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MS/AL Living Shoreline Workshop

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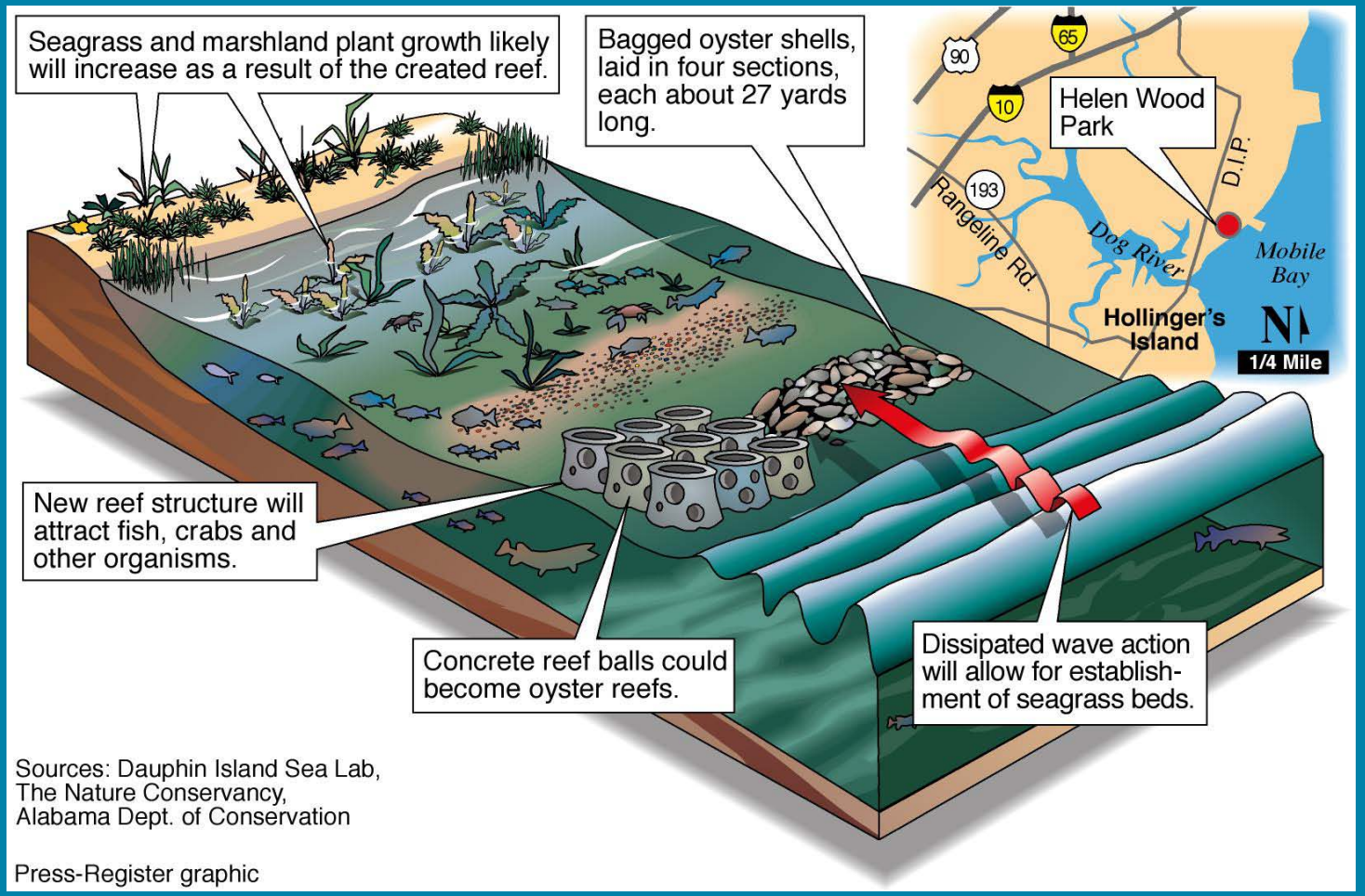
Living Shoreline Restoration



Graphic Credit: Mobile Press Register

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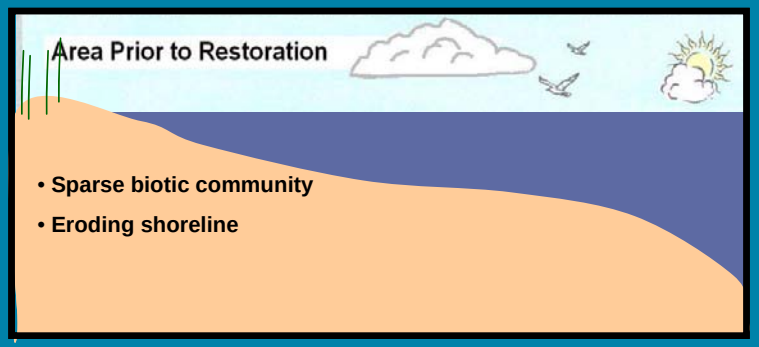
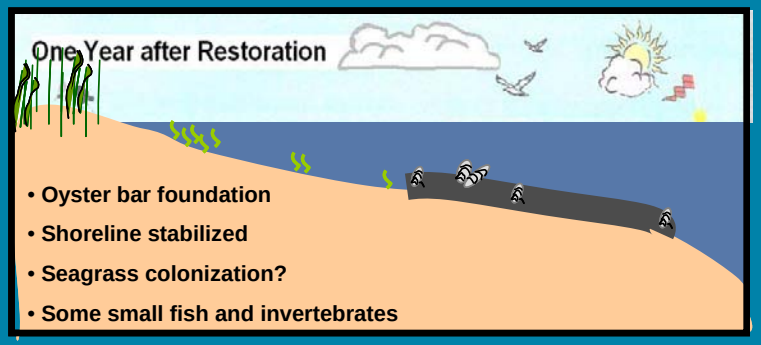
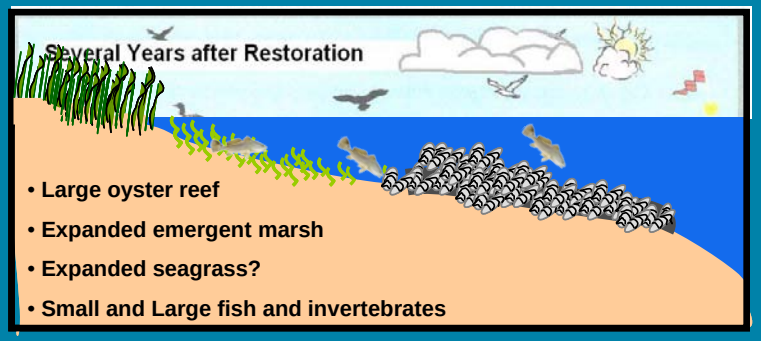
Living Shoreline Restoration







Goals for TNC Breakwater Project

- Reef Construction,
- Shoreline Stabilization,
- Marsh Re-growth,
- Faunal Utilization, and
- Seagrass Colonization.

Slide Credit: Jared McKee - DISL

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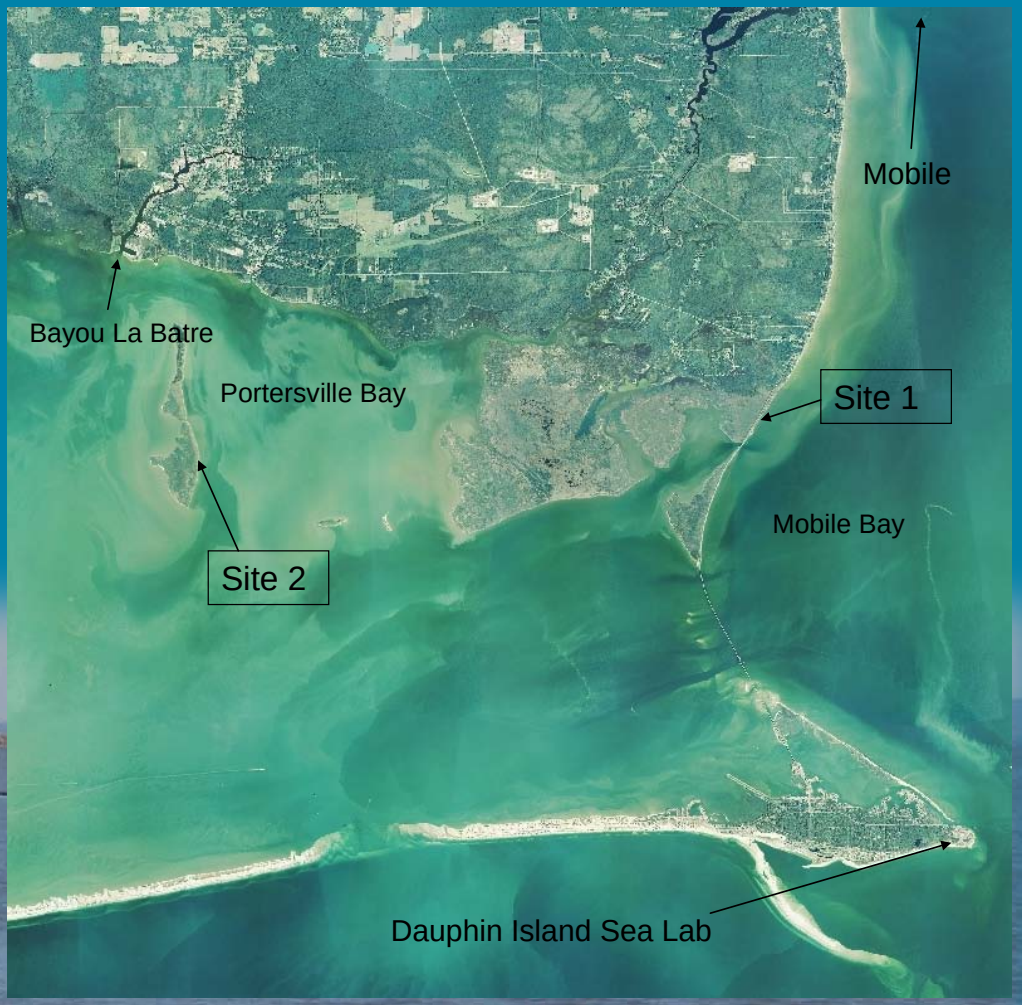
Site Locations

Site Locations

Site 1: Bay Front Park to Heron Point Bridge, Mobile Bay; Mobile County, AL (30.344917N, -88.123355W)

Site 2: Coffee Island, Portersville Bay; Mobile County, AL (30.338954N, -88.253860W)



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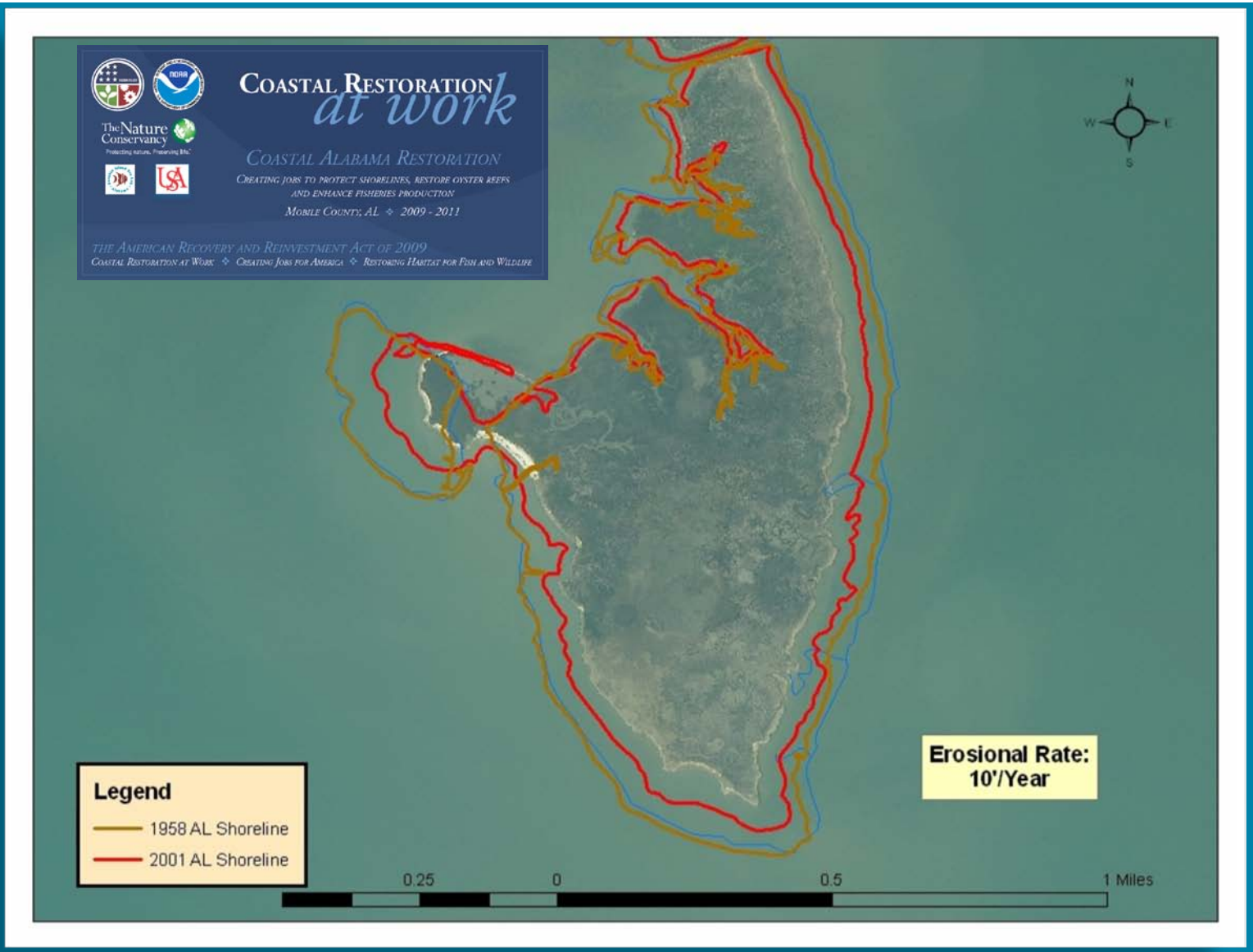
Why did the shoreline need strengthening? Coffee Island Historical Erosion Aerial Photography (slide courtesy of Carl Ferraro)



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Project Update - Bagged Oyster Shell

- Wayne Eldridge with J&W Marine Enterprises, Inc.
- Full Time Crew of about 8 -10 people
- Magical Oyster Bagging Machine
- Creating approximately 140,000 bags of oyster shell.

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Project Update - Reef Balls

- Reef Innovations, Inc.
- Larry Beggs – President
- Robbie Duke – Superintendant
- Harry Rolfe - Superintendant

- Crew of 6 people

- Creating 3,168 Reef Balls.

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Project Update - ReefBLKs

reefblk℠
oyster reef block system.

- Coastal Environments, Inc.
- Mitch Tinsley – Project Manager
- Crew of about 8 people.
- Creating 492 units to cover 750 linear meters of breakwater.

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Alabama Port Treatment Layouts

Alabama Port	
Treatment	**Material**
1	Control
2	Shell Bags
3	ReefBLKs
4	Reef Balls
5	Reef Balls
6	Shell Bags
7	ReefBLKs
8	Control

- Treatments are labeled from North to South
- Each Treatment is 125m (~137 yd) in length

Slide Credit: Jared McKee - DISL

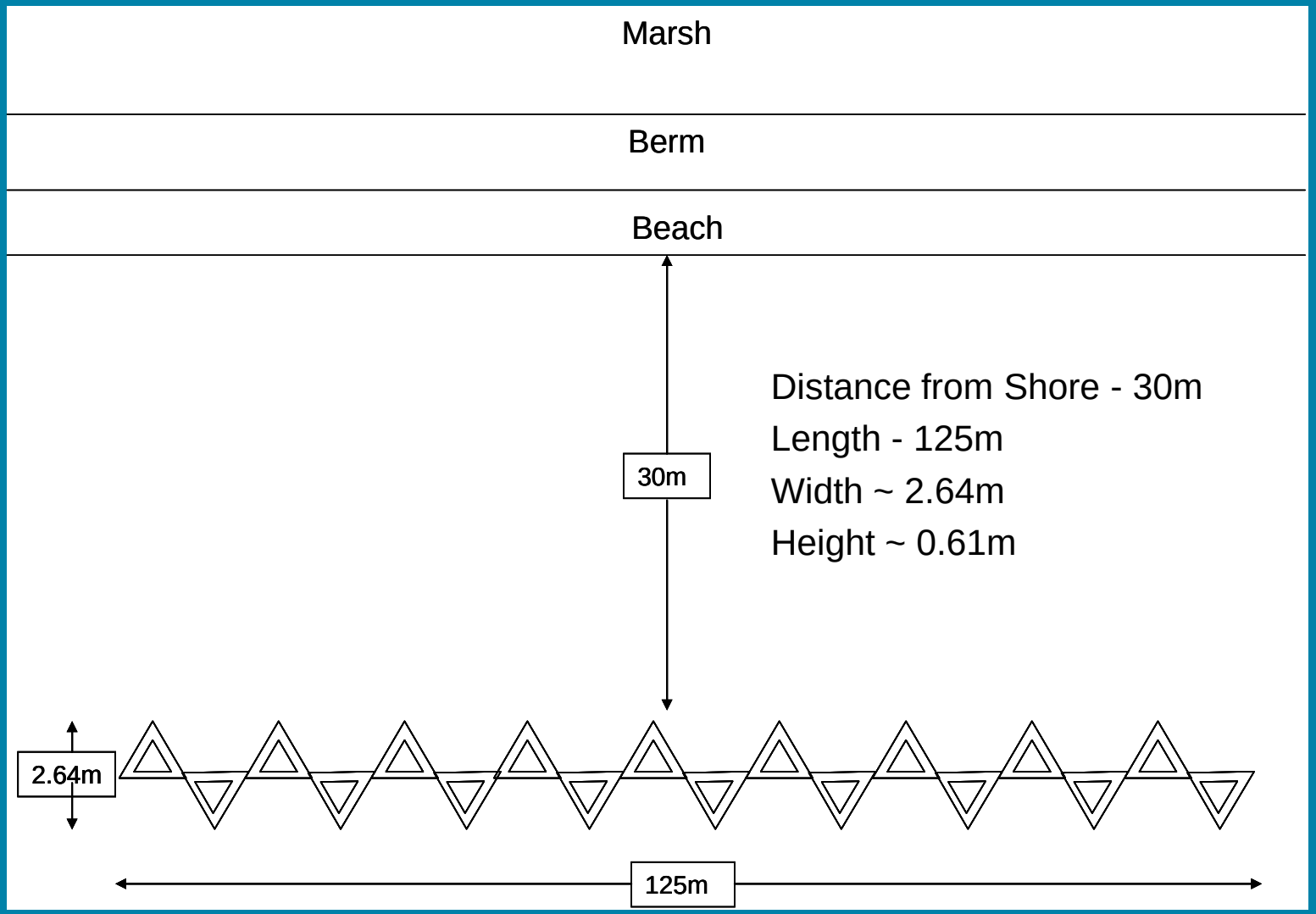
Coffee Island Treatment Layouts

Coffee Island	
Treatment	**Material**
1	Control
2	Reef Balls
3	Shell Bags
4	ReefBLKs
5	ReefBLKs
6	Reef Balls
7	Control
8	Shell Bags

- **Treatments are labeled from North to South**
- **Each Treatment is 125m (~137 yd) in length**

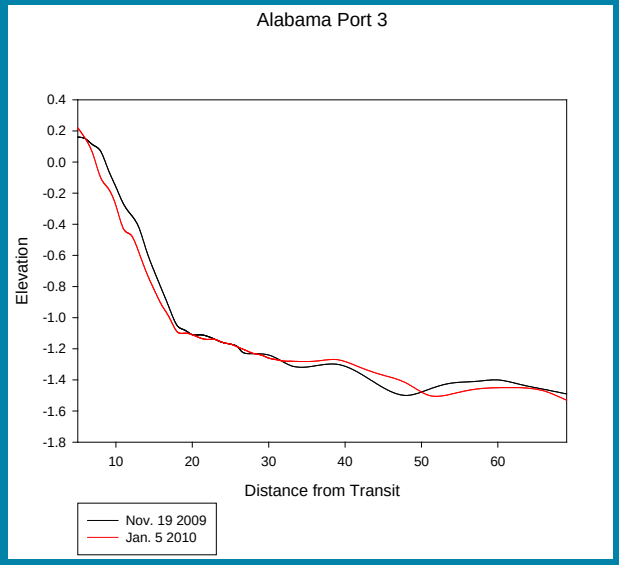
Slide Credit: Jared McKee - DISL

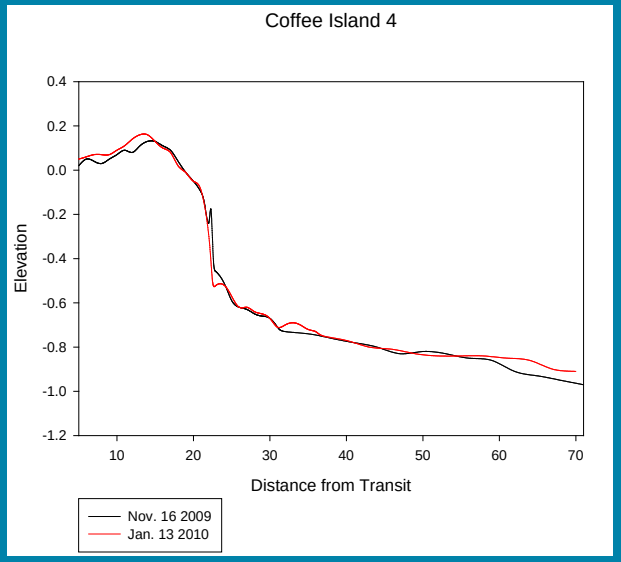
ReefBLK Layout

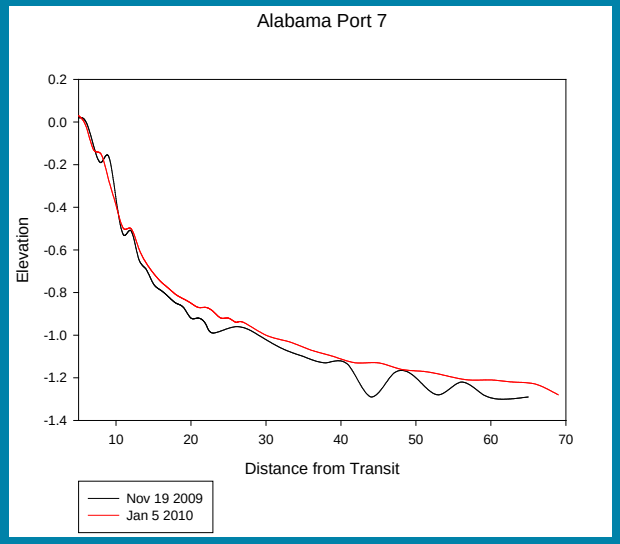


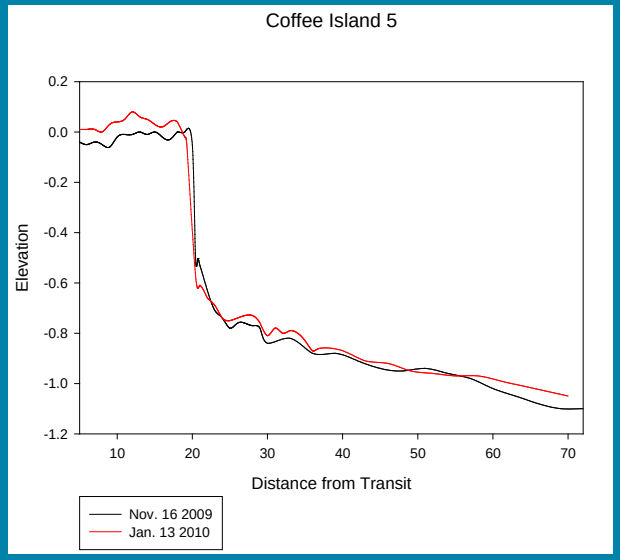
Slide Credit: Jared McKee - DISL

ReefBLK Site Bathymetries



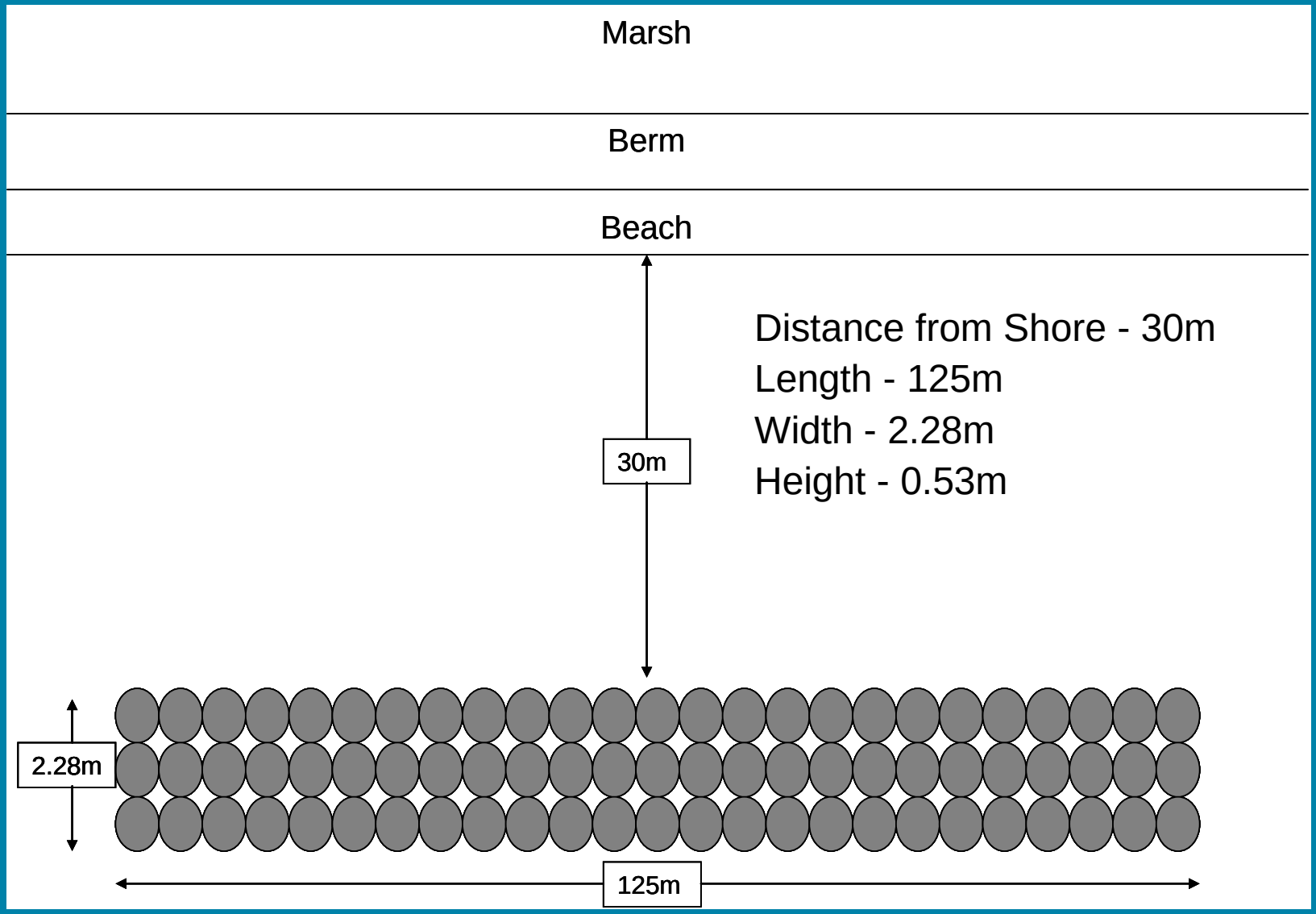






Slide Credit: Jared McKee - DISL

Reef Ball Layout



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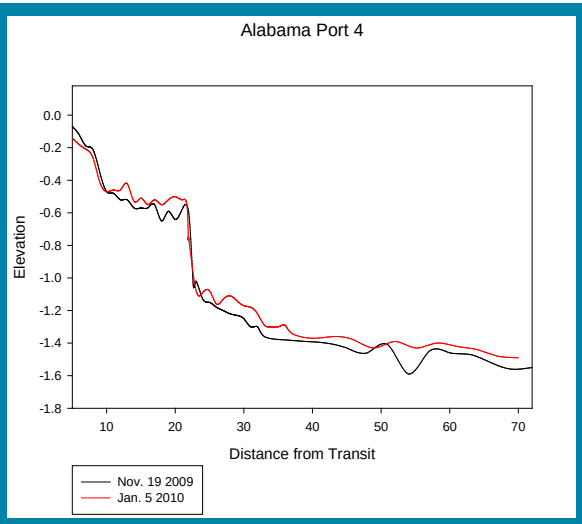
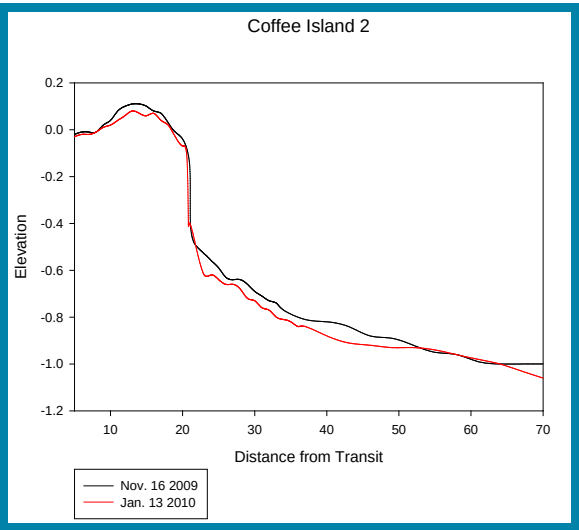
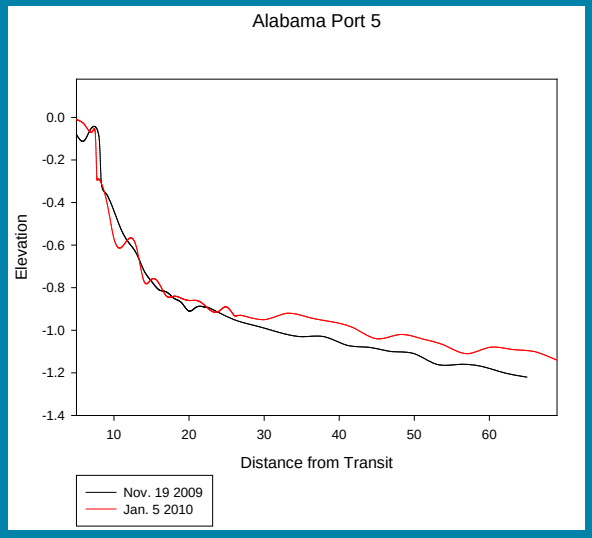
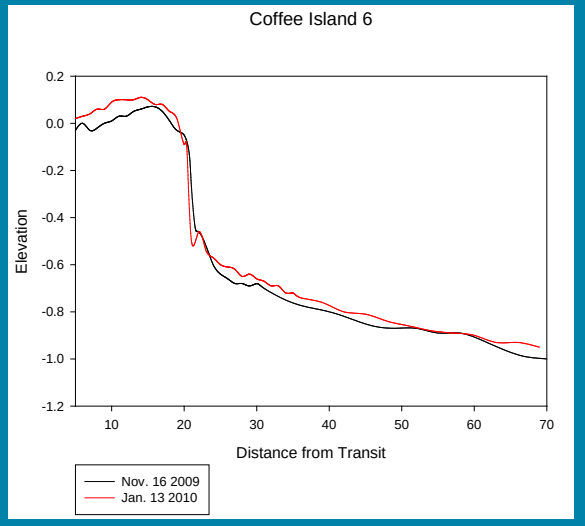
Reef Ball Site Bathymetries



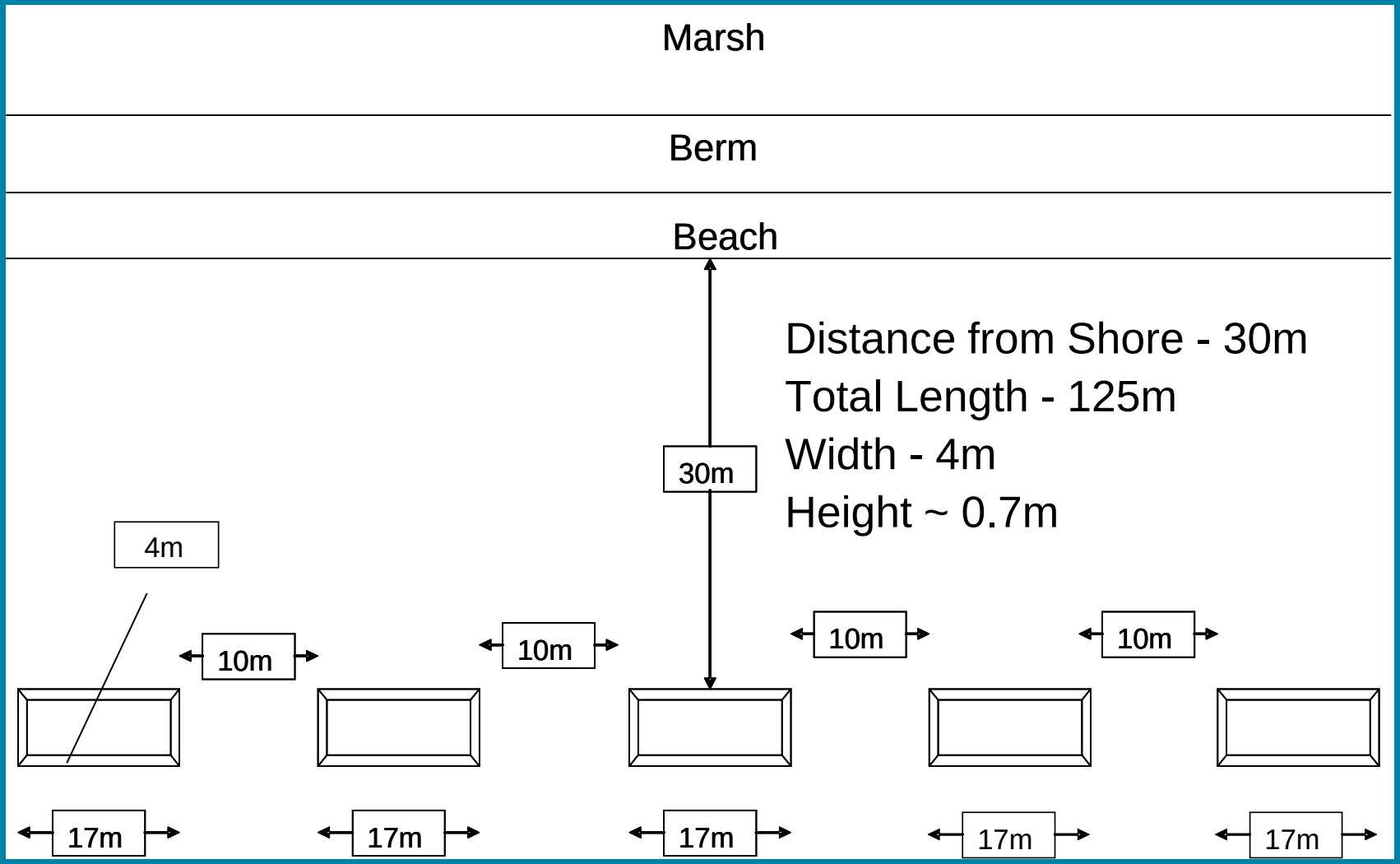






Slide Credit: Jared McKee - DISL

Bagged Oyster Shell Layout



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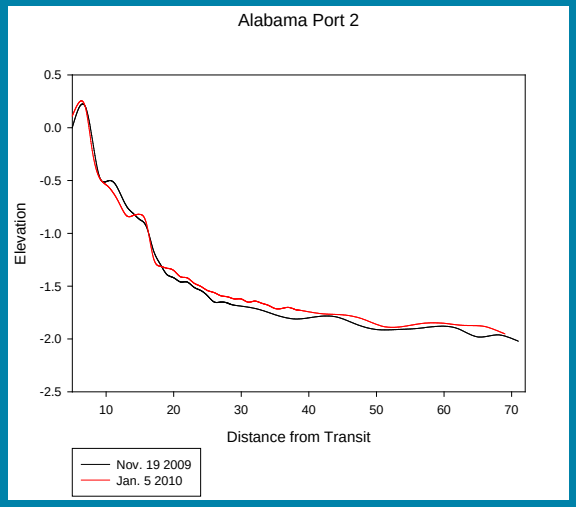
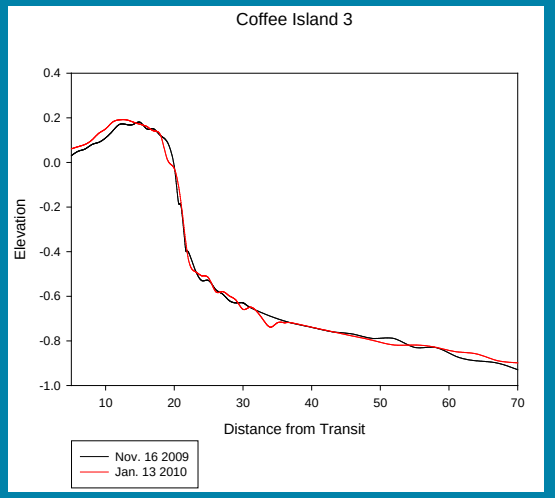
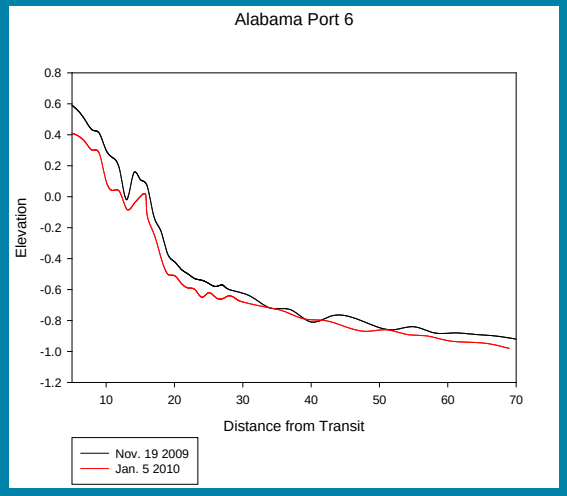
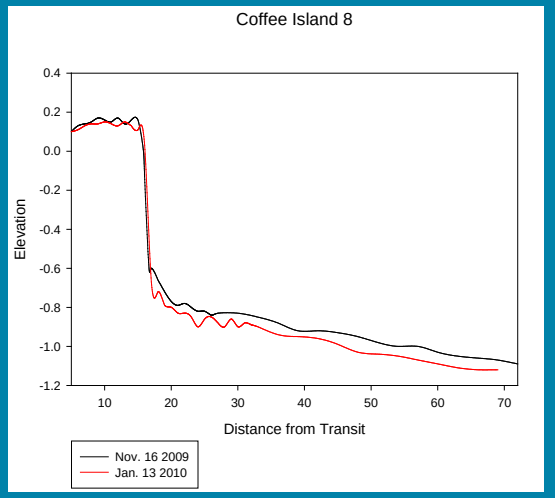
Bagged Shell Site Bathymetries









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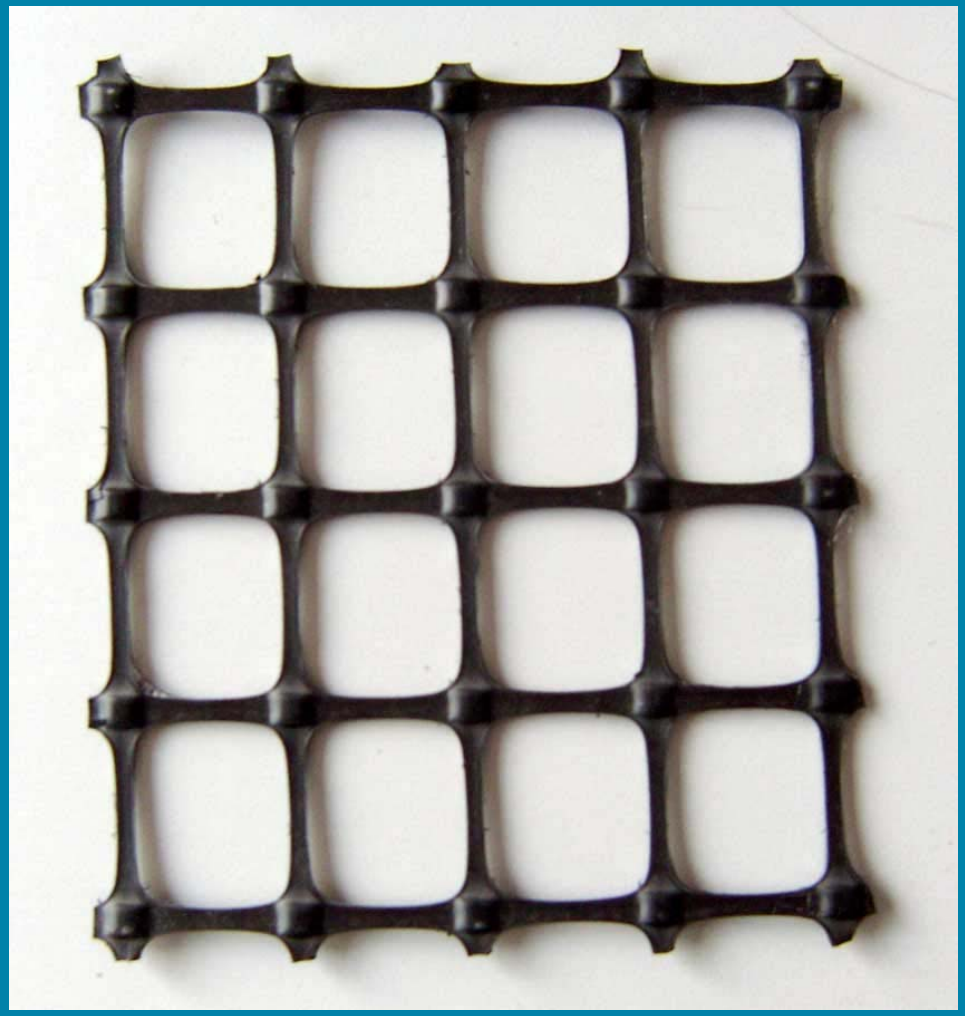
Geo-Grid



- Geo-Grid is being used to help prevent subsidence in the soft soils within the project area.

- Geo-Grid will be placed, staked, and weighted down just prior to deployment of various treatments

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Monitoring Metrics

1. Oyster Abundance
2. Seagrass Cover
3. Finfish and Mobile Invertebrates
4. Sediment Size and Organic Content
5. Shoreline Stabilization
6. Marsh Plant Density

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Socio-Economic Component

Major Goal: To better understand the link between coastal residents and coastal resources

1) What are the biggest threats to coastal fisheries and habitats?
2) Which habitats and resources are the most important to protect and restore?
3) Where does an oyster have its greatest economic value?

Slide Credit: Steven Scyphers- USA

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Socio-Economic Survey Details

Target Group: Coastal Alabama Residents (n=1000)
*Focus on Bayou la Batre, Alabama

Method: Random dial Telephone Survey

Project Leadership:

USA: Dr. Sean Powers
Dr. Steve Picou
Steven Scyphers (sscyphers@disl.org)

UNF: Dr. Jeffrey Will

Collaborators:

NOAA: Dr. Peter Edwards

TNC: Dr. Rob Brumbaugh

Slide Credit: Steven Scyphers- USA

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Q&A

Questions?

Comments?

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Thank you!