THE APALACHICOLA BAY SYSTEM INITIATIVE (ABSI)

SCIENCE UPDATE
COMMUNITY ADVISORY BOARD
NOVEMBER 29TH, 2023

ABSI funding is provided by Triumph Gulf Coast Inc. and Florida State University
HOW ARE THE OYSTERS DOING IN THE BAY?
2022-2023 Bay-Wide Monitoring: **227 sites**

**Agency Plantsites**
- FWC NFWF
- DACS
- NRDA
- RESTORE
- Career Source

**Oyster Habitat**
- Oyster Habitat
2022-2023 Bay-Wide Monitoring

Market

Seed

Spat

Western Bay

Eastern Bay
TRENDS OF SPAT, SEED AND MARKET OYSTERS ON DIFFERENT SUBSTRATES

Next steps
Focus 2023-2024 surveys on limerock areas to assess patchiness in oyster abundance
ABSI Restoration Reefs Deployed Spring 2021
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Reefs are 50 x 26 ft x 15 in high
CONCRETE TREATMENT October 2023
Average Shell Height and Distribution of Size Classes

C = Concrete  CS = Concrete and Shell  L = Limerock  LS = Limerock and Shell

Shell Height (mm)  Abundance/Tong Lick

C  CS  L  LS

Spat  Seed  Market

C  CS  L  LS
Summary

**Bay-wide surveys**
- The eastern side of the Bay is doing better than the west
- Areas cultched with small limerock are performing much better than shell or un-cultched areas
- Limerock areas are very patchy – some good spots, some not.

**2021 Restoration Experiment**
- Large Limerock (5-7 “) is performing best,
- Small Limerock (2”) is doing better than Shell

**2023 Restoration Experiment**
- Treatments performing equally with the exception of just Limerock (different material).
- High abundance of spat and seed and a small number of market oysters on most treatments
Assessment of survival and growth of hatchery juveniles and spat on shell in different biodegradable containers

- **10 sites** (planted with limerock) deployed in May-June 2023
- **Each site:** 5 biodegradable mesh, 5 chicken wire, 5 vexar cages, Water quality datalogger
- **Each container:** 100 juveniles or 5 kg of spat on shell, stained with calcein
- **Collected quarterly** and assessed for survival, growth, spat recruitment and status of material
Results after 3 months (July 2023)
Bags and wire cages functional but compromised (crabs?)

Average % survival of hatchery oysters by site

After 6 months (October 2023)
West Bay
- Most Cage lines found
- Some biodegradable bags intact
- Many juveniles dead, low spat set

East Bay
- Several juvenile cage lines missing
  Most spat cage lines missing
- Bags and wire cages fallen apart
- Good survival and spat set on hatchery juveniles.
Survival and growth of hatchery juveniles and spat on shell – next steps

FWC low relief pilot study areas (~ 30 acres)

FSU-FWC experimental reefs
OBJECTIVES

Review shell recycling programs along the Eastern Seaboard and Gulf of Mexico to inform expansion and/or initiation of recycling and re-shelling programs for Apalachicola Bay.
Questions?