

# ABSI SCIENCE UPDATE

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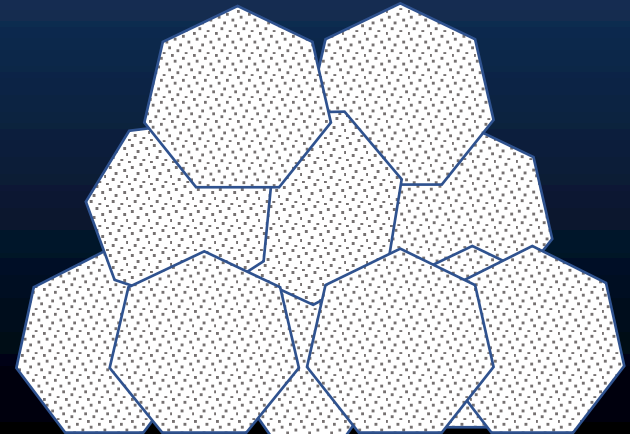
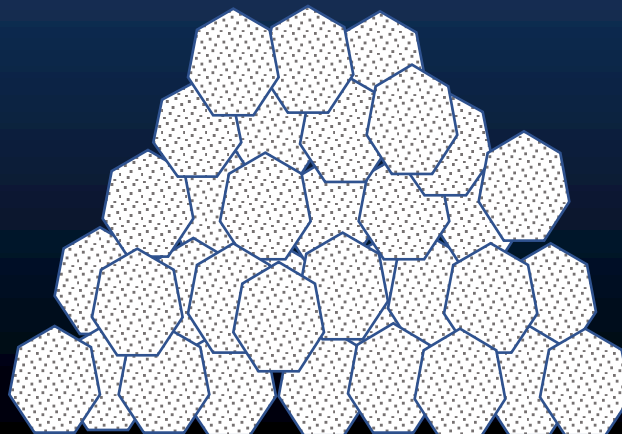
# Methods

## Reef design

30 ft x 30 ft x 1.5 ft = 50 cubic yards of material

## Materials

- Natural oyster shell – good for spat settlement, can be harvested with tongs
- Small Lime-rock (2”) creates mound, small spaces, many layers, can easily be harvested with tongs
- Medium Lime-rock (6-8”) – creates stable structure, medium spaces, few layers, good for habitat development, can be harvested once oysters develop.



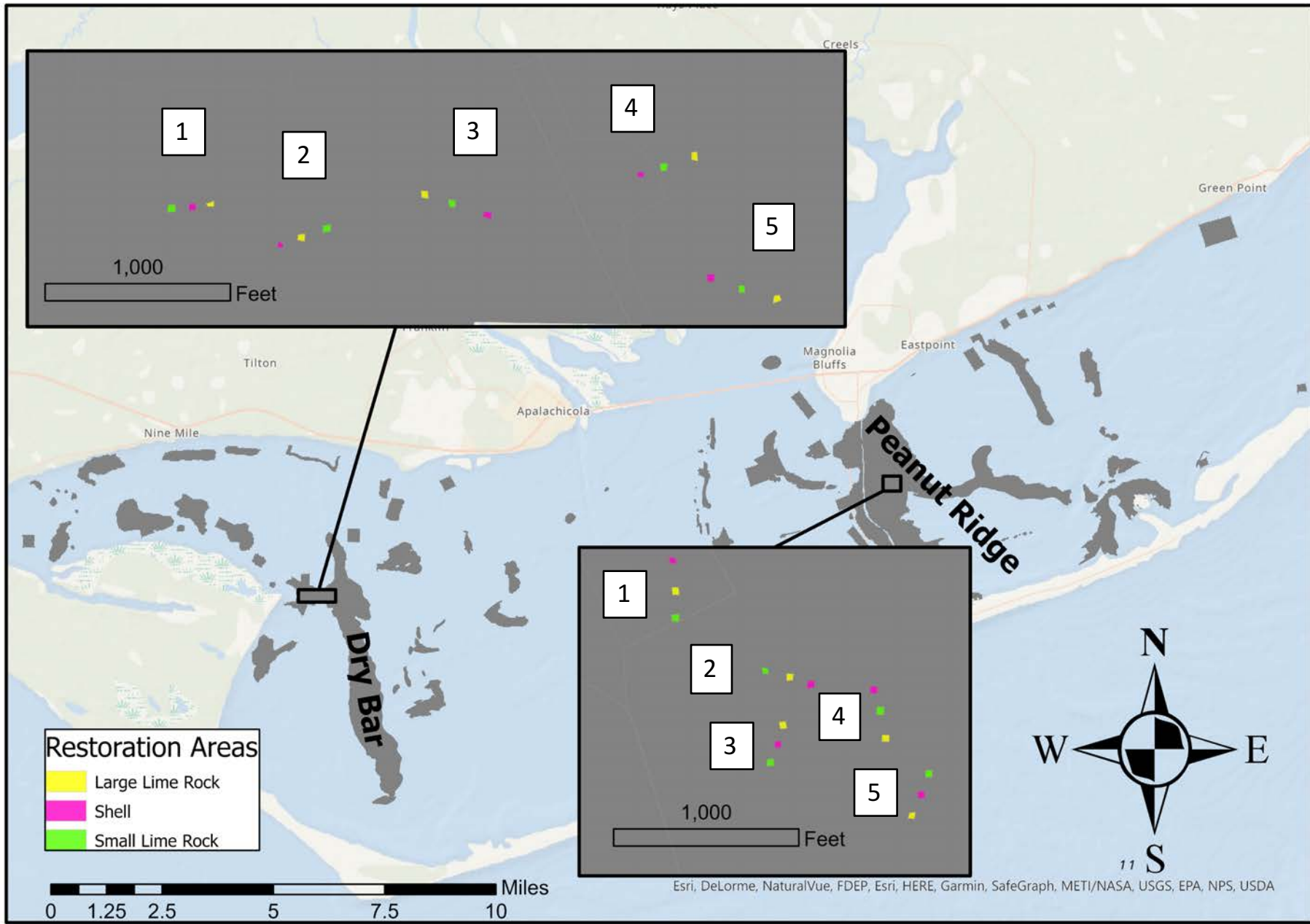


# Deployment

- 26 May – Peanut Ridge Shell
- 27 May – Peanut Ridge Small Lime-rock
- 3 June – Dry Bar Small Lime-rock
- 4 June – Dry Bar Shell
- 9 June – Dry Bar Large Lime-rock
- TBD – Peanut Ridge Large Lime-rock



# ABSI Experimental Oyster Restoration Sites



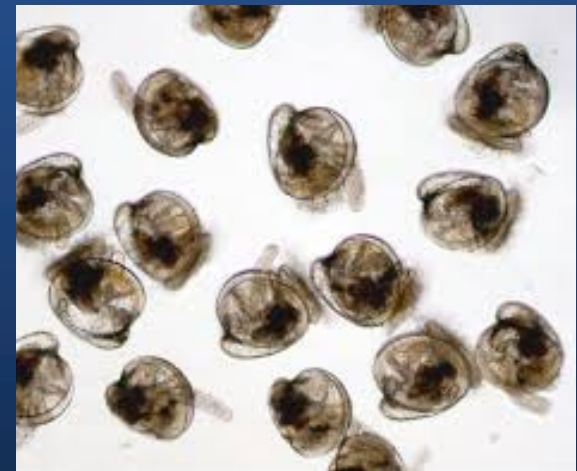
# ABSI HATCHERY

*First successful spawn May 7th*

*Larvae set May 26th*

*Deployed June 15th (20 days post-set)*

*Spawned again June 8<sup>th</sup> (3.5 million larvae)*



# Spat deployment

## Quantitative assessment of spat survival and growth

Vexar cages (14" x 36" x 4")

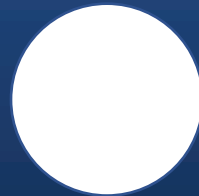
Spat cages (one per reef): 150 spat on shell per cage (~ 50 shells)

Control (one per reef): 50 clean shells per cage to account for wild recruitment

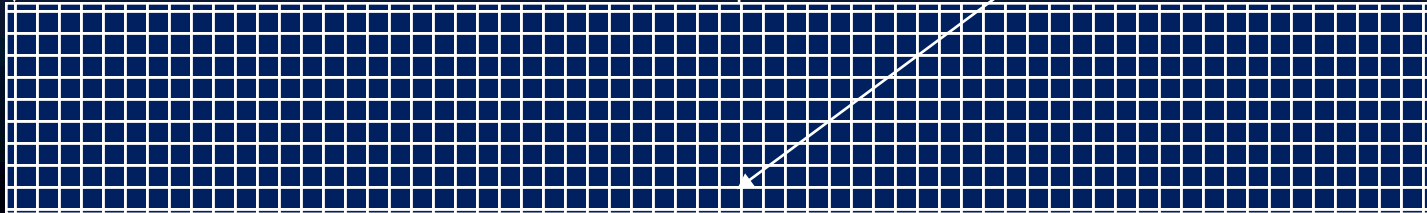
Monthly/quarterly (tbd): subsample cages and document survival and growth

Document predators

Monitor environmental conditions



Cage 'door' for easy access





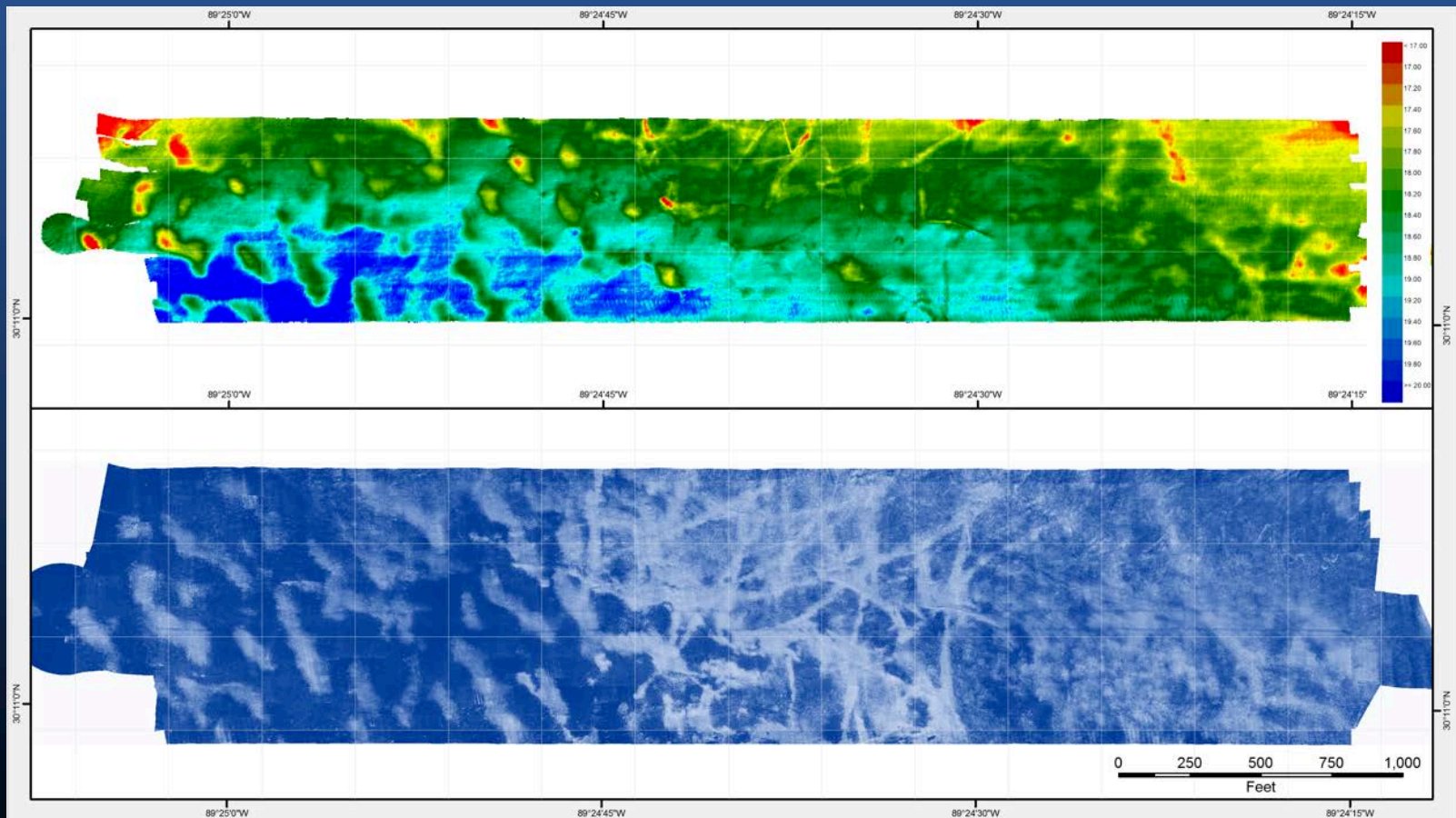
## Spat deployment

- Qualitative assessment of spat planting
- Place leftover spat on shell in biodegradable mesh bags (50 shells/bag)
- Place bags adjacent to restoration sites
- Monitor quarterly for 'success'

# Mapping

National Oceans and Applications Research Center (NOARC)

High resolution mapping of restoration experiment (July 2021, Summer 2022)



Simultaneous high resolution 3D bathymetry and SSS



A wide-angle photograph of a sunset over a large body of water. The sky is a mix of deep blue, orange, and yellow, with scattered clouds catching the low sun. The water's surface is calm, reflecting the colors of the sky. In the foreground on the left, there are tall, green reeds. In the middle ground, a long bridge with multiple spans stretches across the horizon. The overall mood is peaceful and contemplative.

Questions?