NOAA Restoration Center
Community-based Restoration Program

Applies a grass-roots approach to restoration by actively engaging communities in on-the-ground restoration of fishery habitats around the nation.

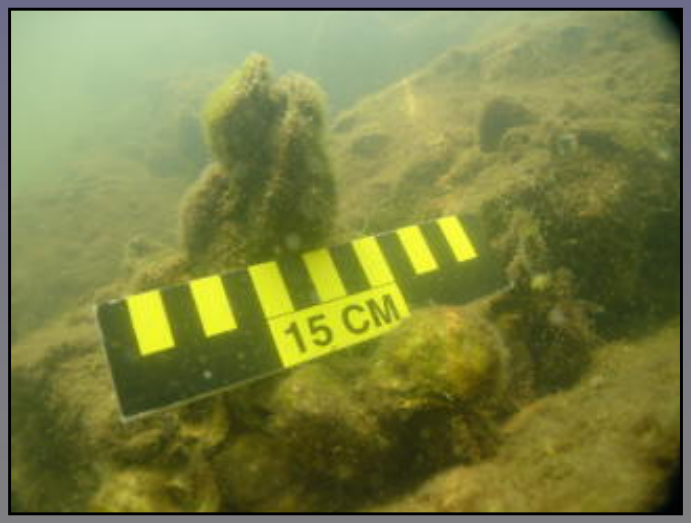
- Provides seed money and technical expertise to help communities restore degraded fishery habitats
- Develops strong partnerships to accomplish sound coastal restoration projects
- Promotes significant community support and volunteer participation
- Instills stewardship and conservation ethic
- Leverages resources through national, regional and local partnerships

Photo Credit: Tampa BayWatch

Restoration Center Technical Staff

Identify Potential Projects
- Conduct Site Visits
- Encourage Partnerships
- Review Proposals

Provide Technical Assistance
- Aid in Project Development
- Aid in Project Implementation
- Aid in Project Evaluation



Track Project
- Participate in Field Work
- Conduct Site Visits
- Review Reports
- Maintain Database

Typical Project Proponents:

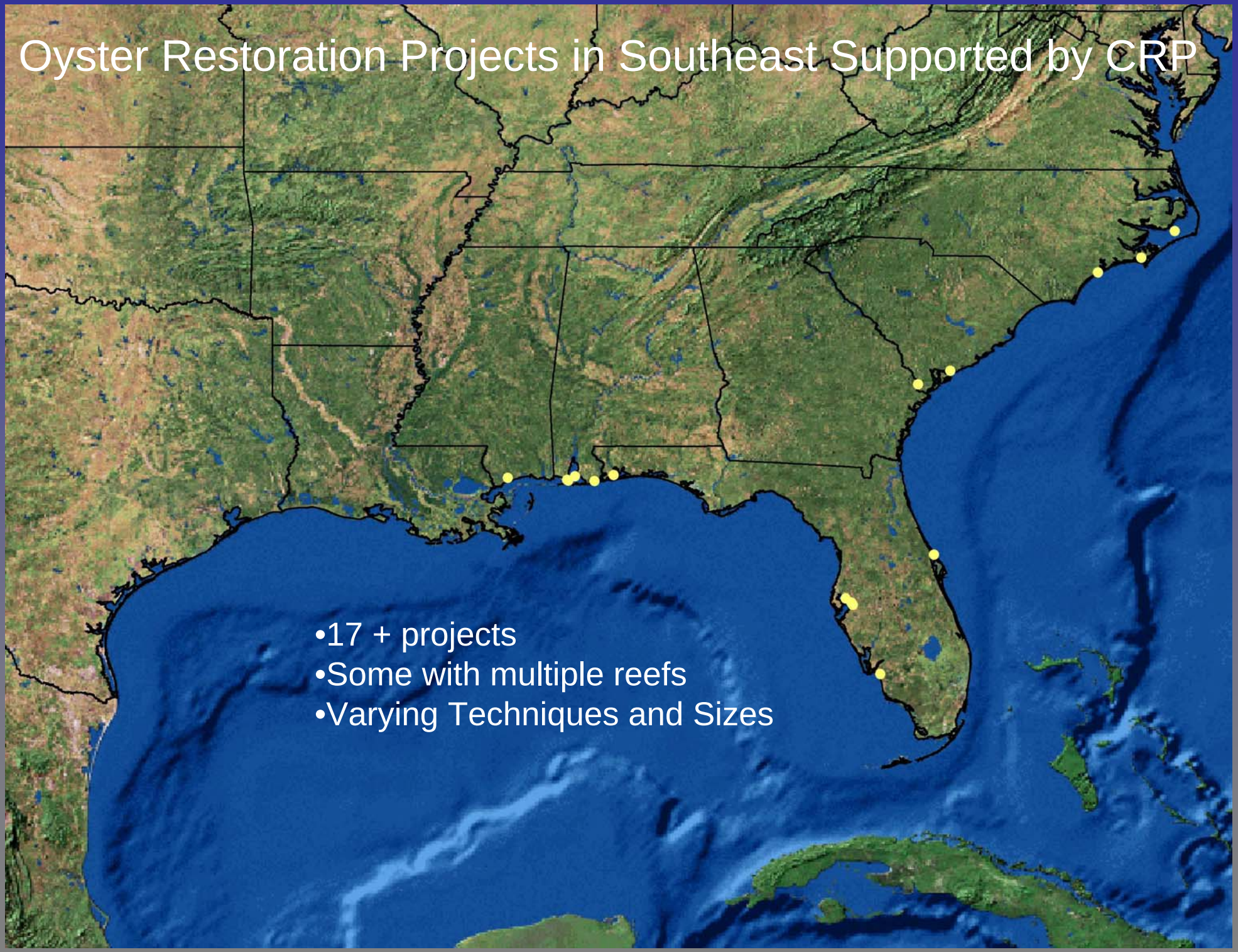
Academics &
Non-profits &
Local Municipalities &
State Resource Managers

PARTNERSHIPS
& Community (Volunteer) Support

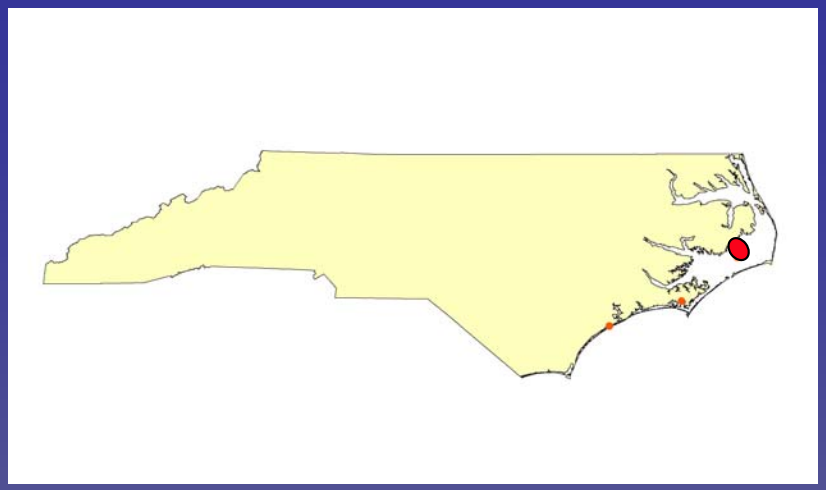
Typical Project Timeline:
12-18 Months

Photo Credit: Tampa BayWatch

Oyster Restoration Projects in Southeast Supported by CRP



- 17 + projects
- Some with multiple reefs
- Varying Techniques and Sizes



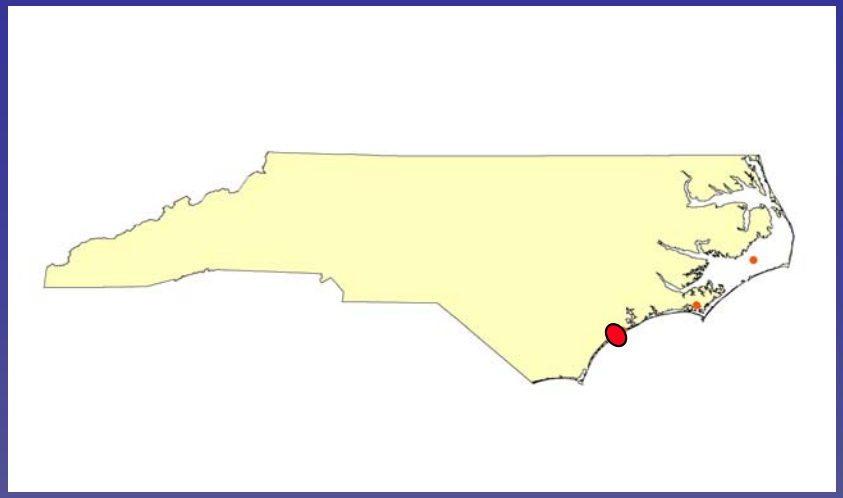
North Carolina

- 3 projects
- Multiple reefs

Project: Pamlico Sound Oyster Restoration
Project Sponsor: The Nature Conservancy
Location: Pamlico Sound

# Reefs	Size	Methods	Location	Goals
6 reefs (2 yrs old); 30 reefs (1 yr old)	100 m^2; 2-2.5 m high	Limestone marl	Subtidal	Promote biodiversity; Education

Monitoring: Bathymetry, salinity, temp, DO, dives to inspect for oysters and fisheries usage; experiments on survivorship over different areas



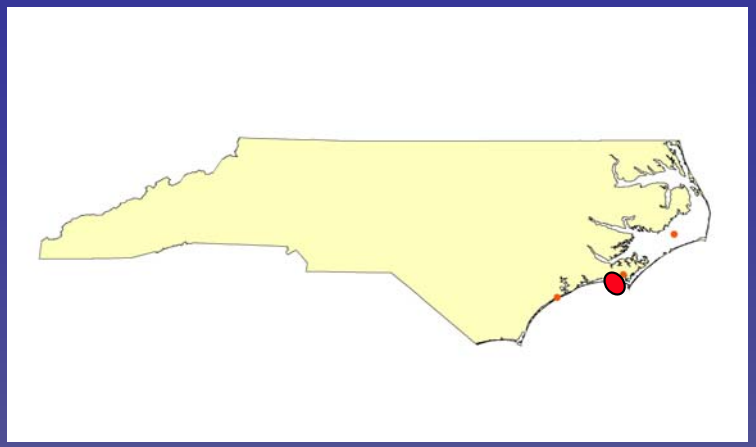
North Carolina

Planned for 2004

Project: Stump Sound Oyster Restoration
Project Sponsor: North Carolina Coastal Federation
Location:

# Reefs	Size	Methods	Location	Goals
	4 acres	17,000 bushels of scattered shell; 1 million juveniles through remote set	? Subtidal or intertidal ?	Reproducing reef prior to disease

Monitoring: Vertical relief, DO, Nitrogen, Phosphorous, pH, salinity, Health/Disease



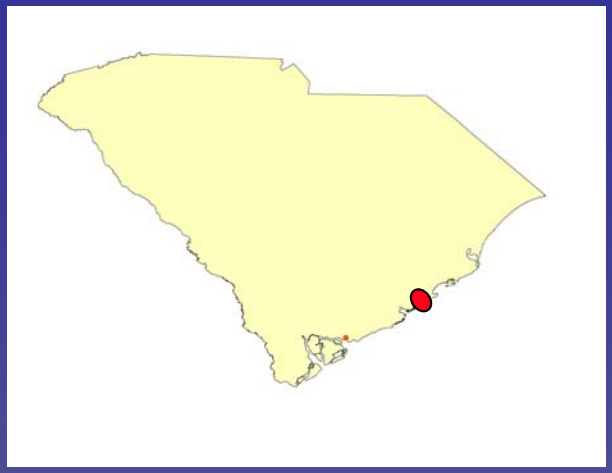
North Carolina

Starting Now?

Project: North River Farms Oyster Restoration
Project Sponsor:
Location: Carteret County

# Reefs	Size	Methods	Location	Goals
1 or more	2 acres	Shell bagging; seeding with 300,000 juveniles and adults		Education; Improved water quality

Monitoring: DO, pH, salinity, temp, turbidity, nitrogen, phosphates, species utilization (seine, bottom samplers, visual), spat set, growth and survival



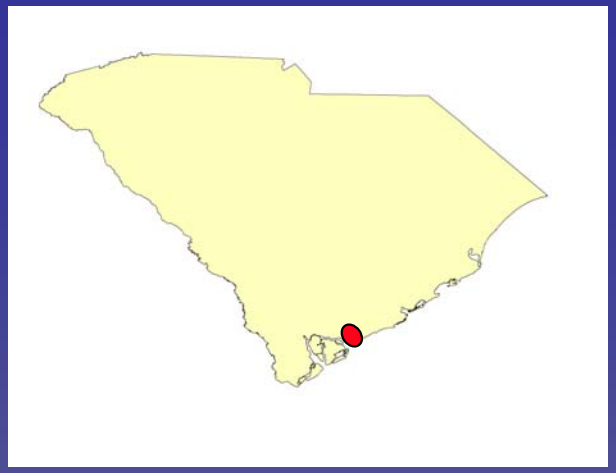
South Carolina

- 2 Projects
- Multiple small scale reefs

Project: S.C.O.R.E.
Project Sponsor: SCDNR
Location: Georgetown, Charleston and Beaufort Counties

# Reefs	Size	Methods	Location	Goals
81 reefs/ 24 sites	Avg. ~13.5 m^2	Shell bagging & mesh covered shell	Intertidal	Education; Self-sustaining reefs

Monitoring: Erosion, water quality (temp, DO, water clarity, salinity), spat set (growth and survival)

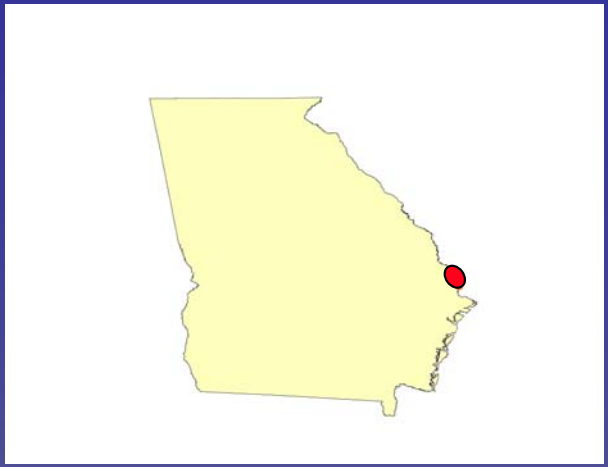


South Carolina

Project: ACE Basin Shellfish Restoration
Project Sponsor: SCDNR
Location: ACE Basin NERR

# Reefs	Size	Methods	Location	Goals
4 reefs Age?	.278 total acres	4 shell methods: Recycled, Gulf Coast Oyster, whelk, clam	Intertidal	Restore fishery

Monitoring: ?



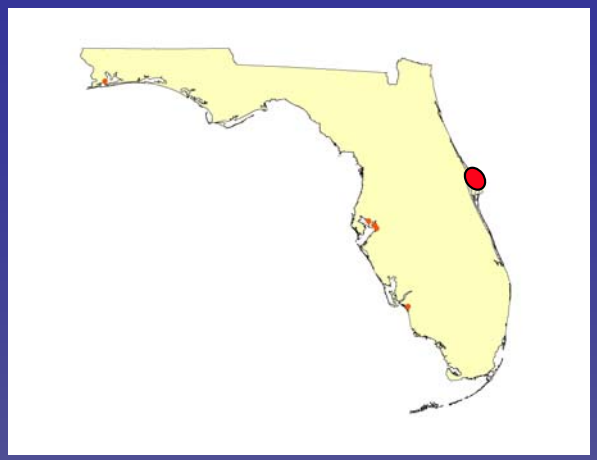
Georgia

- **1 project**
- **5 small scale reefs**

Project: G.E.O.R.G.I.A.
Project Sponsor: University of Georgia Marine Extension
Location: Skidaway and Tybee Island (near Savannah)

# Reefs	Size	Methods	Location	Goals
5 reefs planned; 2 completed to date (3 months old)	10 m^2	Shell bagging	Intertidal	Education; Establishment of self-sustaining reefs

Monitoring: Temp, Salinity, DO, turbidity, spat set, sedimentation



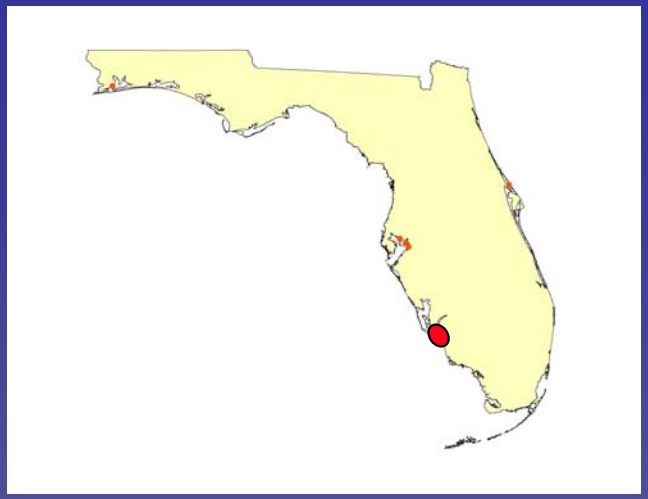
Florida

- 6 Projects
- Generally small scale

Project: Mosquito Lagoon Oyster Restoration
Project Sponsor: University of Central Florida
Location: Canaveral National Seashore

# Reefs	Size	Methods	Location	Goals
360 mats/ 6 sites 1 yr old	45 cm^2	Attaching 3 densities of oysters to vexar mats	intertidal	Education; restore 30 reefs over 200 acres

Monitoring: Oyster Recruitment

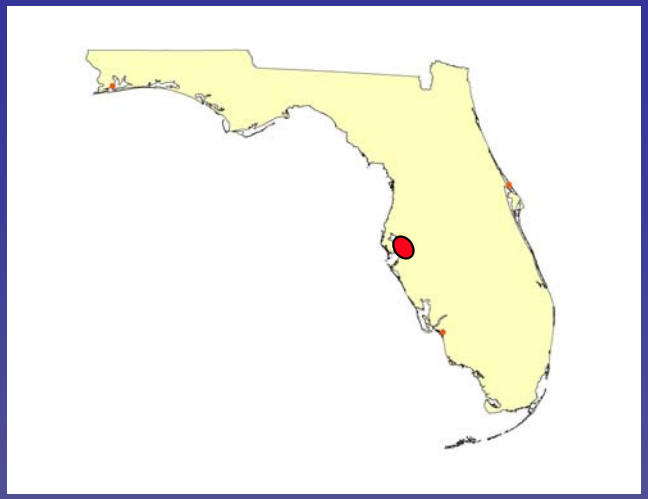


Florida

Project: Everglades Oyster Restoration
Project Sponsor: Florida Gulf Coast University
Location: 3 rivers near Fort Meyers

# Reefs	Size	Methods	Location	Goals
10 reefs; 7 completed to date < 6 mos old	5 x 20 m	Shell bagging and oyster gardening	intertidal	Improve water quality; Decrease shoreline erosion; education

Monitoring: Water quality (temp, salinity, DO), spat set, survival, growth



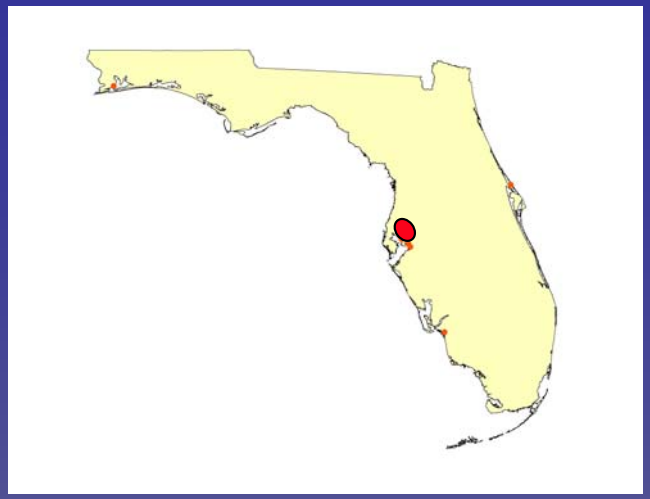
Florida

Photo Credit: Tampa BayWatch

Project: Green Key Oyster Restoration
Project Sponsor: Tampa BayWatch
Location: East Tampa Bay

# Reefs	Size	Methods	Location	Goals
8 reefs 2 yrs old	10.5 m^2 each	Loose shell and shell bagging for comparison	Intertidal	Erosion Prevention; Self-sustaining reef

Monitoring: shell migration; shoreline erosion; oyster recruitment (qualitative); wildlife utilization (i.e. birds)

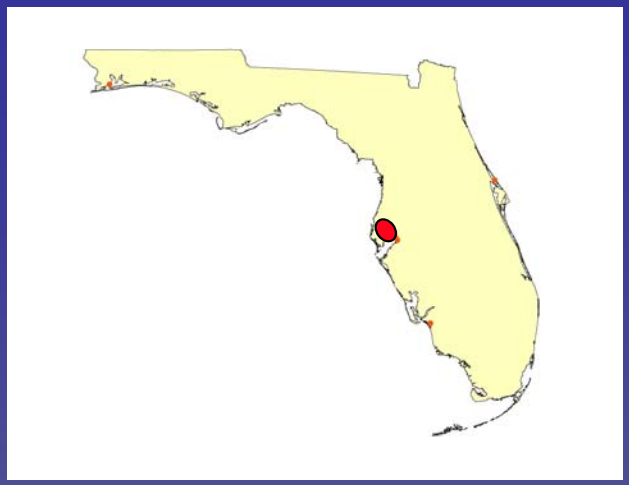


Florida

Project: Fantasy Island Oyster Restoration
Project Sponsor: Tampa BayWatch
Location: East Tampa Bay

# Reefs	Size	Methods	Location	Goals
12 reefs 2.5 yrs old	4.4 m^2	Loose shell *This site was redone in 2004 with bagged shell	Intertidal	Erosion Prevention; self-sustaining reef

Monitoring: shell migration; shoreline erosion; oyster recruitment; wildlife utilization

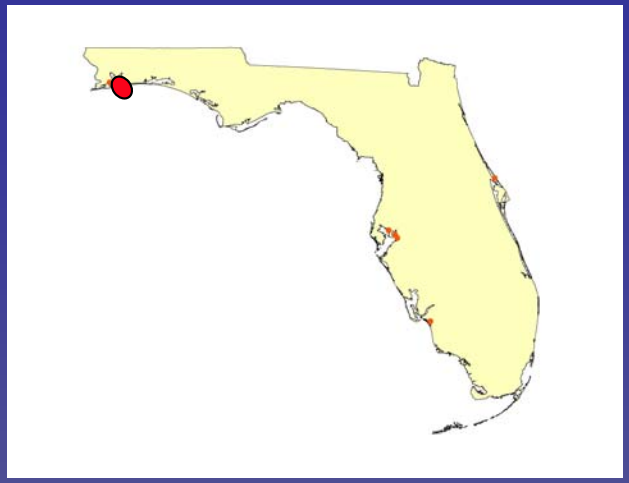


Florida

Project: Palonis Park Oyster Restoration
Project Sponsor: Tampa BayWatch
Location: North-east Tampa Bay

# Reefs	Size	Methods	Location	Goals
3 reefs (1 yr old); 2 reefs (1 month old)	42 m^2 each	Shell bagging protecting loose shell	Typically subtidal	Erosion prevention; self-sustaining reefs

Monitoring: shell migration; oyster recruitment; shoreline erosion; wildlife usage

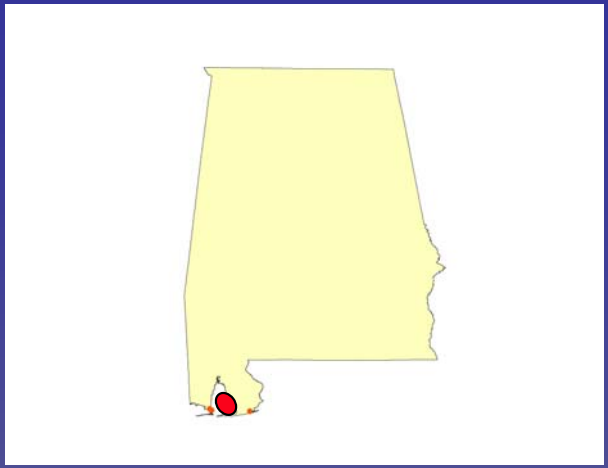


Florida

Project: Project Greenshores
Project Sponsor: ERSO/ FDEP
Location: Pensacola Bay

# Reefs	Size	Methods	Location	Goals
1 yr old	3 acres	Multiple mounds of rubble covered with shell and spat on shell	Intertidal and subtidal	Improve water quality; Provide habitat

Monitoring: Benthic invert Utilization; finfish utilization; water quality



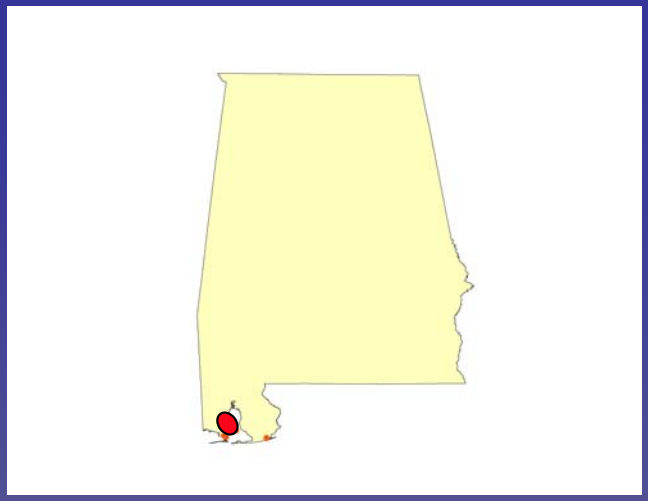
Alabama

- 4 projects
- Range of sizes

Project: Bon Secour Oyster Reef Restoration
Project Sponsor: Auburn Marine Extension
Location: East of Mobile Bay

# Reefs	Size	Methods	Location	Goals
1 1.5 yrs old	1 acre	400 cubic yards of shell covered with spat-on-shell cultch	Subtidal	?

Monitoring: ?

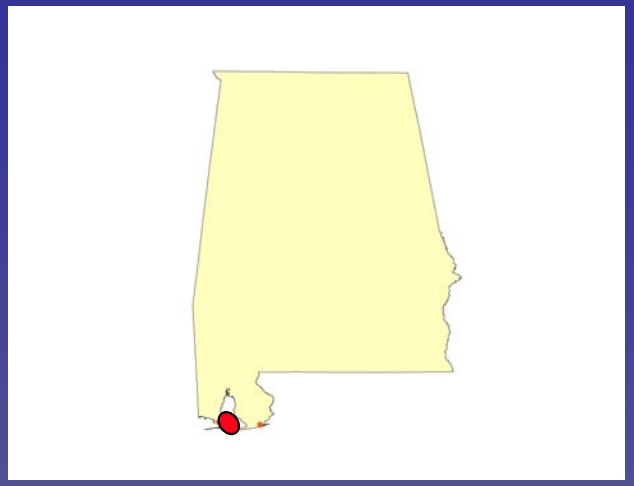


Alabama

Project: Oyster Gardening for Whitehouse Reef
Project Sponsor: Mobile NEP
Location: Southwest Mobile Bay

# Reefs	Size	Methods	Location	Goals
1 6 months old	10 acres	Spat- on-shell gardened cultch placed on natural shell bed	Subtidal	Self-sustaining reef; education

Monitoring: Water quality; spat growth, size and number; reef condition; species present; marine litter



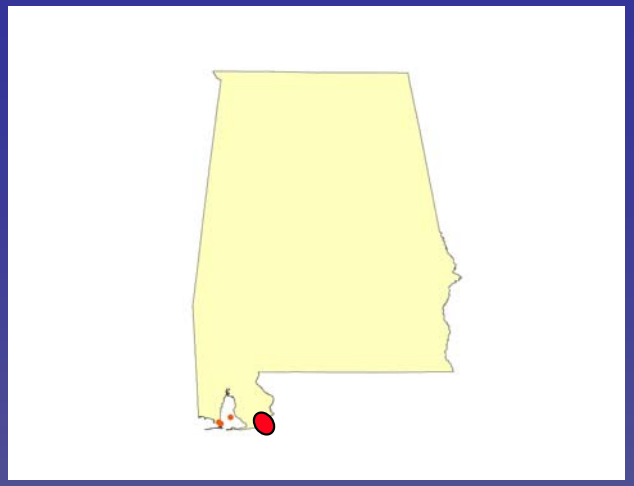
Alabama

Photo Credit: USA

Project: Alabama Oyster Restoration
Project Sponsor: University of South Alabama
Location: Mobile and Bon Secour Bay

# Reefs	Size	Methods	Location	Goals
24 reefs 5 months old	25 m^2	Limestone covered with veneer of loose shell	subtidal	Education; Development of management plan

Monitoring: Fisheries habitat utilization; spat settlement around Bay and on reefs; Hydrodynamics of Bay; Oyster survival and growth



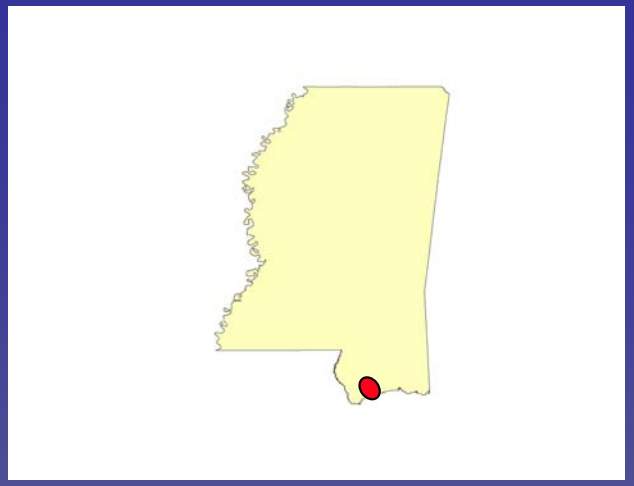
Alabama

Planned for 2004

Project: Wolf Bay Living Reef Restoration
Project Sponsor: City of Orange Beach
Location: Wolf Bay (Near Perdido Bay)

# Reefs	Size	Methods	Location	Goals
2 reefs	.01 acre total	Shell-bagging	Intertidal	Education; self-sustaining reefs

Monitoring: Recruitment of reef building organisms



Mississippi

- 1 Project
- Two- 4 acre reefs

Planned for 2004

Project: Mississippi Oyster Restoration
Project Sponsor: Mississippi DMR
Location: Bay Saint Louis and Biloxi Bay

# Reefs	Size	Methods	Location	Goals
2 reefs	8 acres	Loose shell scattering	Subtidal	?

Monitoring: Side scan sonar and diving to measure size and stability of reef; Catch and release to measure finfish utilization

Challenges for the NOAA CRP Program:

- Limited information in proposals
- Limited ability to guide projects
- Limited ability to collect monitoring data
- Limited time frame for implementation and monitoring
- Need to develop monitoring requirements which can be implemented by a range of project sponsors and project types
- Need to collect meaningful data