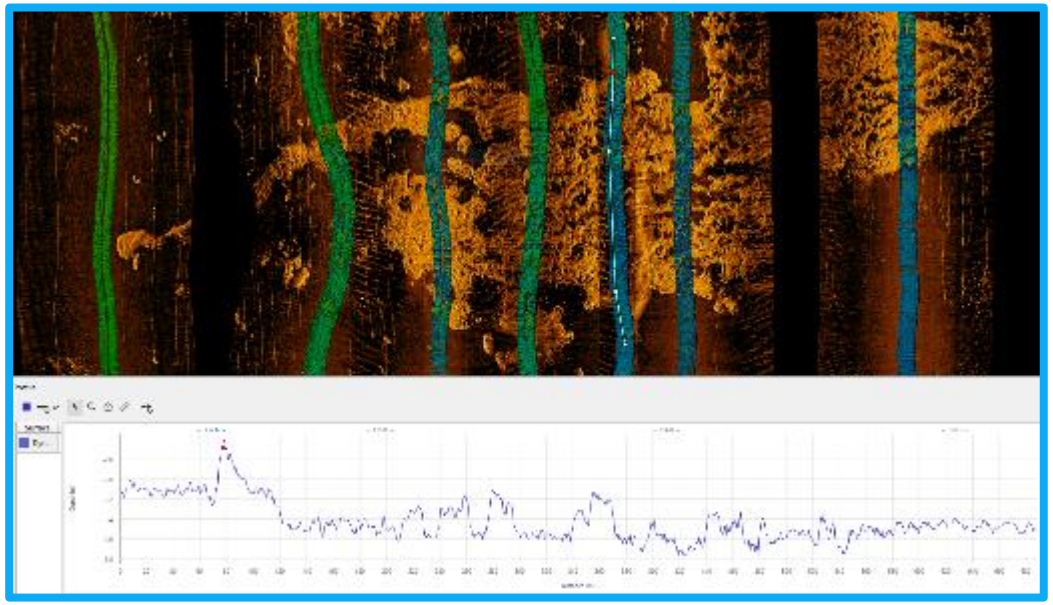
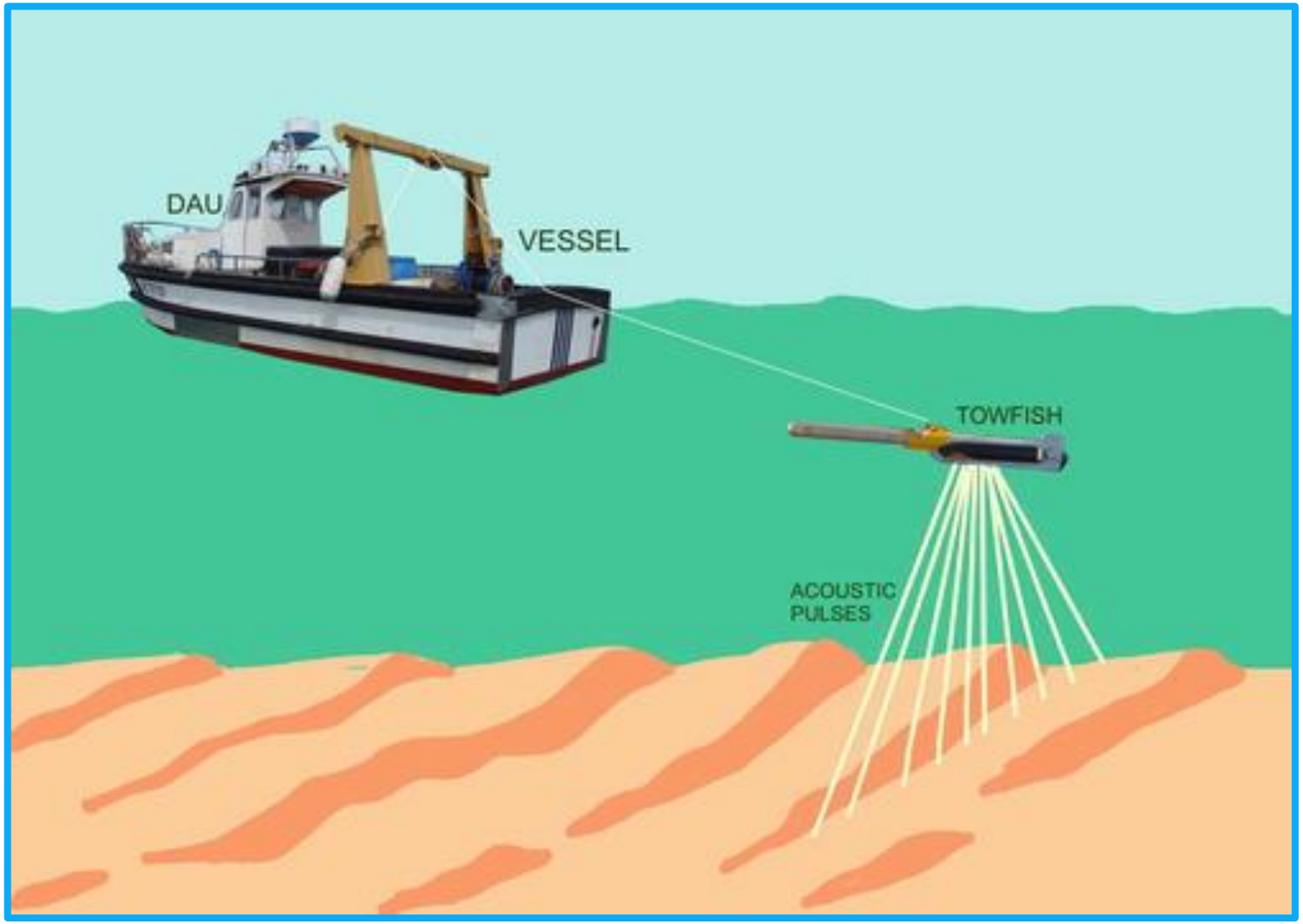
Side Scan Sonar Surveys

Sample side scan composite





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Side-Scan Sonar & Polling

Oyster Condition & Water Quality

- % live vs. dead oysters
- Oyster size, density
  - Seed (0-24mm), spat (25-74mm), sack (>74mm)
- Cultch material present
- Invertebrates present
- Salinity, temperature, DO
  - Surface & bottom

SQUARE METER QUADRANT SAMPLE

Sample No: 1

Location:	Escambia Bay	Collection Method:	Scuba Diver
Oyster Area:	E7	Sample Date:	7/21/2021
Parish/County:	Escambia County	Latitude:	30°28.920
Depth (ft):	11.1	Longitude:	87°06.898

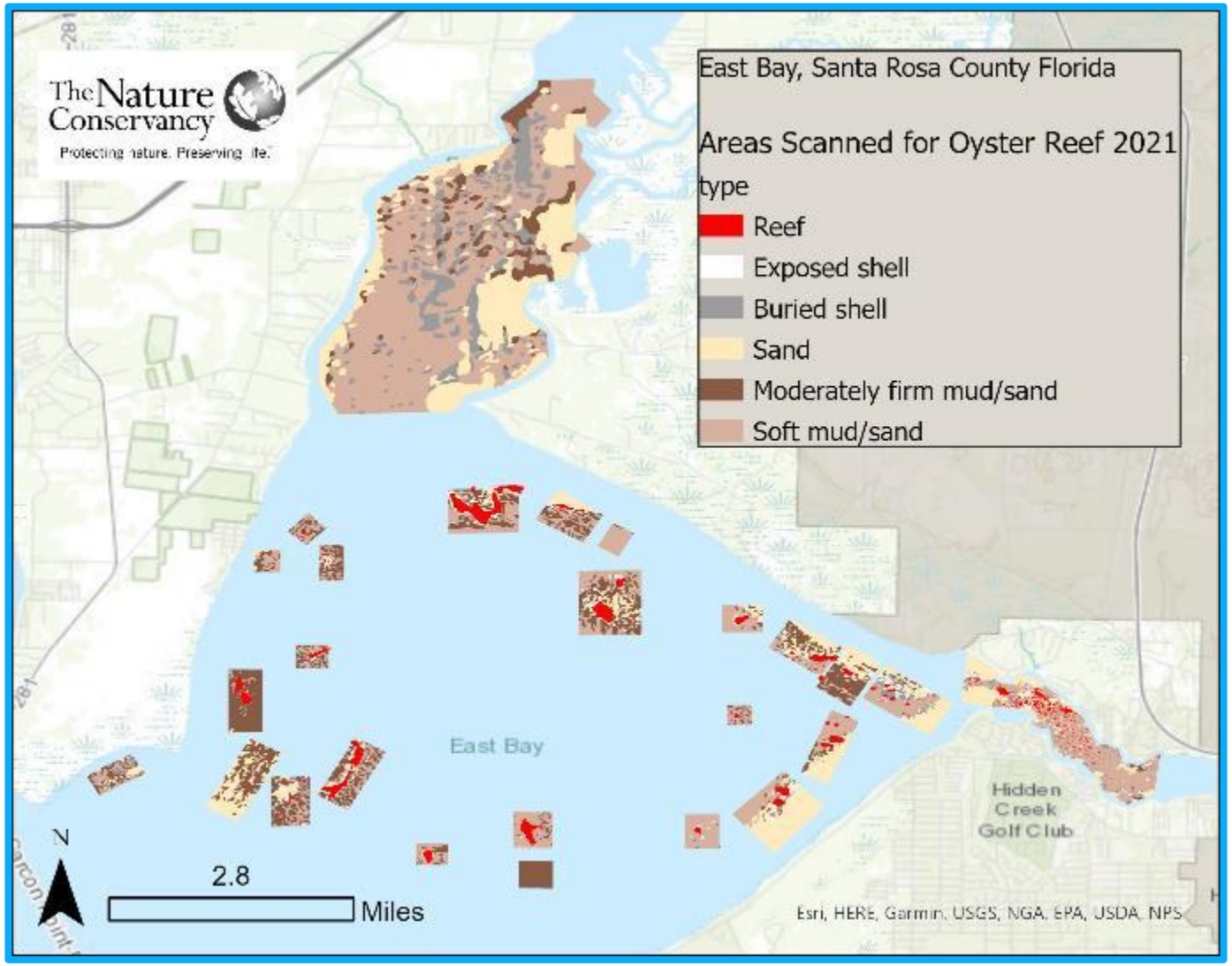
SQM #1 Basket Photo

Picture Date: 7/21/2021

PENSACOLA & PERDIDO BAYS ESTUARY PROGRAM

East Bay & River

- 70% of areas contained either reef or shell substrates
- **226** acres of oyster reef
  - Depth: 3 – 14 ft
- **75** acres of exposed shell
- Reefs found in East Bay & the lower East Bay River
- Harvest size oysters present in some reef areas



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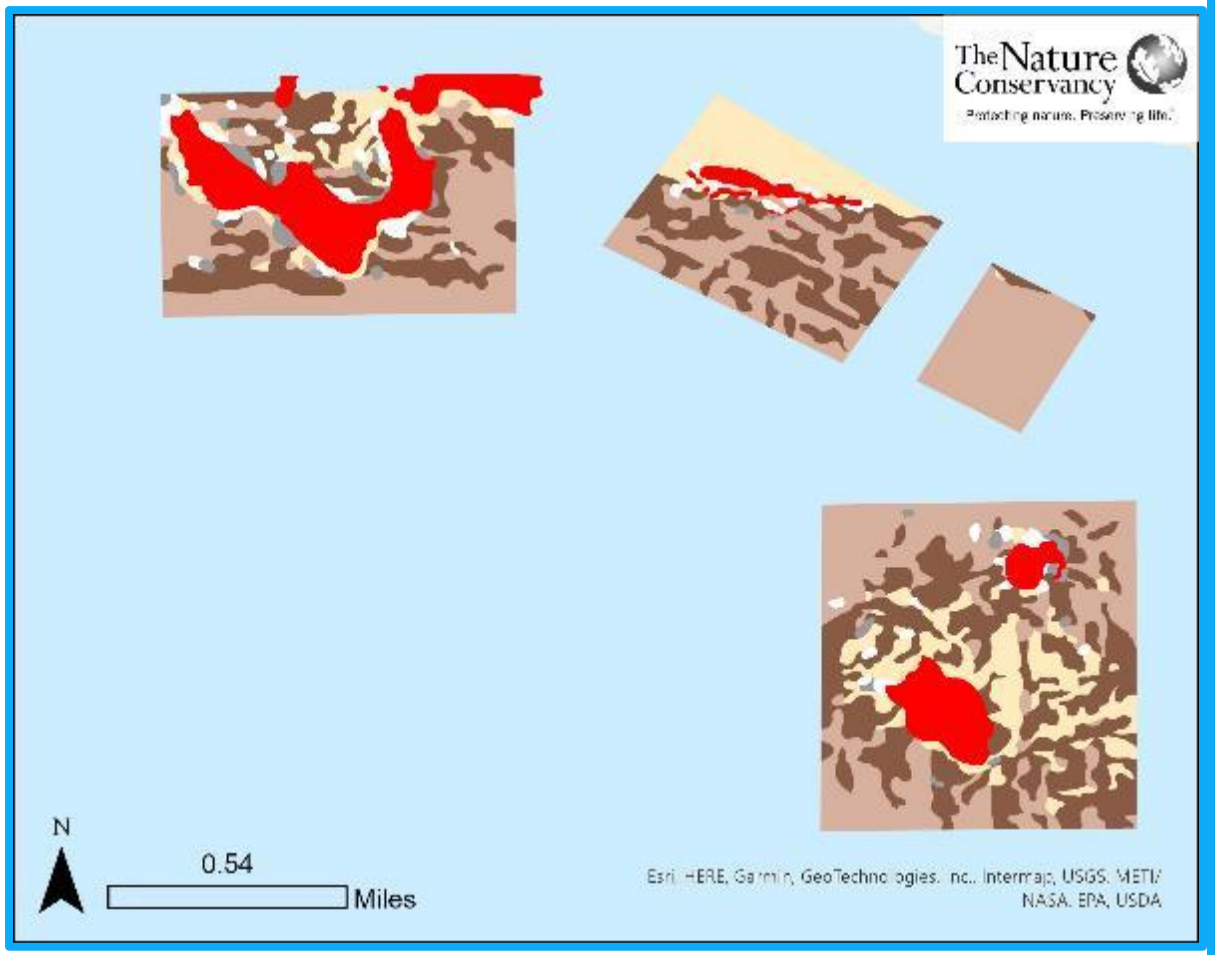
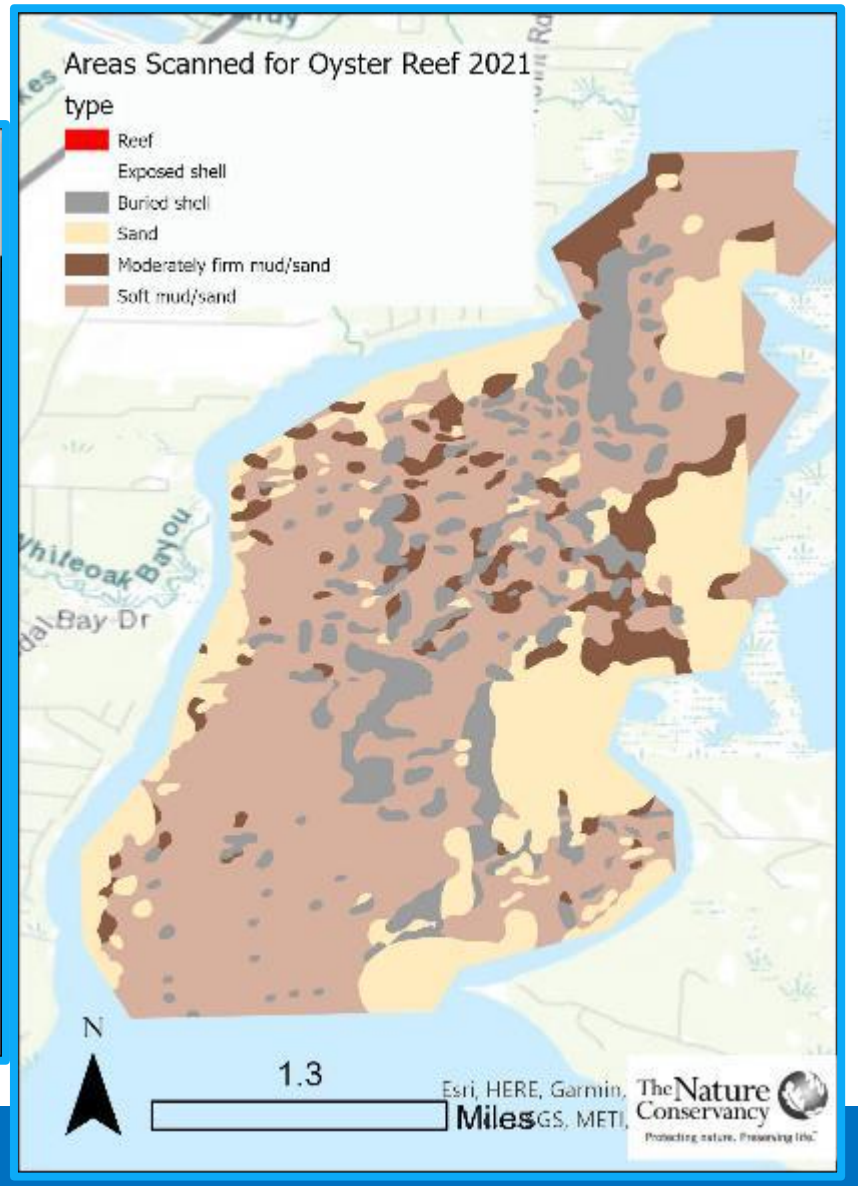
Bottom Types

Close up





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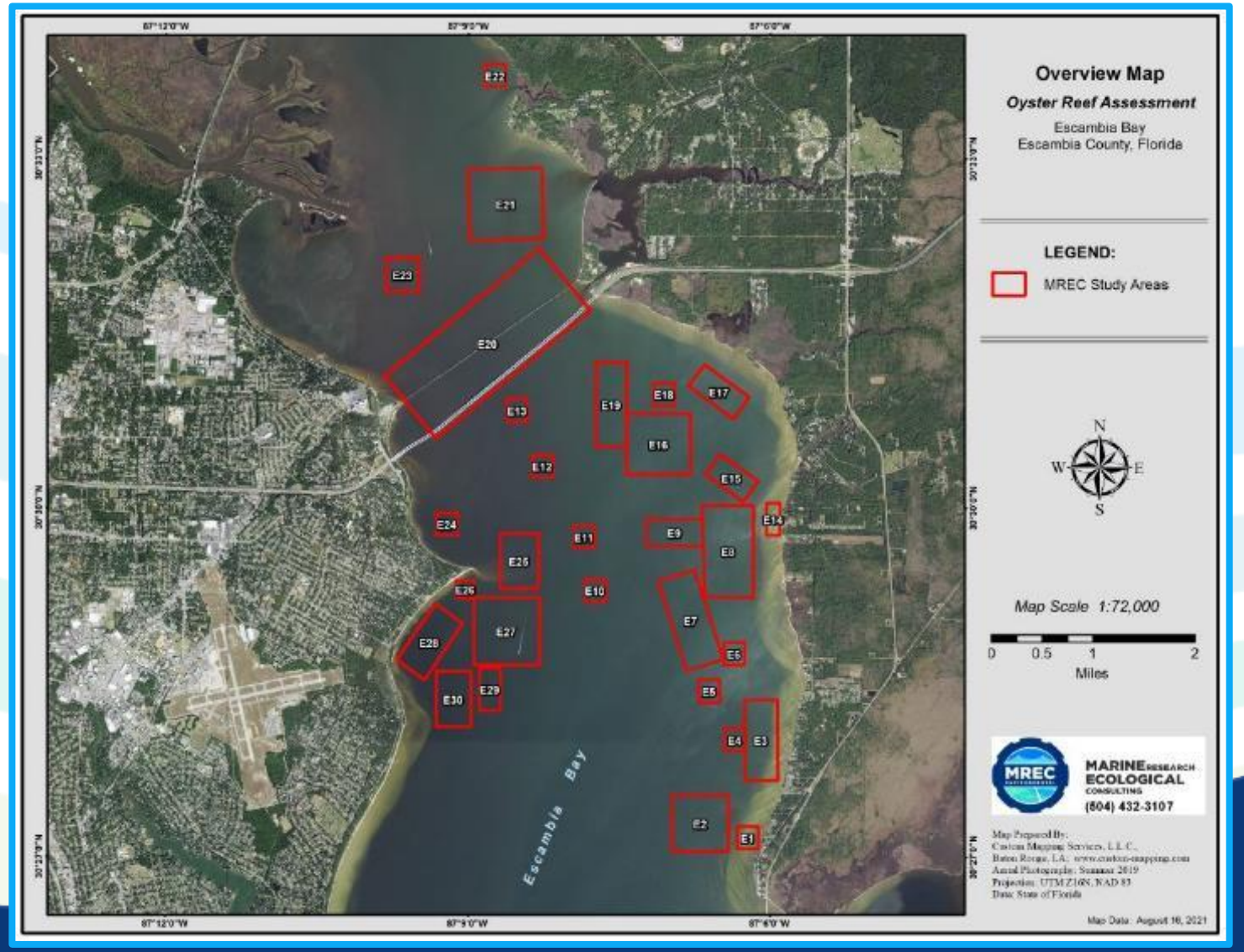
Escambia & Pensacola Bays

- Study areas selected based on previous data on current & remnant reefs
- 30 study areas covering over 4,000 acres
- Oyster condition assessed where oysters were present
  - 9 study areas



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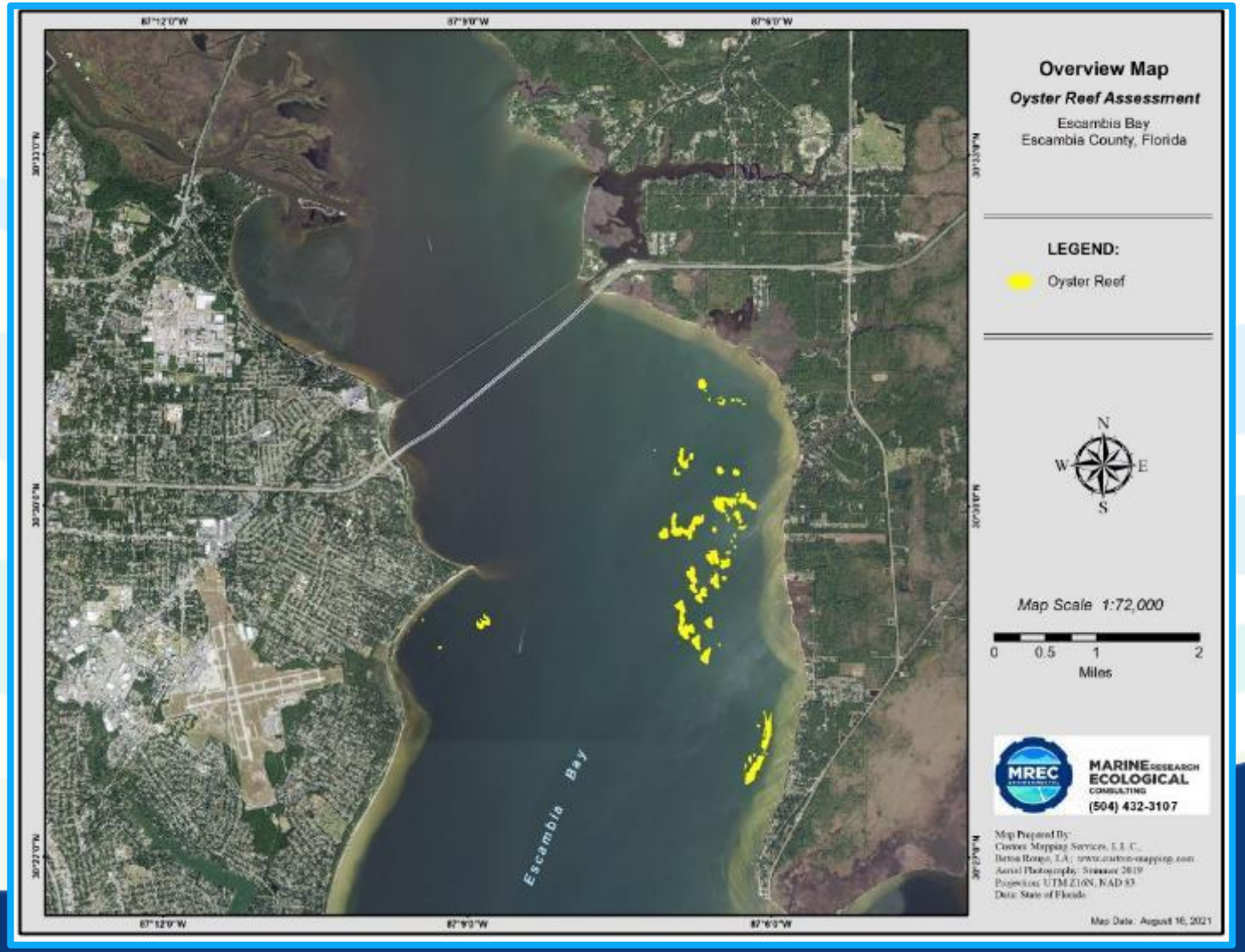
Bottom Types

- Mostly soft mud with areas of buried shell or existing reef
- Recommendation to restore eastern Escambia Bay: good salinity & bottom

PENSACOLA & PERDIDO BAYS ESTUARY PROGRAM

Oyster Reef Extent

- **190** acres of reef
  - Depth range: 6 – 10 ft.
- **45.7** acres of exposed shell
- Standing stock of live oysters low despite amount of material



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Oyster Condition

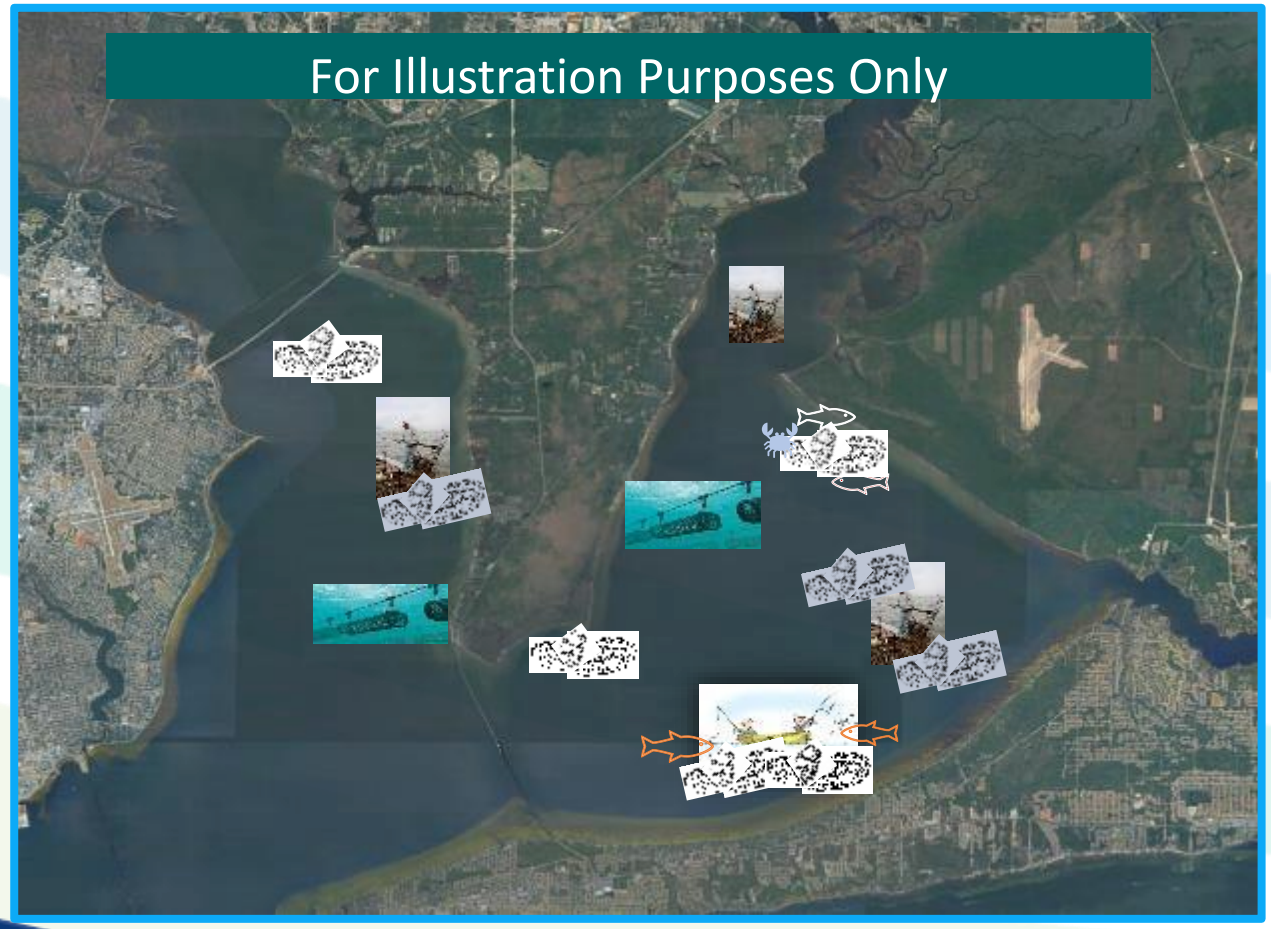
- Good distribution of sizes found at a few areas along east Escambia Bay
  - Reef organisms: barnacles, oyster drills, hermit & mud crabs, mussels

What Does This Inform?

- Where to place restoration reefs
- Harvesting levels

Photo credit: Darryl Boudreau (NWFWMD)

Where Do We Go From Here?



- Implement Oyster Fisheries & Habitat Management Plan & Comprehensive Conservation & Management Plan (PPBEP)
  - Pensacola Bay oyster documentary
  - K-12 Education
  - Funding design & implementation of bay-wide oyster restoration project
    - Develop vision map

What Data Do We Still Need?

Photo credit: FWC

Photo credit: Baker et al.

- Recruitment monitoring
  - March 2022
  - Partnership with FWC (FL TIG)
- Sedimentation monitoring
  - Lead: FWC (FL TIG)
- Fish community surveys
  - Lead: Ronnie Baker (DISL)

Questions? Contact Us!

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