The Apalachicola Bay System Initiative (ABSI)

Science Update August 9th 2023

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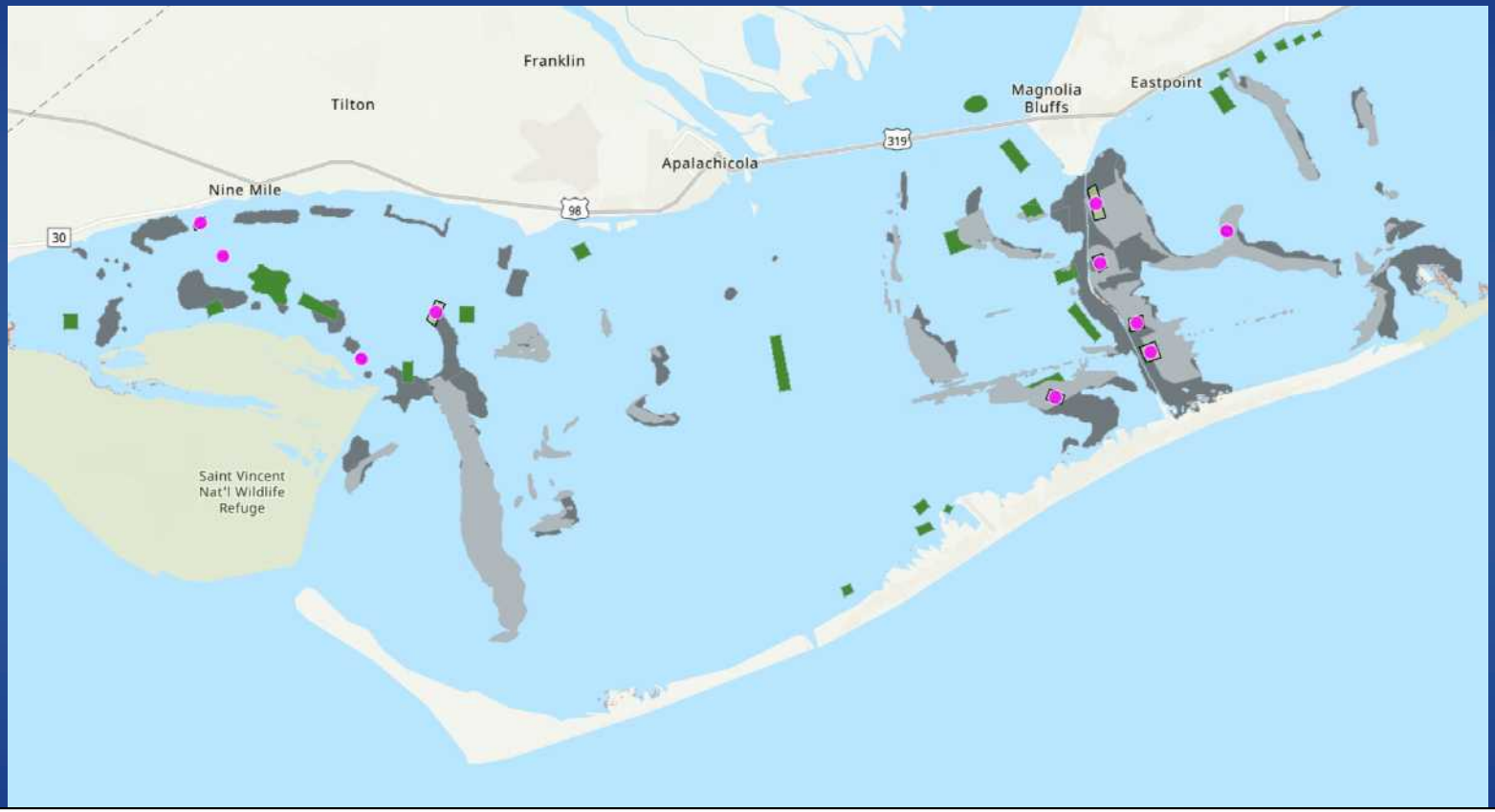
ABSI Project Lead

The ABSI seeks to gain insight into the root causes of decline of the Apalachicola Bay ecosystem, and the deterioration of oyster reefs

Ultimately, the ABSI will help develop a management and restoration plan for oyster reefs and the long-term health of the bay

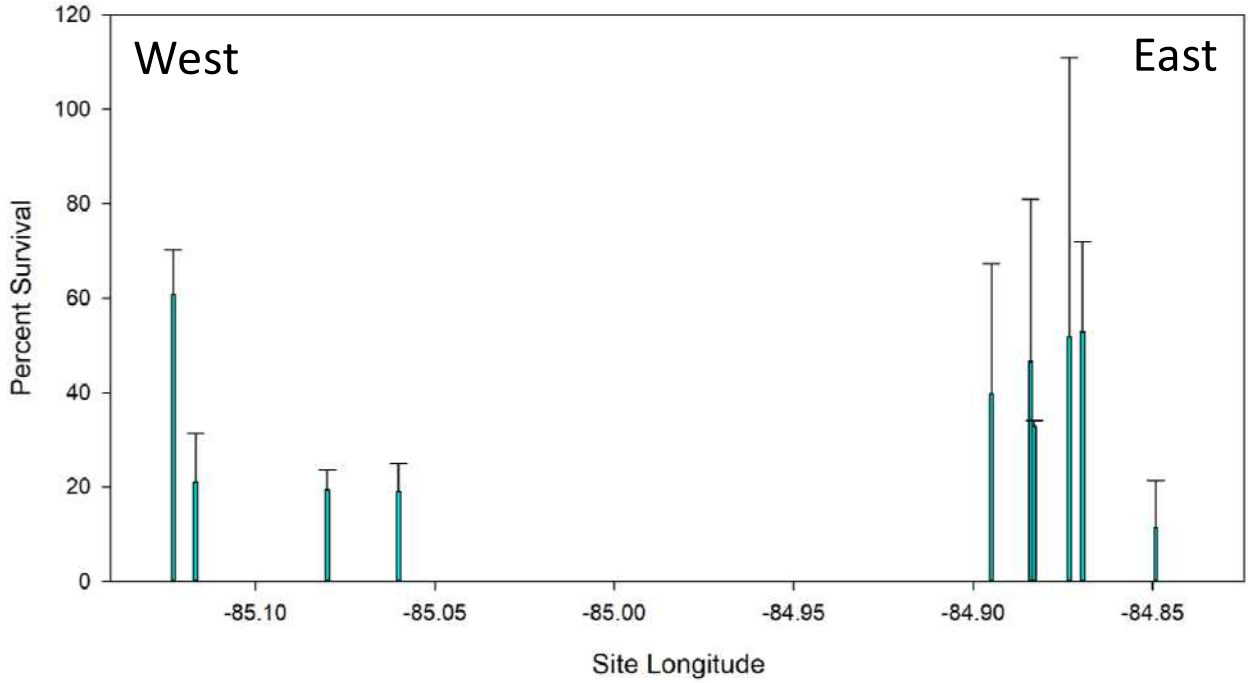
ABSI funding is provided by Triumph Gulf Coast Inc. and Florida State University

Oyster Ecology: Assessment of survival and growth of juvenile oysters in different biodegradable containers

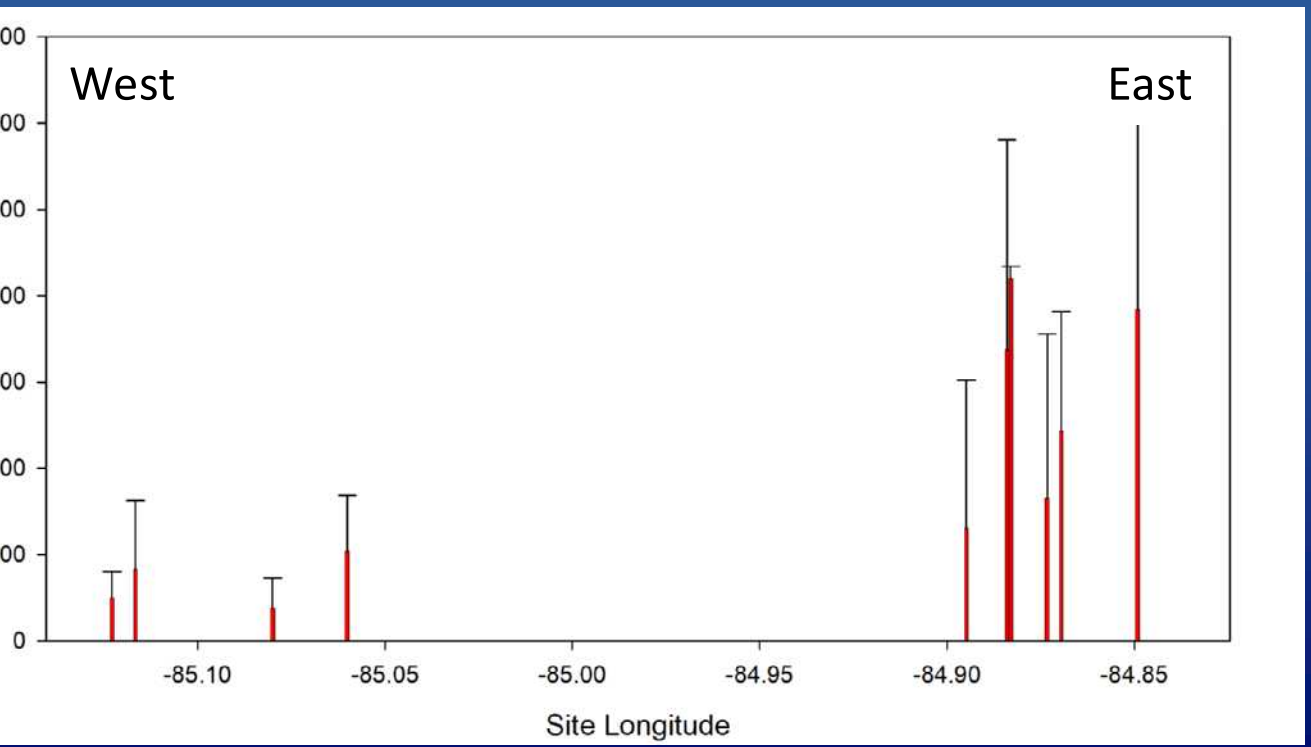


- **10 sites** (planted with limestone rock in 2016)
- **Each site:** 5 biodegradable mesh, 5 chicken wire, 5 vexar cages, Water quality datalogger
- **Each container:** 100 juveniles, individually tagged
- **Collected quarterly** and assessed for survival, growth, spat recruitment, predators and status of containment material

Results after 3 months

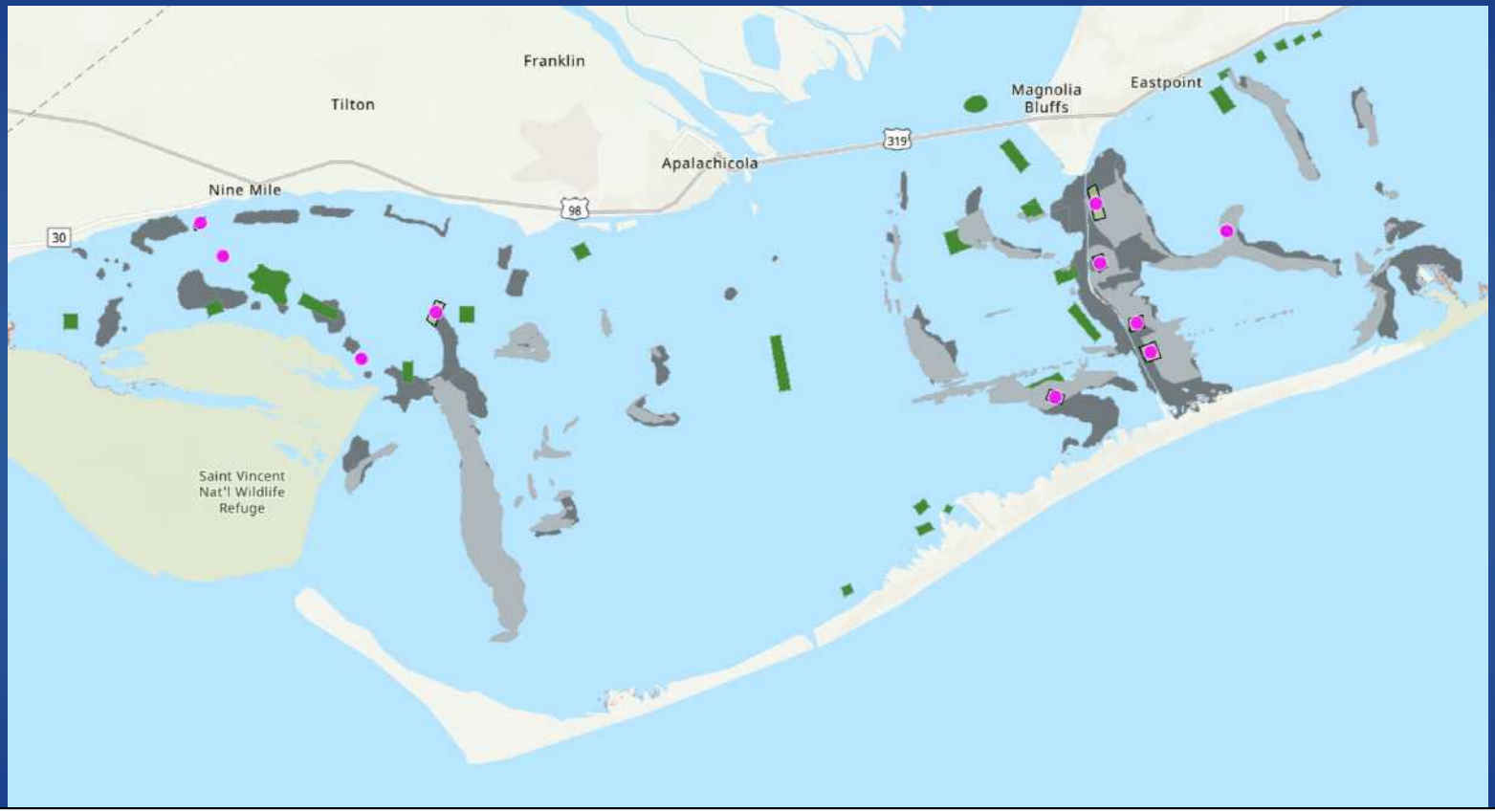


Average % survival of hatchery oysters by site



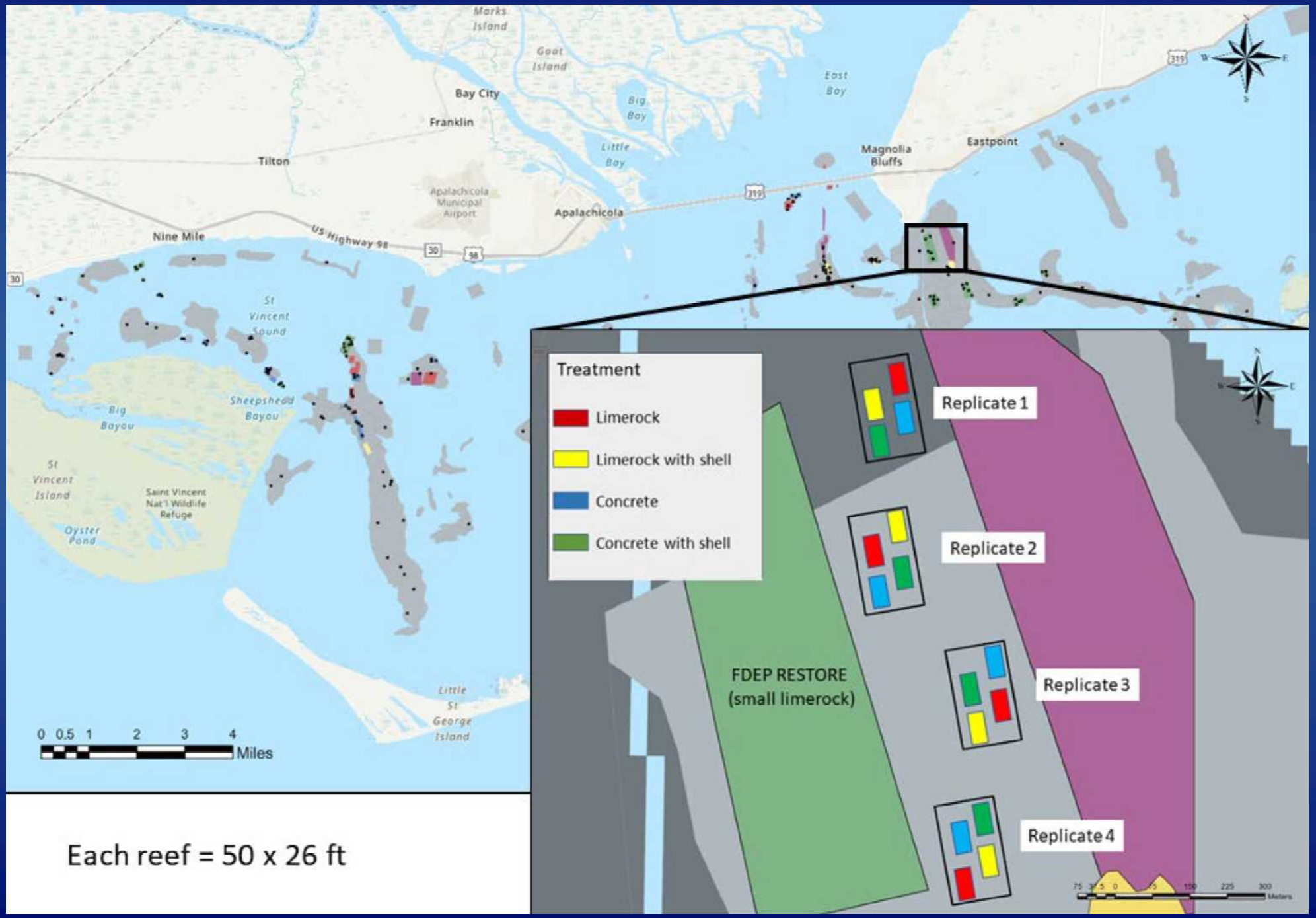
Average wild spat settled on hatchery oysters by site

Oyster Ecology: Assessment of survival and growth of <u>spat-on-shell</u> in different biodegradable containers



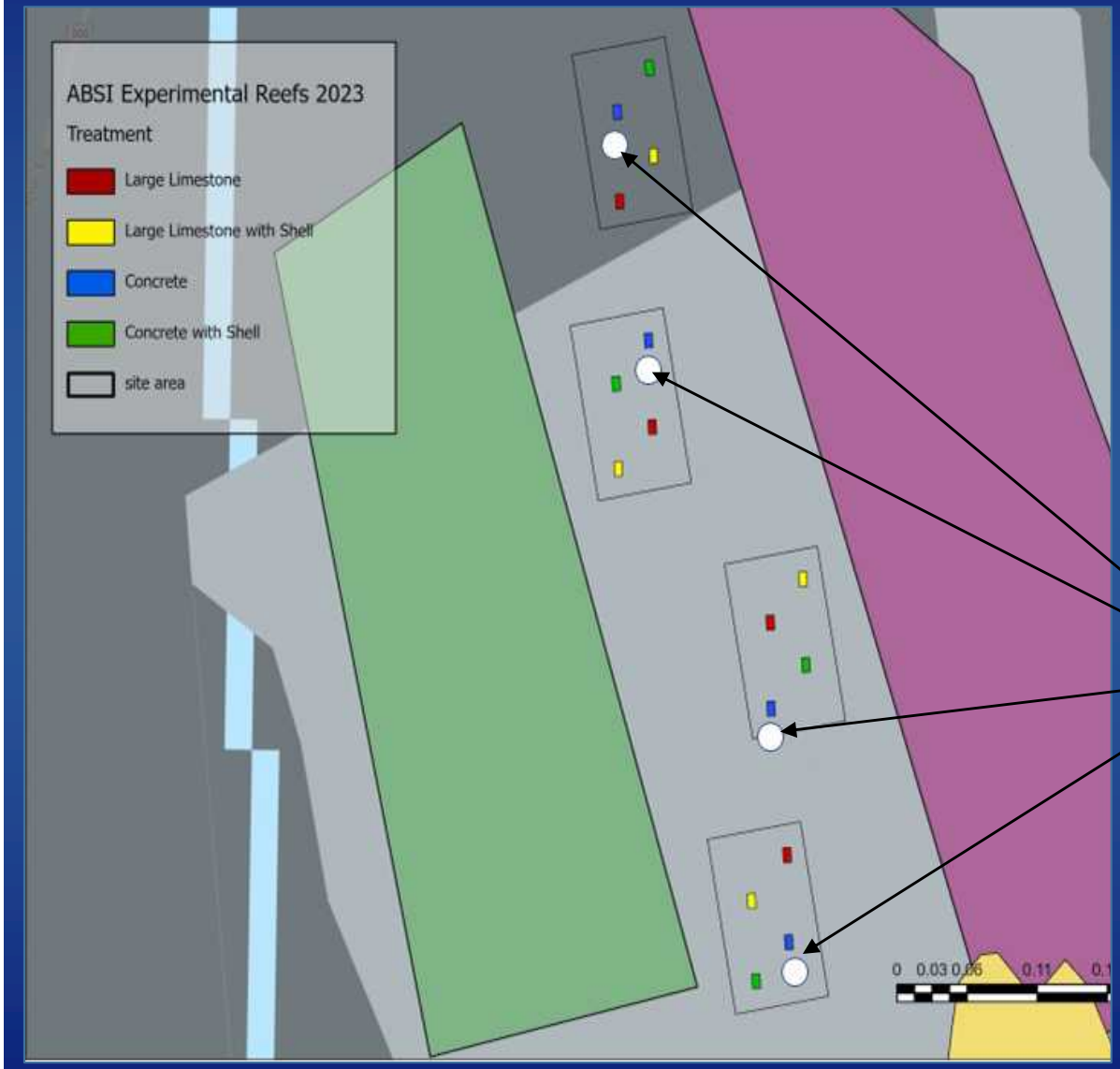
- **10 sites** (planted with limestone rock in 2016)
- **Each site:** 5 biodegradable mesh, 5 chicken wire, 5 vexar cages, Water quality datalogger
- **<u>Each container: 5 kg of spat on shell, stained with calcein</u>**
- **Collected quarterly** and assessed for survival, growth, spat recruitment, predators and status of containment material

Deployment of second ABSI Experimental Restoration Reefs



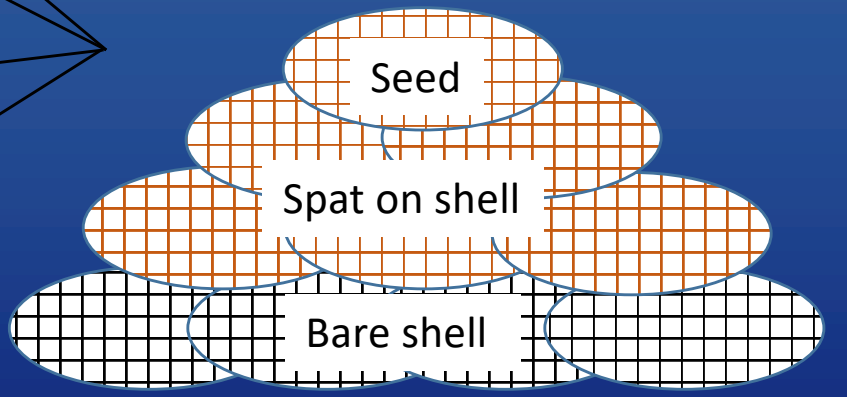
Experiment deployed by Oystermen
April 24 – May 4

Restoration mini-reefs



Excess spat on shell or seed, and collected live spat/seed from experiments are re-bagged into biodegradable bags and used to make mini-reefs adjacent to the new restoration experiment

Mini reefs will be surveyed by divers quarterly for structural integrity, qualitative oyster metrics (TBD), mobile associates.



Accepted into Estuaries and Coasts, July 2023

Analysis of multidecadal nekton communities in a regulated river-fed estuary: assessing temporal changes relative to river flow rates in the Apalachicola Bay System, Florida

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Questions?

For additional information:

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