Mapping oyster resources in East Bay, Pensacola Florida Region

Laura Geselbracht, Senior Marine Scientist
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The Nature Conservancy
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Part of a Suite of Projects TNC is doing in the Pensacola and Perdido Bay Regions

- **Pensacola East Bay Oyster Habitat Restoration**
  - Thirty-three reefs of varying sizes located along approximately 6.5 miles of shoreline in East and Blackwater Bays in Santa Rosa County (NFWF GEBF)
- **Santa Rosa County Oyster Habitat Restoration Project**
  - Oyster reef mapping and condition analysis in East and Blackwater bays and creation of a county-wide oyster shell recycling program (SRC and Restore Act),
- **Oyster Ecosystem-Based Fisheries Management Plan**
  - Integrates the needs of the oyster fisheries (both wild harvest and aquaculture) with the need to deliver ecosystem services and benefits provided by oyster habitat in the Pensacola Bay System (TNC private)
- **Perdido Blueway Trail and Watershed Protection**
- **Pensacola and Perdido Bays Estuary Program**
- **Milton Wastewater Treatment Plant Relocation**
- **Rattlesnake Bluff Road and Riverbank Restoration**
- **Milton Wetland Stormwater Program**

https://www.nature.org/en-us/about-us/where-we-work/united-states/florida/stories-in-florida/florida-pensacola-east-bay/

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Oyster Integrated Mapping and Monitoring Program Report for the State of Florida

KARA R. RADABAUGH, STEPHEN P. GEIGER, RYAN P. MOYER, EDITORS

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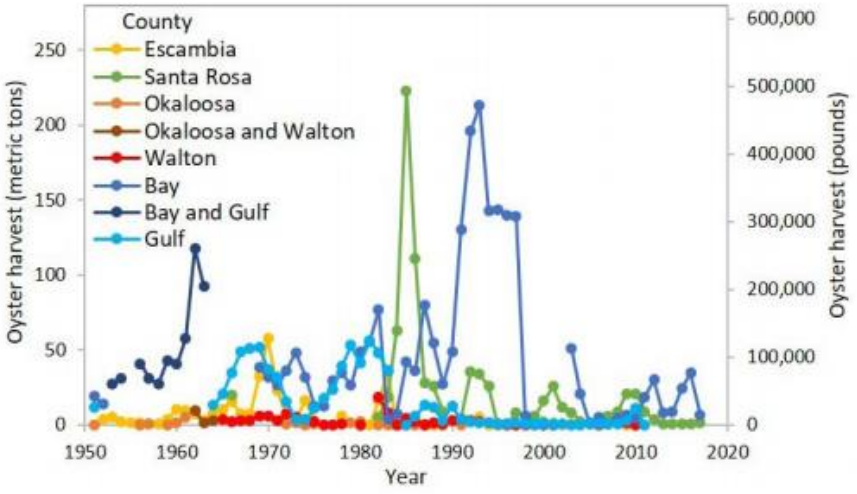
MyFWC.com

2019

"Many Florida estuaries have lost 80-90% of the oyster reefs that were present before human development."

Santa Rosa County reefs are no exception



Excerpts from OIMPP Chapter 2

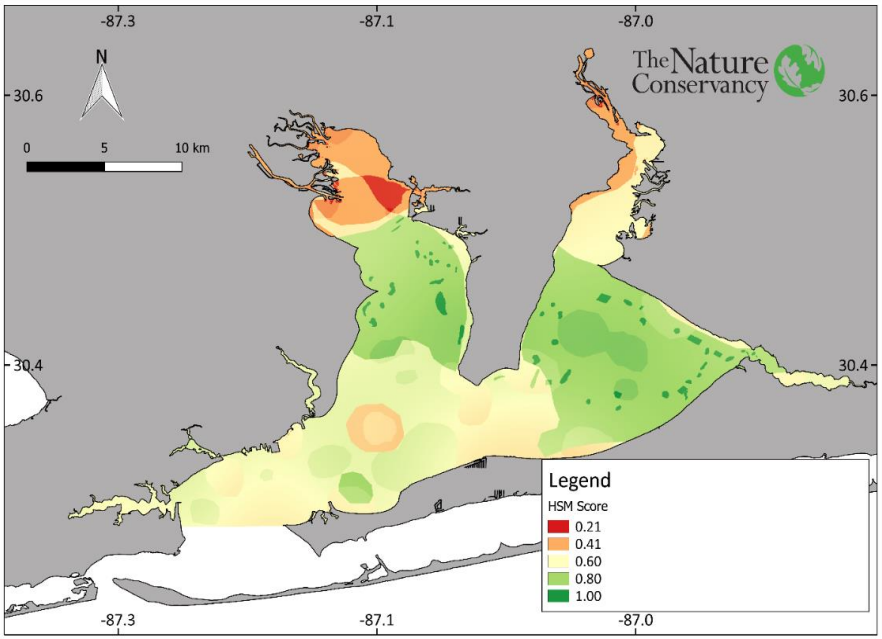
"Pensacola Bay provides appropriate salinity and temperature ranges for oyster habitat."

"There are an estimated 95-99 ha (235-245 ac) of oyster reef within Pensacola Bay."

"Water quality in the bay improved significantly since the passage of the Clean Water Act and implementation of best land-use practices within the watershed"

https://myfwc.com/media/21768/oimmp-report-2019.pdf

Recently Completed Project Informing SRC Oyster Reef Mapping: Pensacola Bay System Oyster Habitat Suitability Analysis



Pensacola Bay System Oyster Habitat Suitability Model Results
(the higher the score, the more suitable)

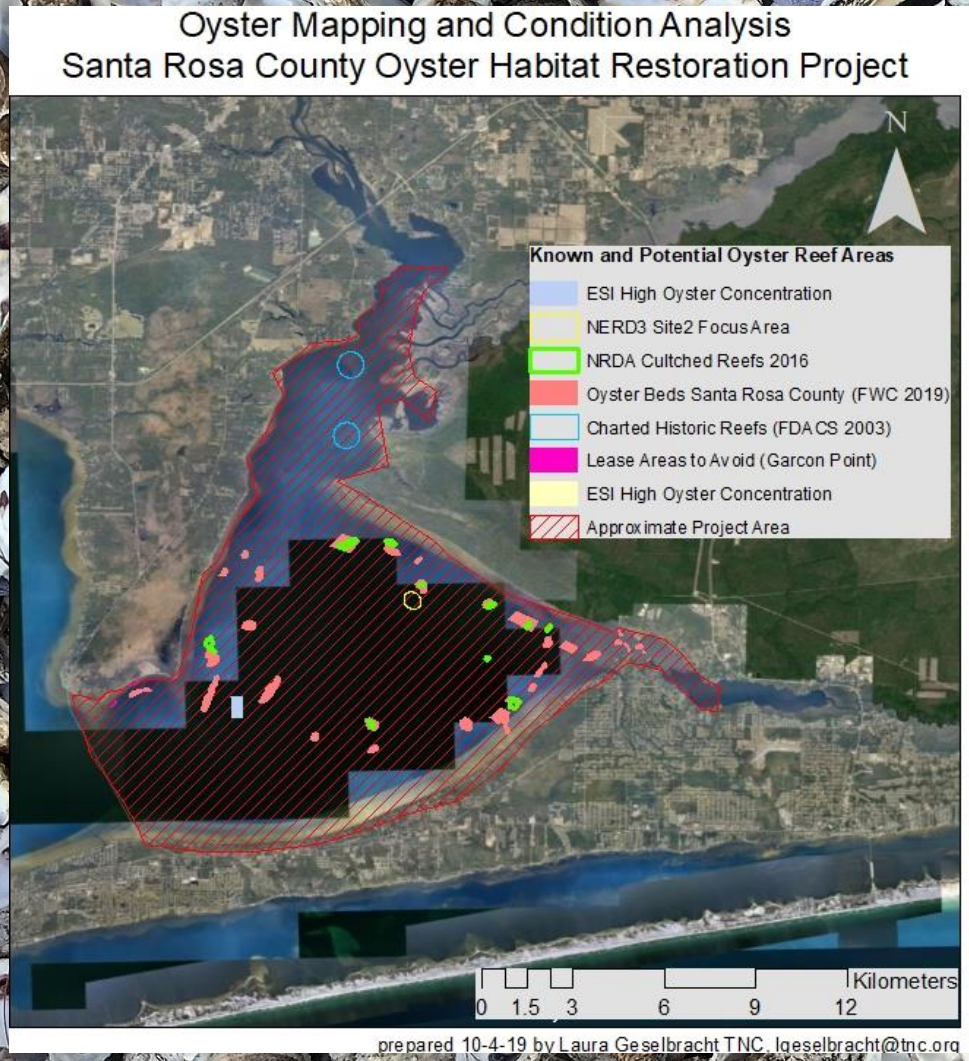
Factors Included:

- Present-Day Oyster Beds
- Historical Oyster Beds
- Dissolved Oxygen
- Seagrass
- Salinity
- Larval Recruitment
- Sediments

Component	Factor	Reference	Model Scoring
Biological, Chemical And Physical	Present-Day Oyster Beds	FWRI	Reefs Present = 1 Reefs Absent = 0
	Historical Oyster Beds	US Fish Commission	Reefs Present = 1 Reefs Absent = 0
	Dissolved Oxygen	EPA	DO Conc. < 2 mg/l = 0 DO Conc. ≥ 2 mg/l = 1
	Seagrass	FWRI	Seagrass Present = 0 Seagrass Absent = 1
	Sediments	EPA	Mud = 0 Muddy Sand = 0.25 Sand = 0.5
	Salinity	EPA	S < 5 = 0.5 S ≥ 5 = 1.0
	Recruitment	Arnold et al. 2017	variable from 0 -1
Avoidances	Aquaculture and Shellfish Lease Areas in the Study Area	FDACS	N/A
	Navigation channels	NOAA	N/A

Technical Report available soon

Oyster Reef Mapping and Condition Analysis in Santa Rosa County



- Side scan sonar surveys of:
  - Known & potential oyster reef areas in East Bay, and
  - Entire study area portions of Blackwater Bay and the Lower East Bay River
- Condition assessment on identified reefs
- Identification of potential intertidal oyster reefs from aerial photography and ground truthing/condition assessment.
- Sub-bottom profiling at 3 historic reef sites.

- Contractor selected
- Scope of work/contract completed soon
- Work set to begin in November 2019
- Work scheduled for completion by 2021

Funding for this project is provided by Santa Rosa County and the RESTORE Act

Any questions?
lgeselbracht@tnc.org

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