Apalachicola Bay Oyster Restoration Phase II Update

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Program Overview

- $20M agreement with National Fish and Wildlife Foundation (NFWF)
- Restoration activities in Apalachicola Bay
- Revised oyster management strategies for Apalachicola Bay & Suwannee Sound
- NFWF has expressed concerns over moving forward with large scale restoration
  - Large number of unknowns still present
- FWC will perform a restoration pilot study
- Utilizing pilot study, FWC will have more data to construct and perform larger restoration activity

Apalachicola Bay Oyster Technical Workshop

- September 7th
- Follow up to the data workshop held earlier in the summer
- Primary focus was on pilot study restoration design and associated sampling design
  - Where?
  - What materials?
  - Densities - how high?
  - How much (acres)?

Apalachicola Bay Oyster Technical Workshop

- NFWF expressed desire for FWC to test multiple treatments
  1. Reef height
  2. Material size
- FSU ABSI's willingness to have a complimentary study
  - Increases scientific scope of work done in Apalachicola Bay
  - Provides more data to assist in future, larger restoration activities

Pilot Study Details

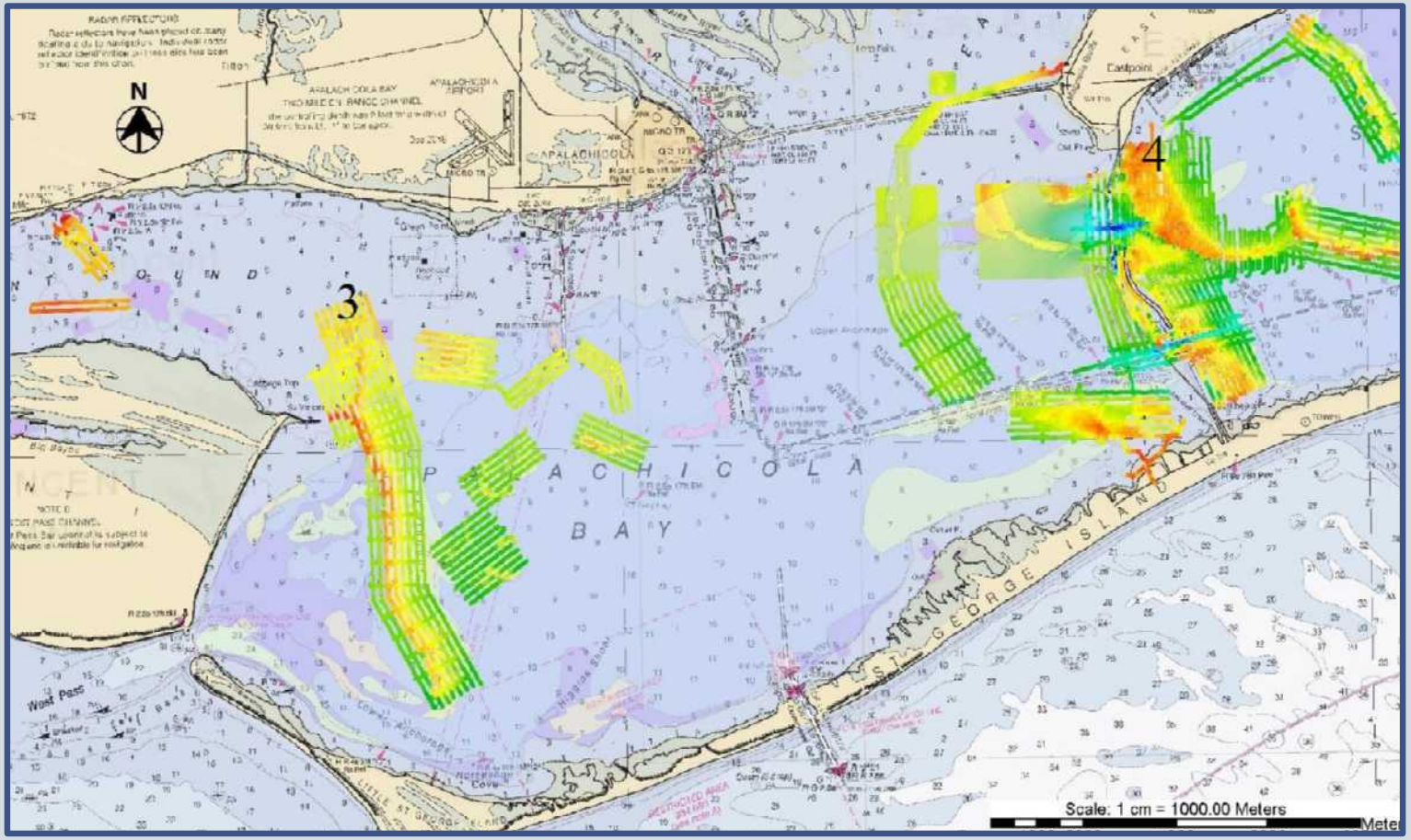
- Reef height treatments: 1 ft (low) and 2 ft (high)
- Material size: 6” (small) & 12” (large) FL limestone
- Location: East side of Apalachicola Bay
- Reef size: 1.0 acre
- Replicates: 5-7
- Monitoring criteria: 1) density of live oysters/m^2, 2) size classes, and 3) cultch weight and/or volume
- Monitoring effort: *Before, After, Control* design for shell budget, diver-excavated sampling, environmental monitoring equipment
- **Cost: $6.97 M** for scientifically-sound study that produces ~24 acres of treated oyster habitat

Pilot Study Details – Material Size

- Material size: 6” (small) & 12” (large) FL limestone
- Major concern is overall degradation of the Bay’s reefs
  - *“Flattened out and looks like a parking lot.”*
- Utilizing large-sized material if an effective strategy to rebuild reefs off bottom
- Testing two sizes is scientifically important, strongly encouraged by funding partner
- If no significant difference is observed between sizes, tongable material would be used for harvestable reefs during future large-scale restoration
- Proposal to layer smaller, tongable size rock over the 12” foundation
  - May benefit local stakeholders
- Use 12” pilot study reefs has sanctuary reefs, closed permanently to oystering

Pilot Study Details – Reef Locations

- Location: East side of Apalachicola Bay, near current oyster populations
- Replicates: 5-7 → 6
- Approximately 24 acres for restoration
- Important to control for ecological conditions
- Main steps in choosing sites for pilot study:
  1. Map all recent restoration work, mapping data from University of New Hampshire
  2. FWRI will select potential locations to ground truth
  3. Listen to recommendations from local stakeholders on historically productive areas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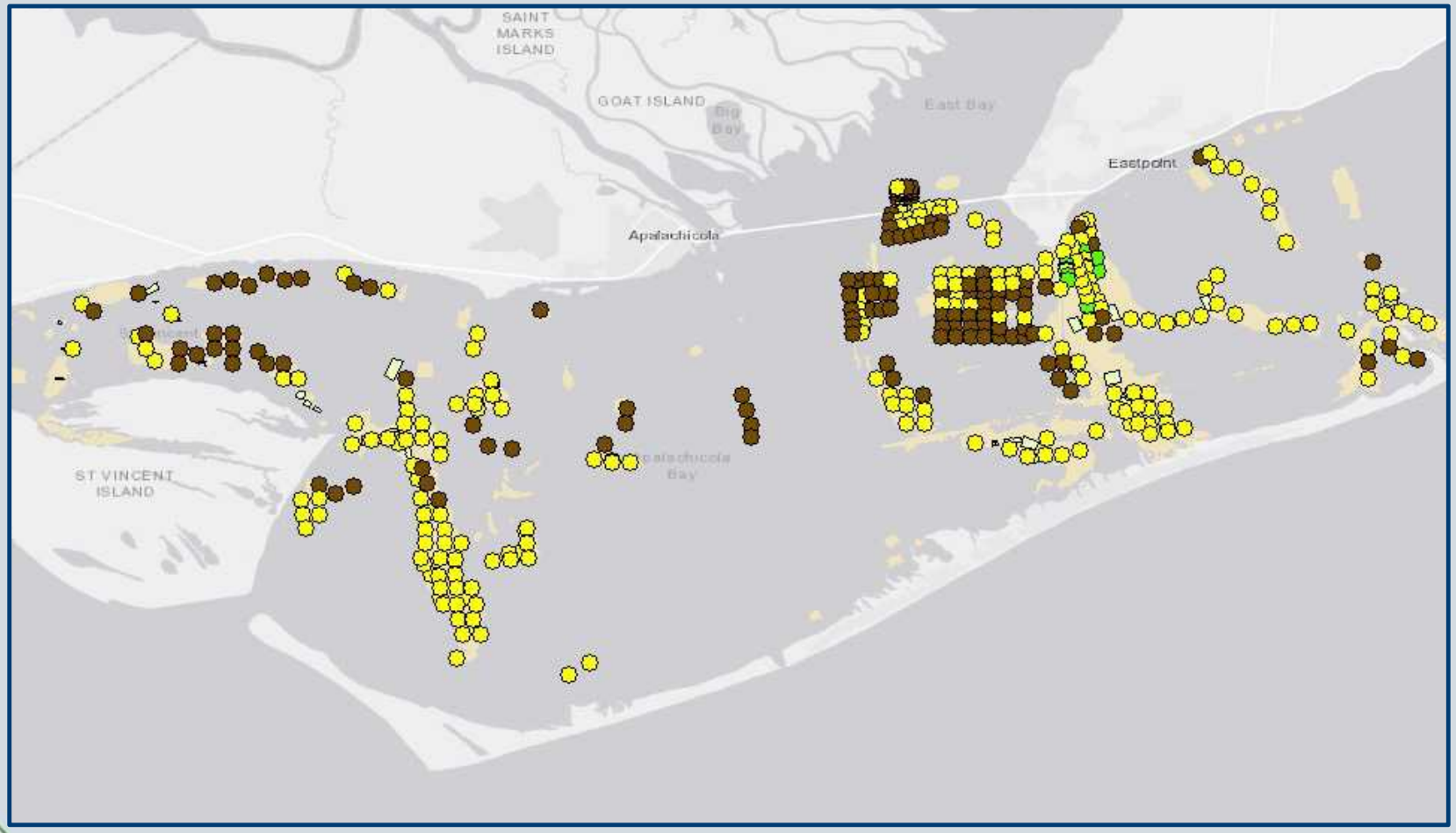
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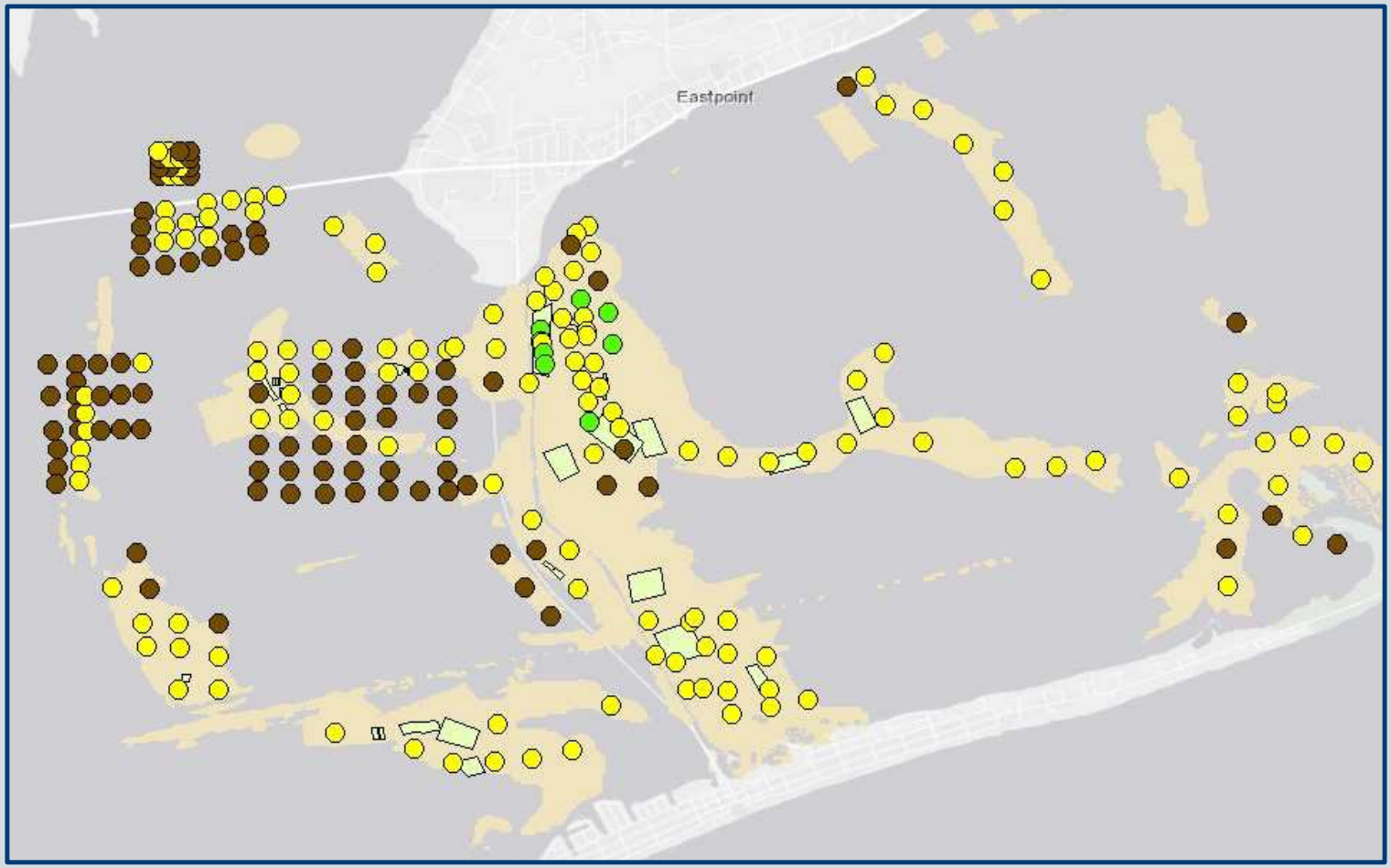
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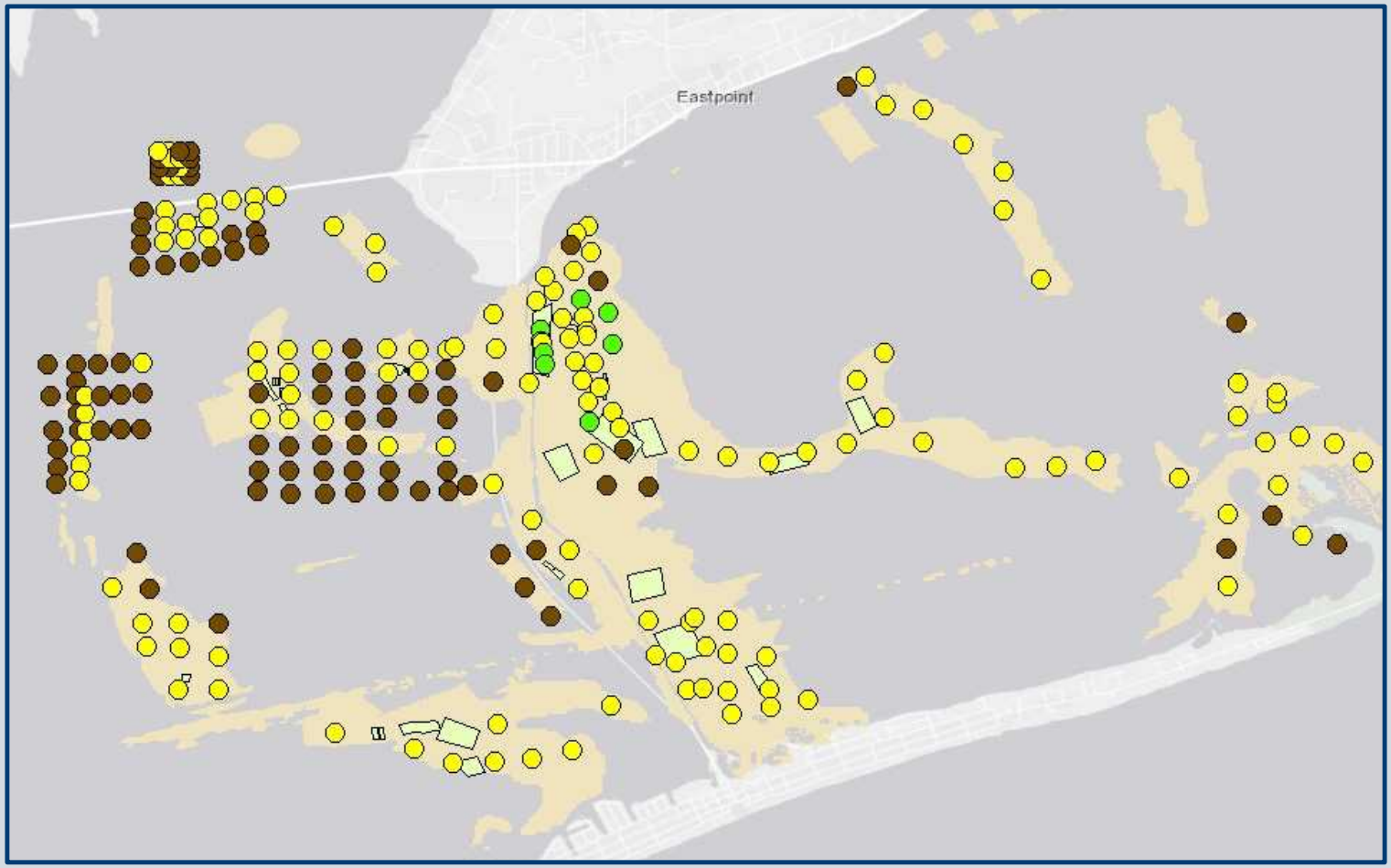
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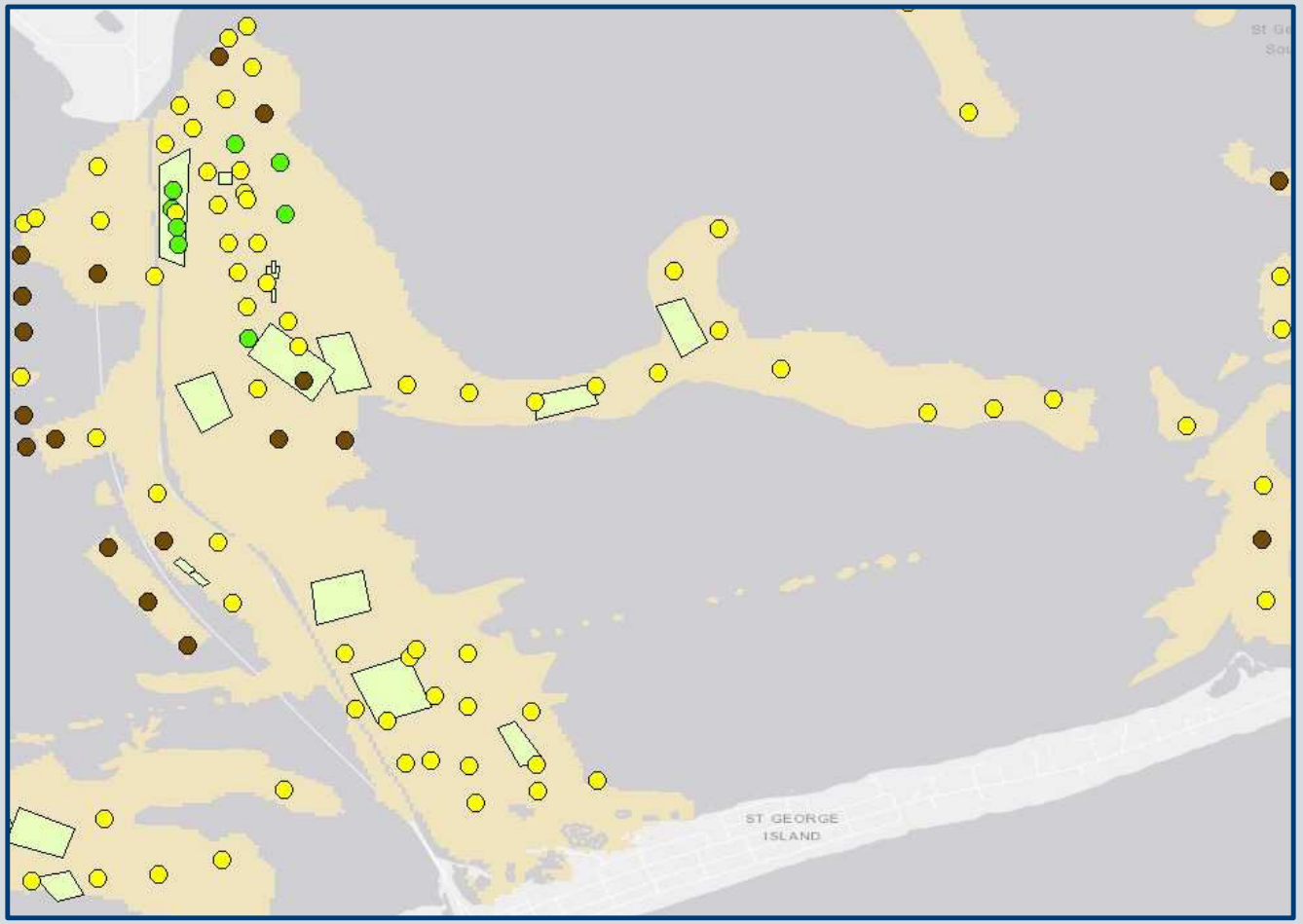
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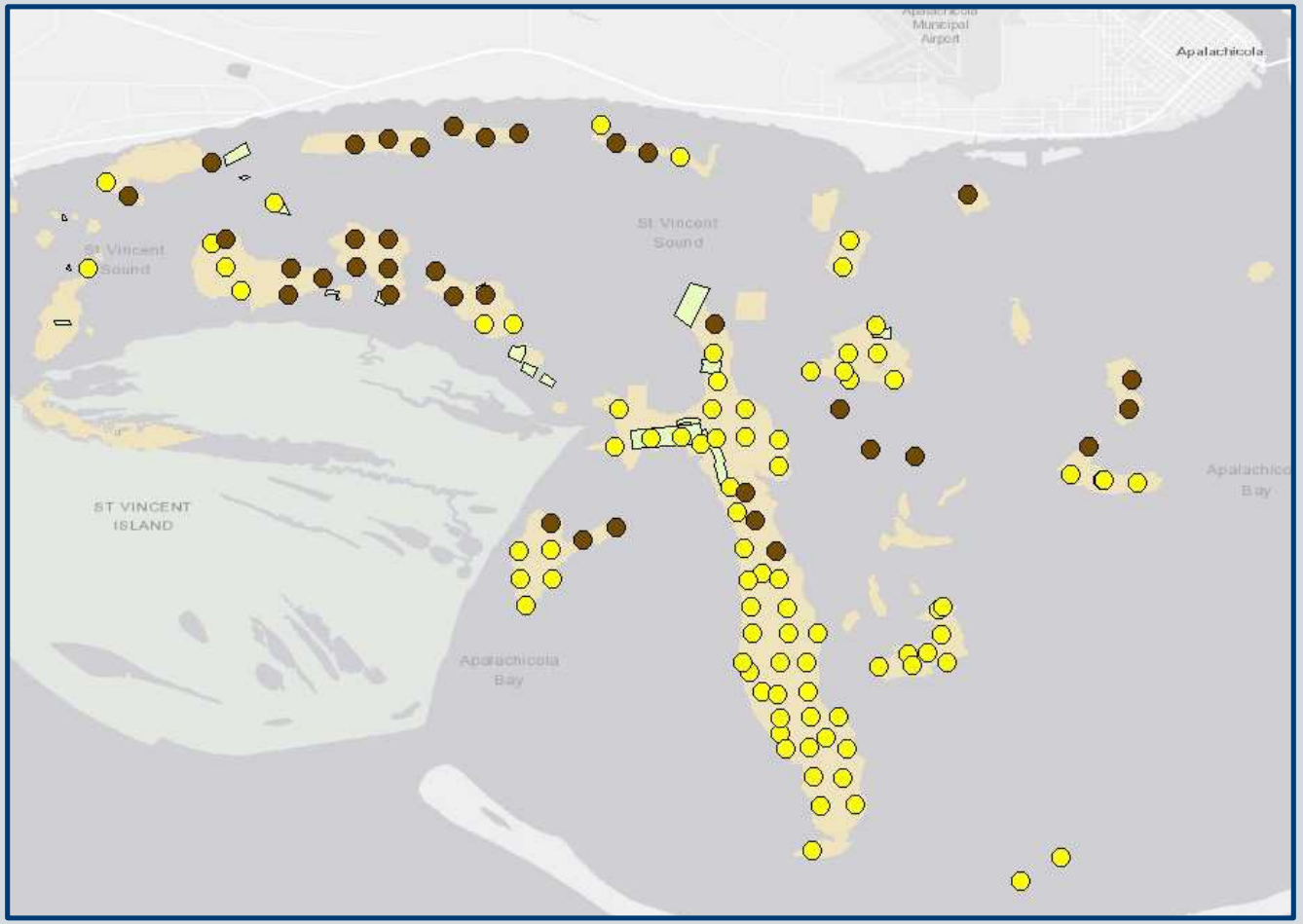
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Next Steps

- Oystermen, Community workshops this week
  - Potentially additional FWC outreach events in near future
- Continued internal, external coordination in drafting pilot study design
- Design, methodology, spend plan will be publicly available for review
- FWC will submit to NFWF for approval
- Goal is to have contractor, material in water Summer 2023

Current Oyster Conditions in Apalachicola Bay

- Recent mapping suggests approximately 2,000 acres of potential oyster habitat remain in Apalachicola Bay
- The oyster habitat over most of this 2,000-acre area is degraded to a point where the cultch (shell hash) does not support oyster spat settlement
- Currently, the east and central east sides of the Bay, where recent restoration has been focused, are the main areas supporting oysters and likely represents the core of the oyster population in the Bay

Current Oyster Conditions in Apalachicola Bay

- Since 2015, $5.8 million in Deepwater Horizon oil spill funds have been spent in attempts to restore approximately 400 acres of oyster reef
- To date, only 56 acres from one project (FDEP-RESTORE) have densities of oysters that meet a traditional threshold (300 bags/acre) used to identify areas suitable for harvest
- Considerations regarding opening commercial harvest:
  - If harvest were to reopen, it might delay the implementation or reduce the potential success of the upcoming NFWF restoration. Commercial tonging on restored areas could undo recent gains from restoration.
  - Removal of oysters in the harvest and habitat degradation from commercial activities will likely increase the time needed to restore oyster populations in the bay.


Questions?