



Franklin-98 Living Shoreline

An Apalachee Regional Planning Council Project

Presented By:

Chris Rietow – Director, Apalachee Regional Planning Council



Harter Restoration
& Consulting, LLC



Project Background

Apalachicola Bay: Oyster Capital of the US

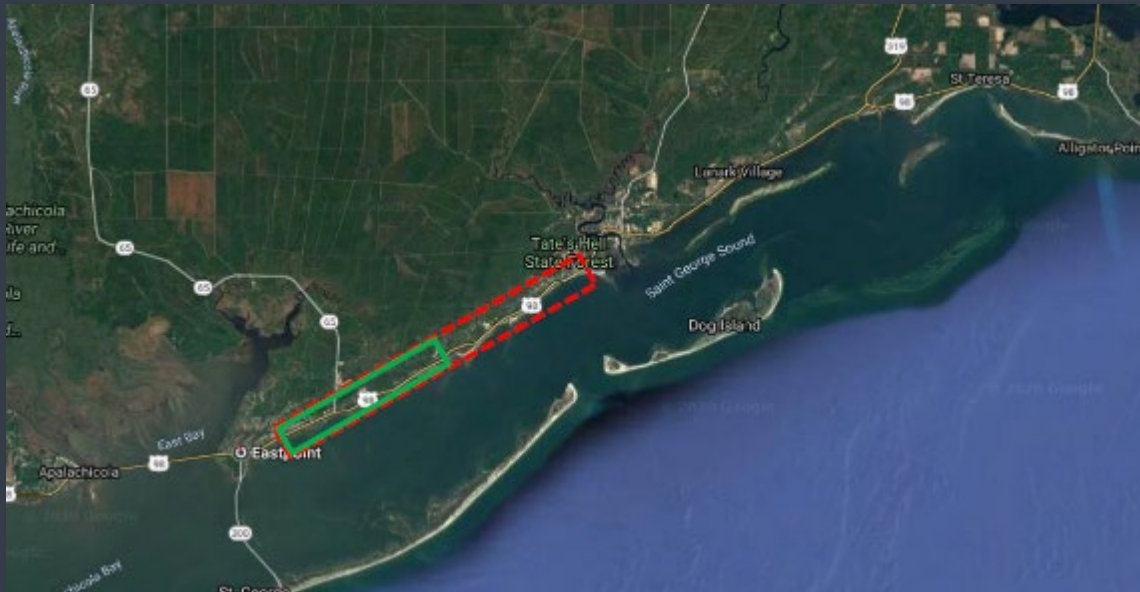
- In decline since 1980's
- Deepwater Horizon threatened to saturate oyster reefs (2010)
- Lower freshwater input → increased salinity favorable for oyster predators
- Hurricane Michael widespread devastation including Highway 98, a designated evacuation route (2018)



Project Background

Highway 98 Project Area

- 12 miles of shoreline on the north side of St George Sound
- Highway 98 suffers from chronic erosion, requiring frequent repairs
- Hard armoring is beyond service life with several areas of failure



Goals/Vision

Specific Restoration Goals

- 20 acres new oyster reef
- 30 acres of new marsh

Project Benefits

- Ecological Productivity
- Resiliency
- Economic Development

Project Funding

- Feasibility Planning – FDEP
- Design/Construction - NFWF



Reef Materials

Evaluation of 16 reef materials

- Limiting oyster predation
- Stability in waves

Natural Design Layout

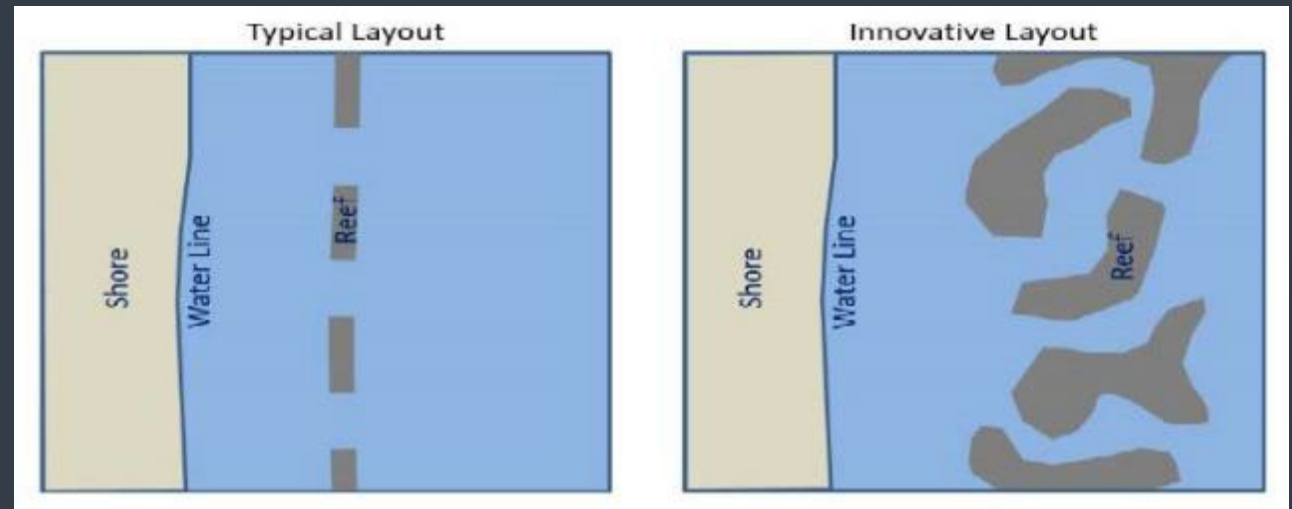
- Working with bathymetry to achieve appropriate elevation for recruitment
- Avoiding submerged seagrasses



Hollow Concrete Domes



Riprap/Recycled Concrete



Design approach maximizes habitat and coastal resiliency, while achieving better aesthetics through natural design

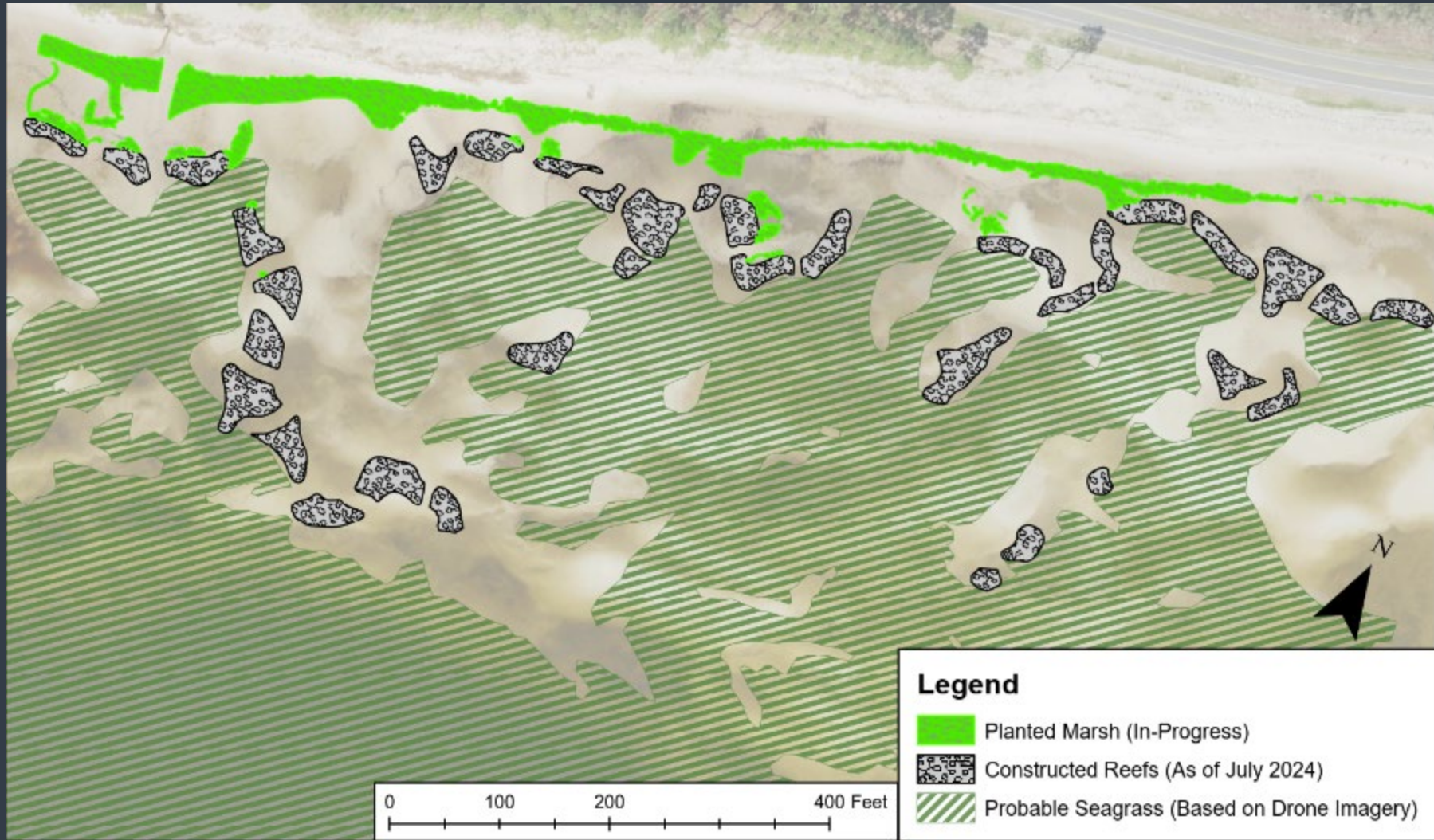


Initial Habitat Mosaic Layout





Revised Habitat Mosaic Layout



Revised Habitat Mosaic Layout (Cont.)

Stakeholder Engagement

Public Perception Challenges

- Property depreciation
- Environmental damage
- Sediment transport issues
- Debris damage during severe weather

Public Outreach

- Over a dozen public meetings
- Participation at public events
- Press releases and interviews

Project Funding

- Franklin's Promise Coalition/Gulf Corps
- Volunteer opportunities during planting



Franklin-98

Phase 1

- 5,500 lf of shoreline
- ~3.0 acres of marsh
- 2.5 acres of reef

Phase 2

- 2,150 lf of shoreline
- ~1 acres of marsh
- 0.7 acres of reef

Phase 3

- Currently signing up landowners





Franklin-98: Construction Approach





April 2023



December 2023

Franklin-98: Phase 1 Before and After Reef Construction

(Note: Seagrass in December is only dormant, not gone.)



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Franklin-98: Wave Attenuation



Franklin-98: Phase 1 Lessons Learned

Stakeholder Engagement

- Initial positive public reaction was limited
- Otherwise, reactions ranged from skeptical to negative
- Now after Phase 1 is complete, much more interest and positive support from the stakeholders

Lesson

- Identify some public owned sites for initial demonstration of the project... *keep the faith*



Franklin-98: Phase 1 Lessons Learned

Design

- Based on our analysis, broken concrete and rock were the best materials for our site conditions, although other products have distinct advantages over others
- Durability vs oyster recruitment; remember that your design could change substantially in the first few years



Franklin-98: Phase 1 Lessons Learned

Design (Continued)

- Be creative and follow nature's lead
- Find the sweet spot through monitoring and reference sites
- Remember it is a dynamic system, plan on adaptive management both during construction and after

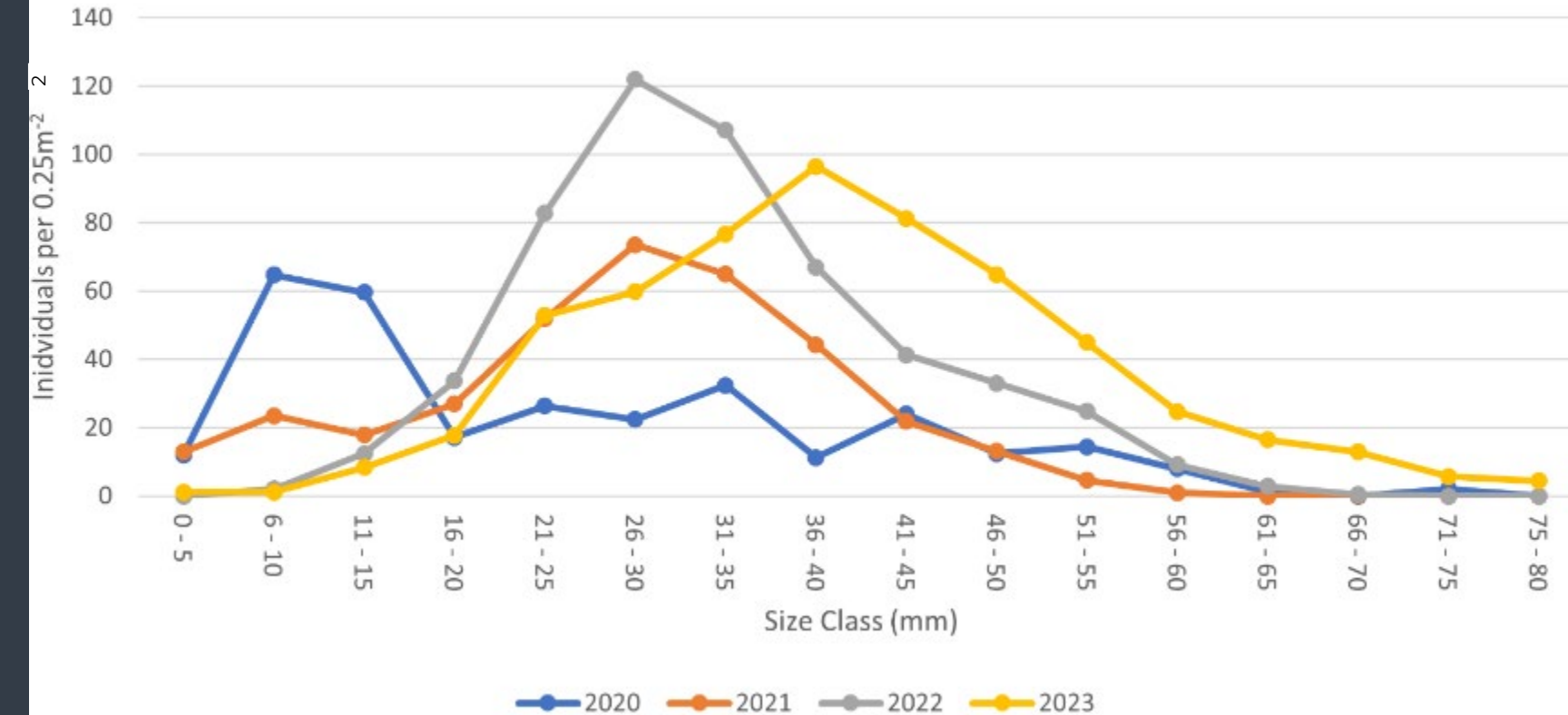




Franklin-98: Finding the “Sweet Spot”



Oyster Size Frequency Distribution by Year



Franklin-98: Oyster Size Class Distribution



December 2023



June 2024



July 2024

Franklin-98: Oysters on the reefs!





February 27th, 2024



September 30th, 2024





May 30th, 2024



September 30th, 2024





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For More Information:

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Thank you!