An Update on Florida Trustee Implementation Group (FL-TIG)

Oyster Data Gaps Panhandle Update

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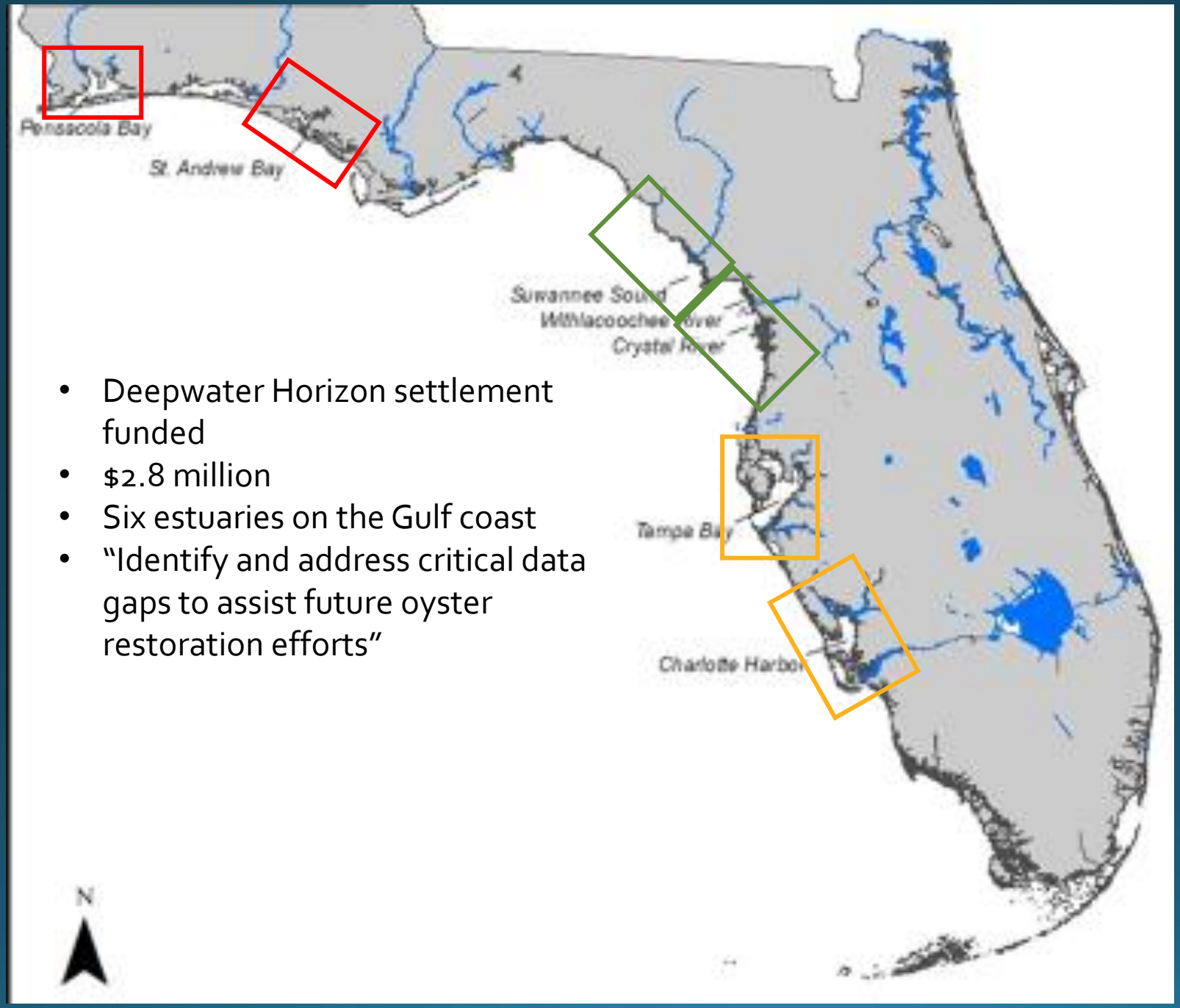
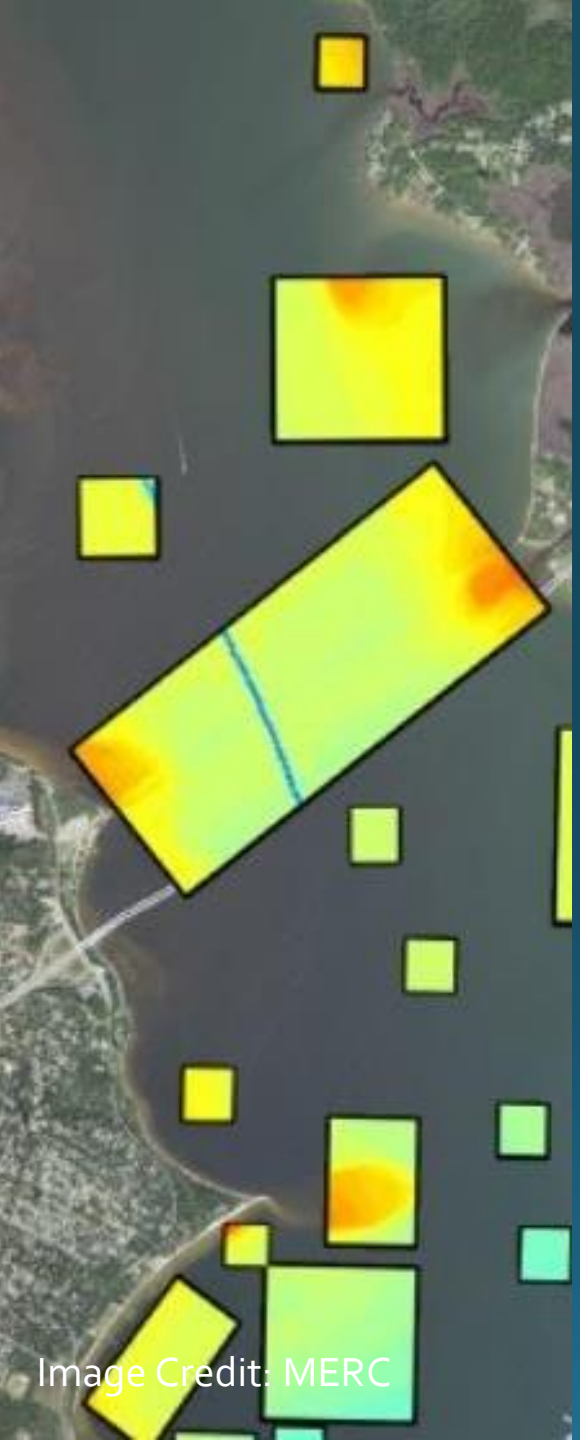


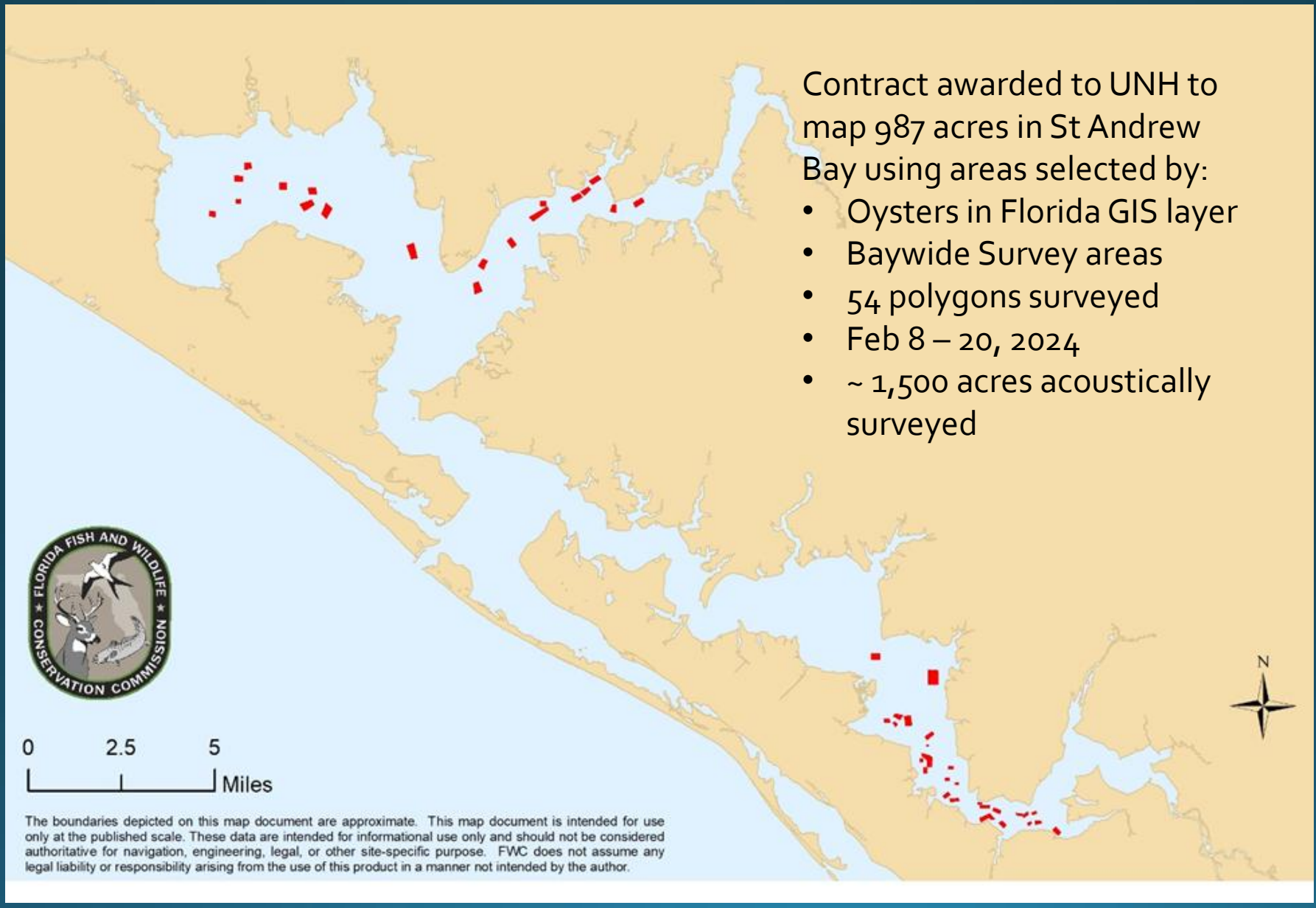
- Deepwater Horizon settlement funded
- $2.8 million
- Six estuaries on the Gulf coast
- "Identify and address critical data gaps to assist future oyster restoration efforts"



Florida Trustee Implementation Group (FL-TIG)

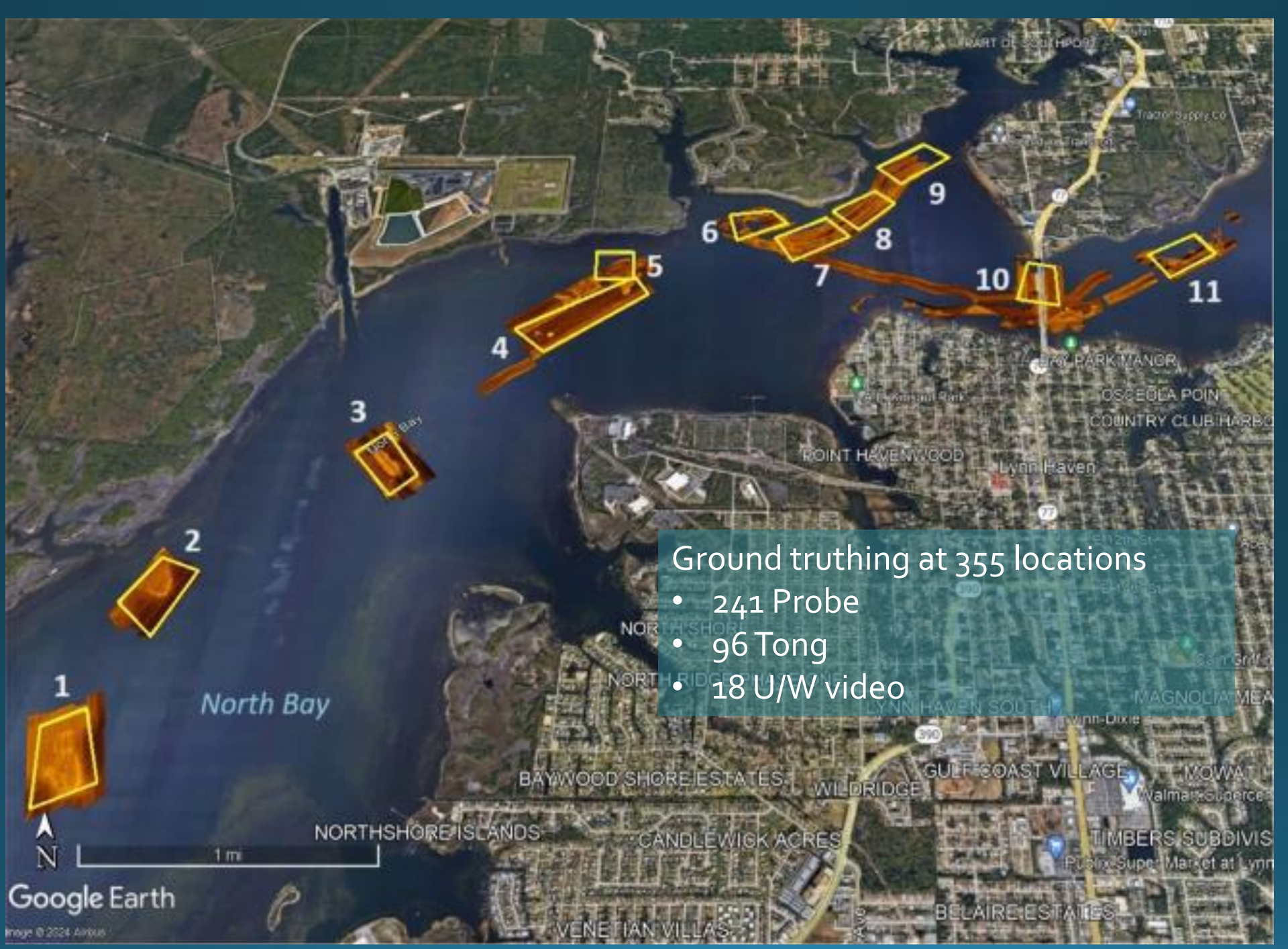
1. Data compilation
   - Water quality and oyster data
   - Develop current status and trends
   - Report available
2. **Oyster habitat mapping**
   - **Mapping areas not recently mapped**
3. **Field assessments & monitoring**
   - **Initial Baywide survey**
   - **Monthly monitoring**
4. GIS-based habitat suitability model (HSM) model
   - Aid for future restoration efforts

Task 2 - Mapping



Contract awarded to UNH to map 987 acres in St Andrew Bay using areas selected by:

- Oysters in Florida GIS layer
- Baywide Survey areas
- 54 polygons surveyed
- Feb 8 – 20, 2024
- ~ 1,500 acres acoustically surveyed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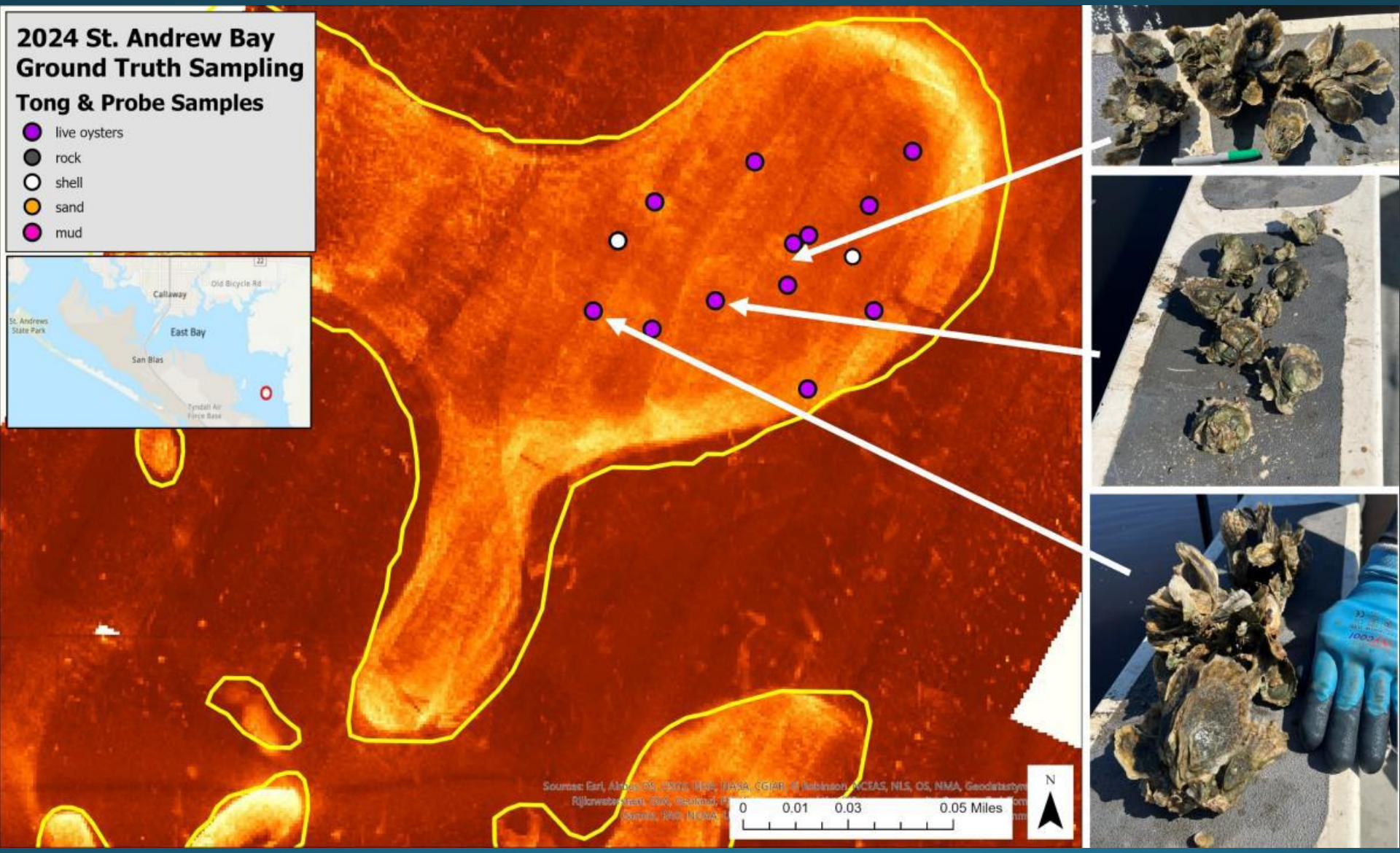
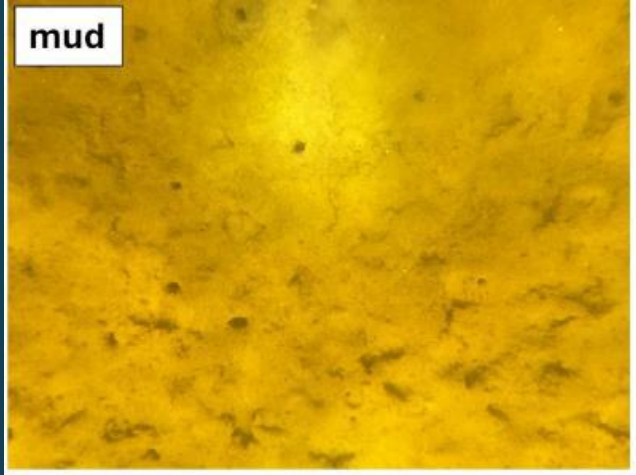
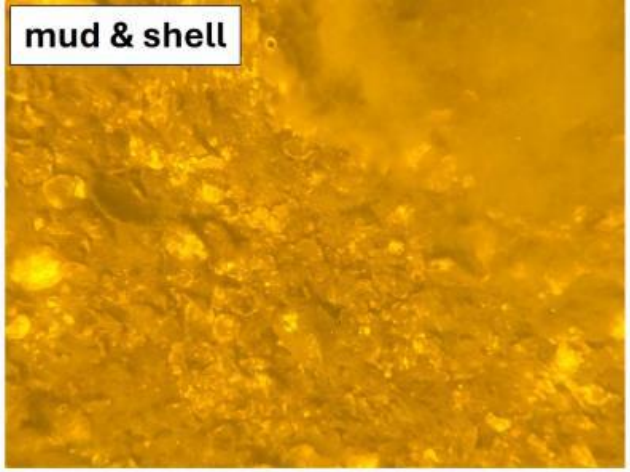
North Bay
Ground truthing at 355 locations
• 241 Probe
• 96 Tong
• 18 U/W video
BAYWOOD SHORE ESTATES
WILDRIDGE
GULF COAST VILLAGE
NORTHSHORE ISLANDS
CANDLEWICK ACRES
VENETIAN VILLAS
BELAIRE ESTATES
Lynn Haven
POINT HAVENWOOD
OSCEOLA POINT
COUNTRY CLUB HARBOR
PARK MANOR
N
1 mi
Google Earth

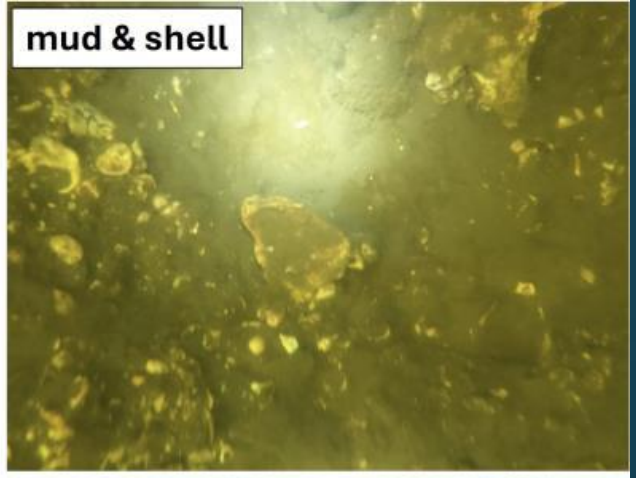
Overview of manually drawn polygons of “firm bottom” (yellow) based on sonar data for a portion of North Bay with the target polygons (red) overlaid.

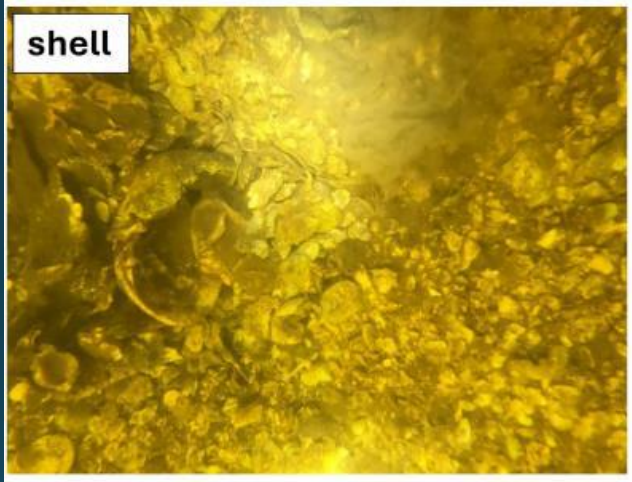
East Bay close up

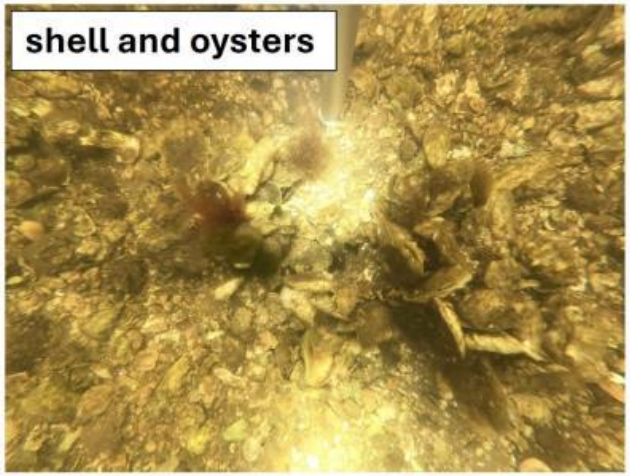


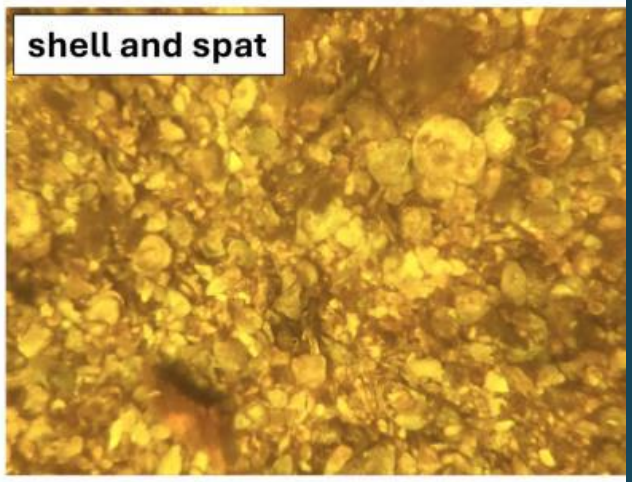

mud

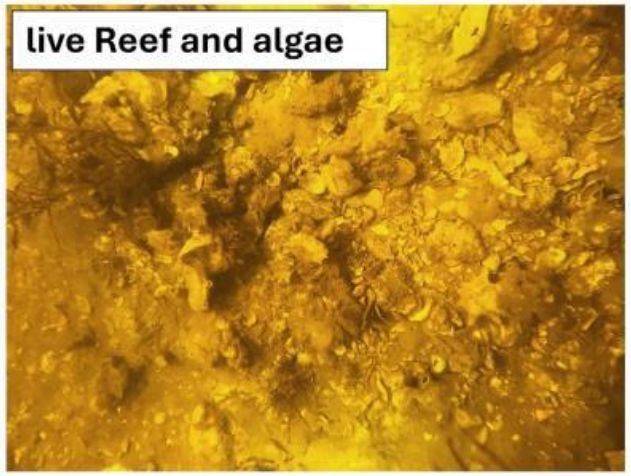

mud & shell

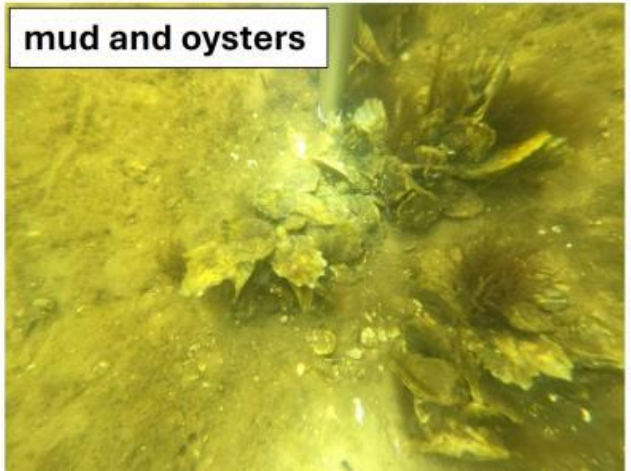

mud & shell

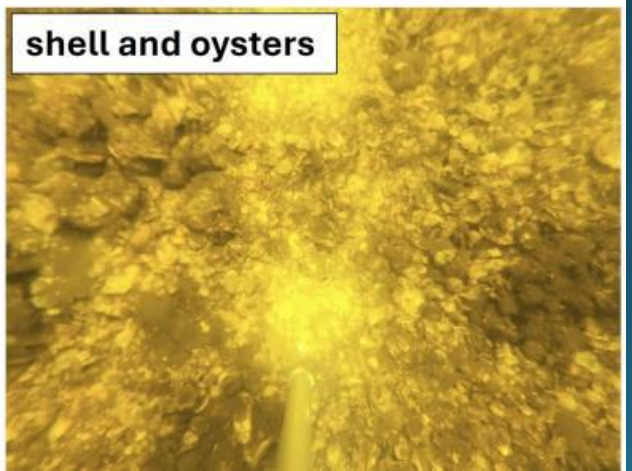

shell


shell and oysters

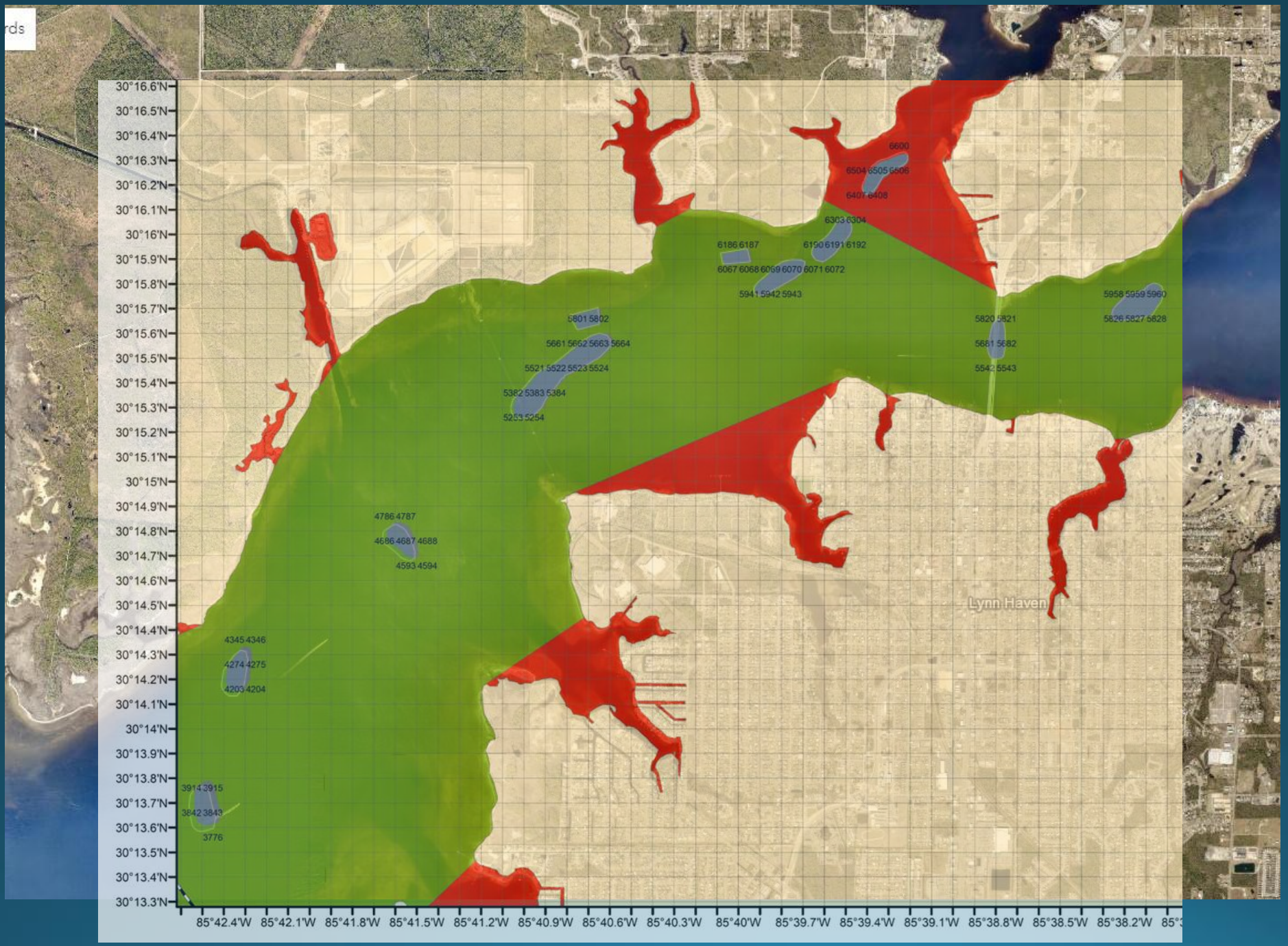

shell and spat


live Reef and algae


mud and oysters


shell and oysters


Task 3 – Assessment & Monitoring
Baywide Survey 2022
Lynn Haven
Panama City Beach
Cedar Grove
Panama City
Springfield
Callaway
Lower Grand Lagoon
Parker


30°16.6'N
30°16.5'N
30°16.4'N
30°16.3'N
30°16.2'N
30°16.1'N
30°16'N
30°15.9'N
30°15.8'N
30°15.7'N
30°15.6'N
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30°14.1'N
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30°13.6'N
30°13.5'N
30°13.4'N
30°13.3'N
85°42.4'W
85°42.1'W
85°41.8'W
85°41.5'W
85°41.2'W
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4686 4687 4688
4593 4594
4345 4346
4274 4275
4203 4204
3914 3915
3842 3843
3776
Lynn Haven

Baywide Oyster Surveys

- Poling or diver to assess substrate
  - Oyster, mud, sand, or seagrass
- SCUBA divers use ¼ meter² quadrat
- Collect 5 quadrats per station
- Collect data on:
  - Sample weight
  - Number and size of live oysters
  - Number of recently dead oysters
  - Number of oyster drills

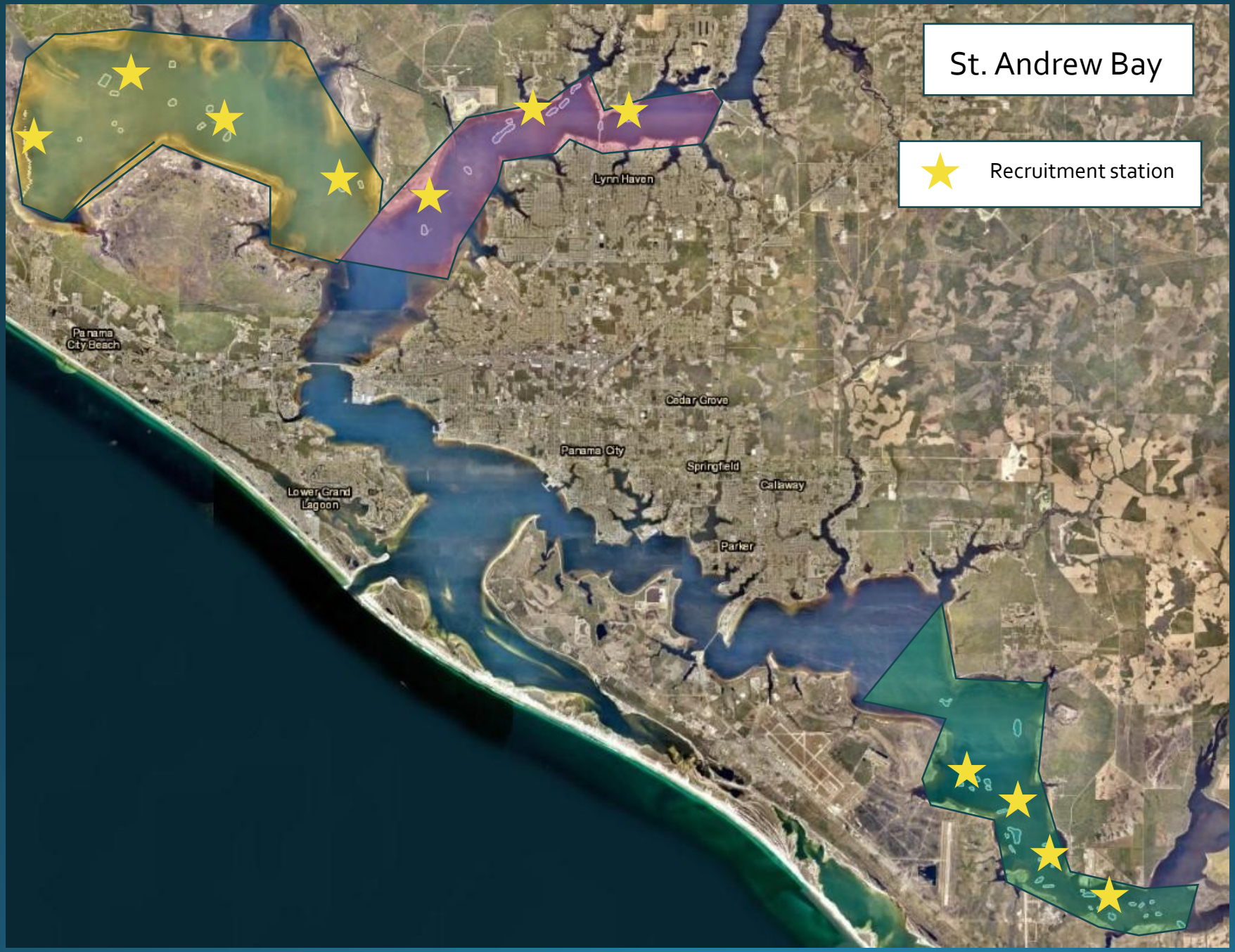
umbo

ventral shell margin

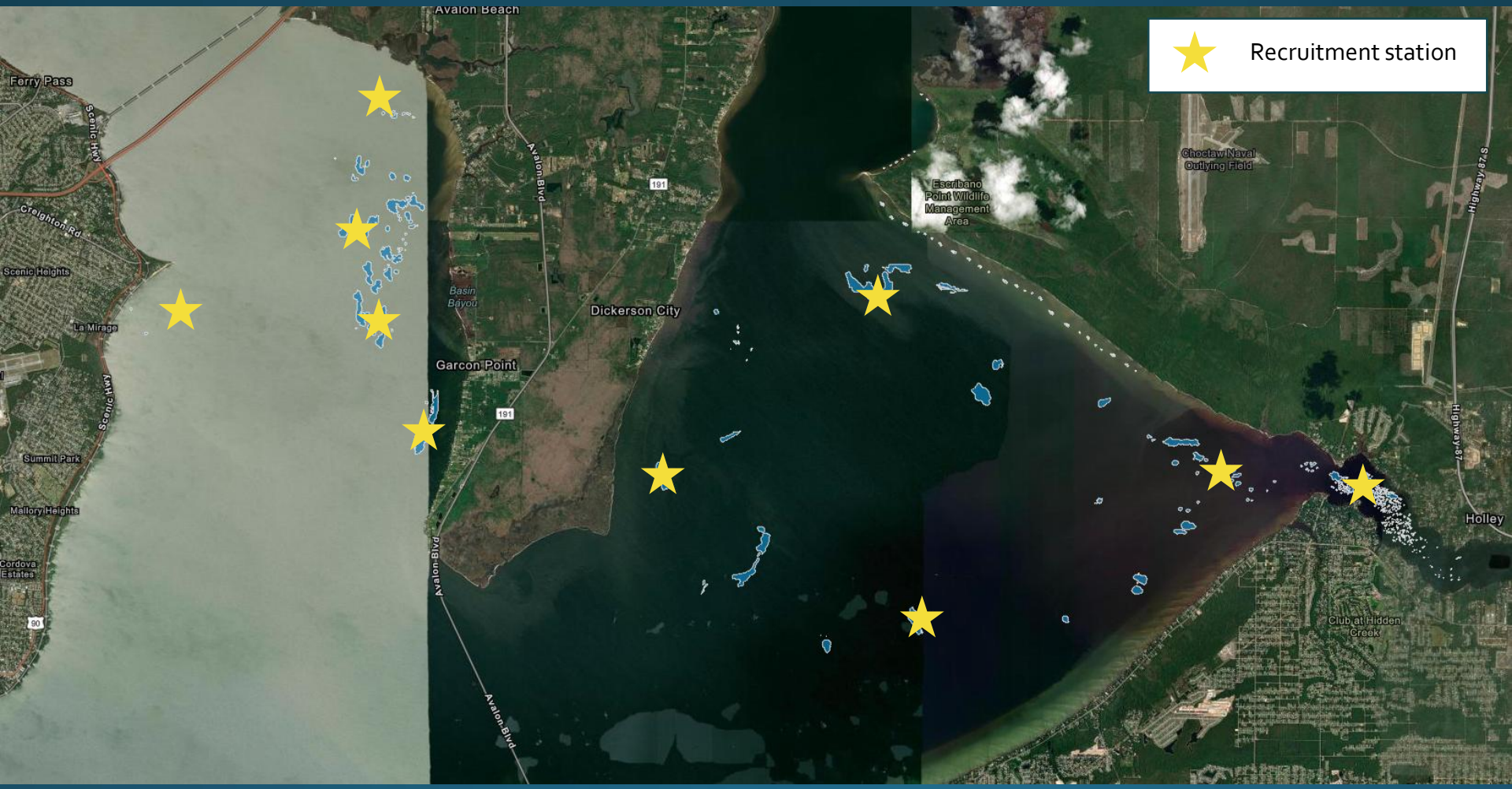
Shell Height = maximum linear distance from umbo to ventral shell margin

Summary Stats

- Stations visited: 45
  - East Bay (24), North Bay (12), West Bay (9)
- Strata found: 3
  - Oyster/hard bottom: 21 stations (47%)
  - Mud: 18 stations (40%)
  - Sand: 6 stations (13%)
- Quadrats collected: 100
  - East Bay (35), North Bay (25), West Bay (40)
- Oysters found: 3,792
  - East Bay (447), North Bay (1,192), West Bay (2,153)
- Oysters over 30 mm SH found: 60
  - East Bay (8), North Bay (1), West Bay (51)
- Oysters over 75 mm SH found: None


St. Andrew Bay
Recruitment station
Lynn Haven
Panama City Beach
Cedar Grove
Panama City
Springfield
Callaway
Lower Grand Lagoon
Parker

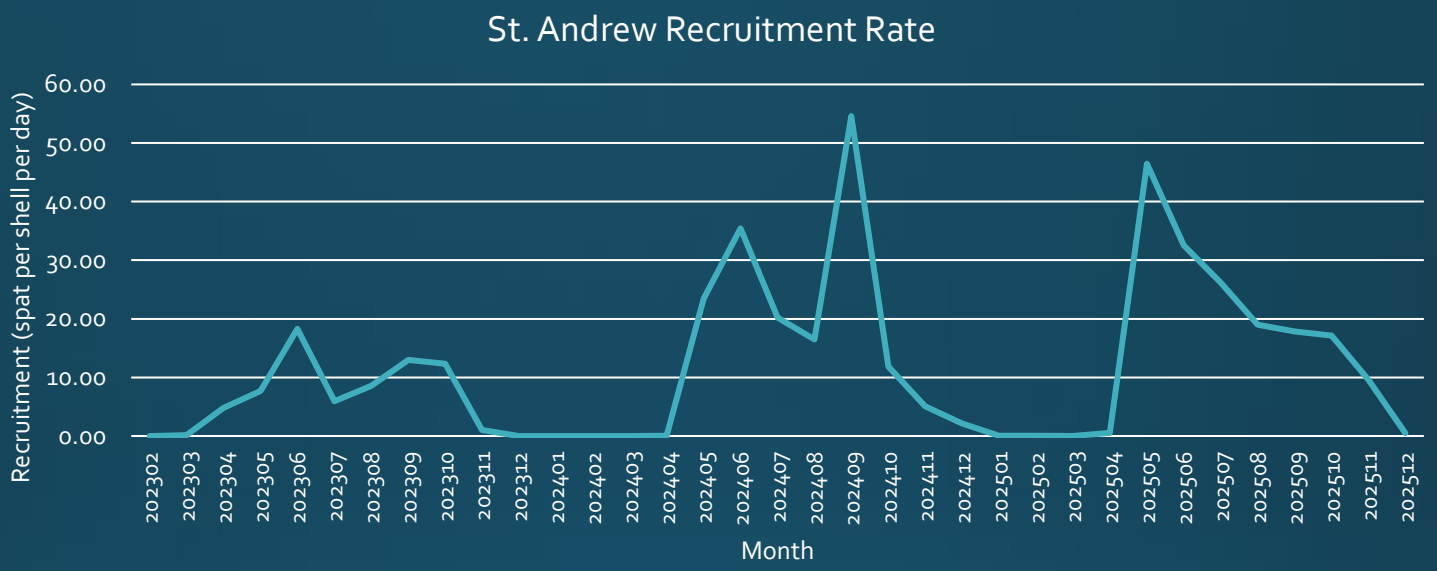
Pensacola Bay



Recruitment Monitoring

- Spat (young oysters) settle on oyster shells / hard substrate
- Shell strings deployed at fixed stations
- Oyster spat settle on shell strings
- Shell strings deployed for one month then collected
- **Initial Deployment:**
  - **Pensacola: March 2022**
  - **St. Andrew: January 2023**

Recruitment



Summary

- Oyster habitat mapping
  - TNC and PPBEP mapped Pensacola in 2021
  - UNH mapped ~1,500 acres of potential habitat in St. Andrew Bay in 2024
  - Maps available on Oysters in Florida layer
- Monitoring
  - Baywide Survey
    - St. Andrew
      - Completed August – September 2022
      - Few oysters, mostly spat
  - Monthly Recruitment Monitoring
    - Pensacola Bay
      - 2022 – 2025
      - Lower recruitment rates
    - St. Andrew Bay
      - 2023 – 2025
      - Higher recruitment rates


Thank you to my hardworking field crew!
Questions?