

Oyster Integrated Mapping and Monitoring Program (OIMMP) and Florida Oyster Recovery Science (FORS) Workshop

10-11 May 2022

Florida Fish and Wildlife Conservation Commission

Fish and Wildlife Research Institute





Workshop Purpose

- Increase communication for oyster mapping and monitoring methodology, gaps, needs, and population status
- Improve data sharing among mapping and monitoring efforts, OIMMP, and FORS
- Opportunity for oyster community to connect (or re-connect!)

Who are we?

Workshop organizers:

OIMMP



Kara Radabaugh FWC Fish and Wildlife Research Institute



Ryan P. Moyer FWC Fish and Wildlife Research Institute



Steve Geiger FWC Fish and Wildlife Research Institute

FORS



Katie Konchar FWC Habitat and Species Conservation



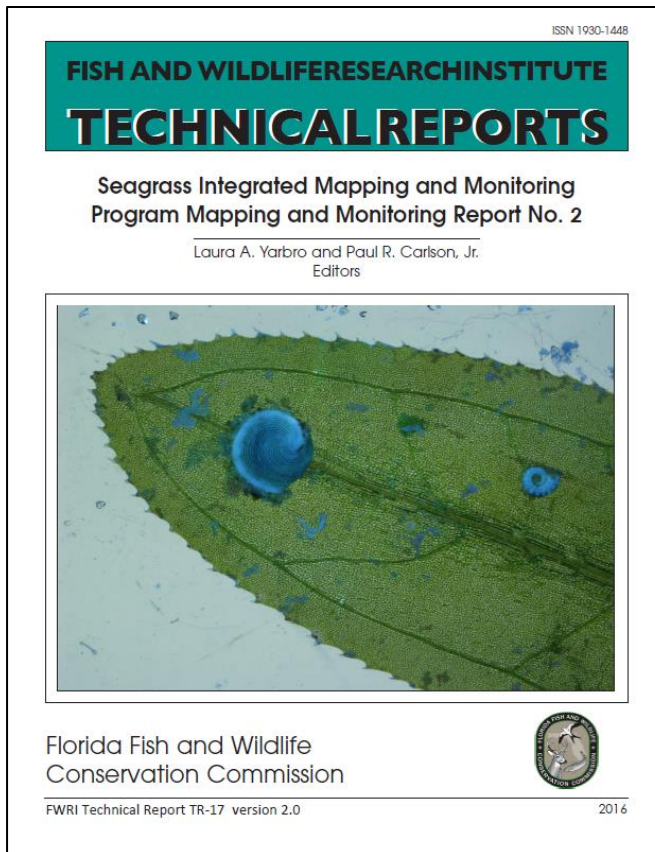
What is OIMMP?

OIMMP Goals:

- **Inventory existing mapping and monitoring programs in FL**
 - Create statewide map and report
- **Bring together representatives from mapping and monitoring programs across the state**
 - Increase communication
 - Compare methods
 - Identify data gaps and priorities
- **Complete small-scale oyster mapping and monitoring**

IMMP Origins

- Seagrass Integrated Mapping and Monitoring (SIMM) program
<https://myfwc.com/research/habitat/seagrasses/projects/active/simm/>
- Coastal Habitat Integrated Mapping and Monitoring Program (CHIMMP)
<https://myfwc.com/research/habitat/coastal-wetlands/projects/chimmp/>



Email kara.radabaugh@myfwc.com to join CHIMMP email list

OIMMP Team

- Kara Radabaugh (PI, coordinator)
- Ryan P. Moyer (co-PI)
- Steve Geiger (co-PI)

GIS support: Christi Santi, LaTosha Tompson

Past and present support: C. Scott Adams, William Arnold, Joshua Breithaupt, Amanda Chappel, Casey Craig, Bland Crowder, Emily Dontis, Savanna Hearne, Emily Ritz, Caroline Gorga, Robin Grunwald, Kathleen O'Keife, Melanie Parker, Sam Roussopoulos, Christine Russo, Emma Wennick, Amber Whittle

OIMMP includes many statewide collaborators!



OIMMP Workshops

- Past workshops held in 2017, 2018, and 2019
- Past workshop presentations available on OIMMP website <https://ocean.floridamarine.org/OIMMP/>



Funding Acknowledgment



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Additional funding for OIMMP provided by FDEP's Coastal Zone Management Program



FDEP FCZM funding by a grant provided by the Office of Ocean and Coastal Resource Management under the Coastal Zone Management Act of 1972, as amended, National Oceanic and Atmospheric Administration Award No. NA16NOS4190120. The views, statements, findings, conclusions and recommendations expressed herein are those of the authors and do not necessarily reflect the views of the State of Florida, NOAA, the U.S. Department of Commerce, or any of their subagencies.

OIMMP Report

ISSN 1930-1448

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

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



Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Technical Report No. 22 • 2019
MyFWC.com

- Compilation of statewide mapping and monitoring data
- “Literature review” rather than database
- Primary focus on natural oyster habitats
- Coauthors include local oyster researchers

OIMMP Regional Chapters



- Regional maps
- Introduction to regional history/ecology, description of local oysters
- Threats to oyster reefs
- Summary of select mapping and monitoring programs
- Recommendations for management, mapping, and monitoring



OIMMP Regional Chapters

[Home](#) > [FWRI](#) > [Habitat Research](#) > [Coastal Wetlands](#) > [Coastal Habitat Projects](#) > [Oyster Integrated Mapping and Monitoring Program \(OIMMP\)](#)

Oyster Integrated Mapping and Monitoring Program (OIMMP)

Oyster Integrated Mapping and Monitoring Program Report

[View complete report](#)

View Individual Chapters

[Title page, acknowledgements, contributors, and executive summary](#)

[Chapter 1: Introduction](#)

[Chapter 2: Northwest Florida](#) (version 2.0, added 3/2022)

[Chapter 3: Apalachicola Bay](#) (version 2.0, added 6/2021)

[Chapter 4: Big Bend and Springs Coast](#) (version 2.0, added 6/2021)

[Chapter 5: Tampa and Sarasota Bays](#)

[Chapter 6: Southwest Florida](#) (version 2.0, added 2/2022)

[Chapter 7: Southeast Florida](#)

[Chapter 8: Central Eastern Florida](#)

[Chapter 9: Northeast Florida](#)

[Chapter 10: Conclusions and Recommendations](#)

[Chapter 11: Fish and Wildlife Research Institute Oyster Monitoring Procedures](#) (version 2.0, added 10/2021)

[Appendices: Historical yields of the Florida oyster fishery, abbreviations, and species list](#)

Version 2 of OIMMP
Report underway
Chapter updates
published online
<https://myfwc.com/research/habitat/coastal-wetlands/projects/oimmp/>

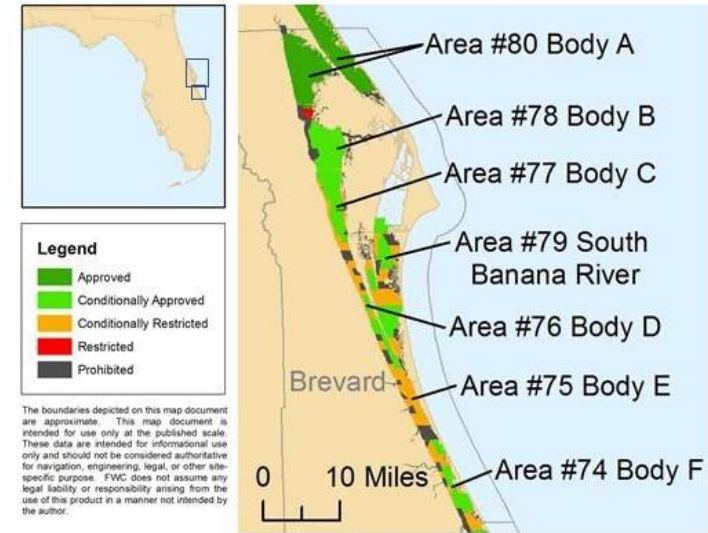
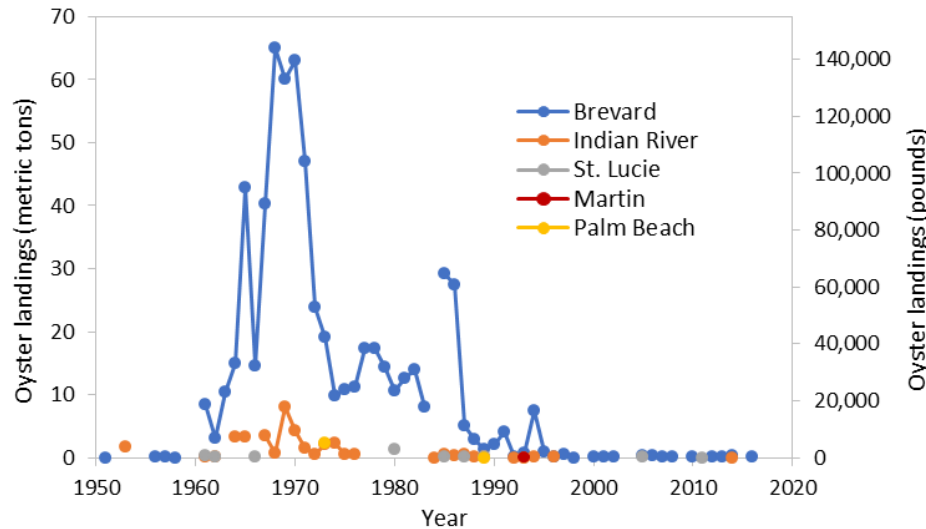
Monitoring methods chapter



- New (2021) chapter of OIMMP report
- Manual of FWRI Standard Operating Procedures
 - Oyster size and density
 - Spat monitoring
 - Disease and reproduction
 - Condition index
 - Shell pests
 - Growth and mortality
 - Shell budget



Commercial Harvest Data



- OIMMP report includes map of shellfish harvest areas and annual oyster landings
- 1950 – 1983 commercial harvest data from summary of Florida commercial marine fish landings. Data are available in OIMMP Report Appendix A and at <https://ocean.floridamarine.org/OIMMP/>
- 1984 – present commercial harvest data available from <https://public.myfwc.com/FWRI/PFDM/ReportCreator.aspx>

Oyster Beds in Florida Map



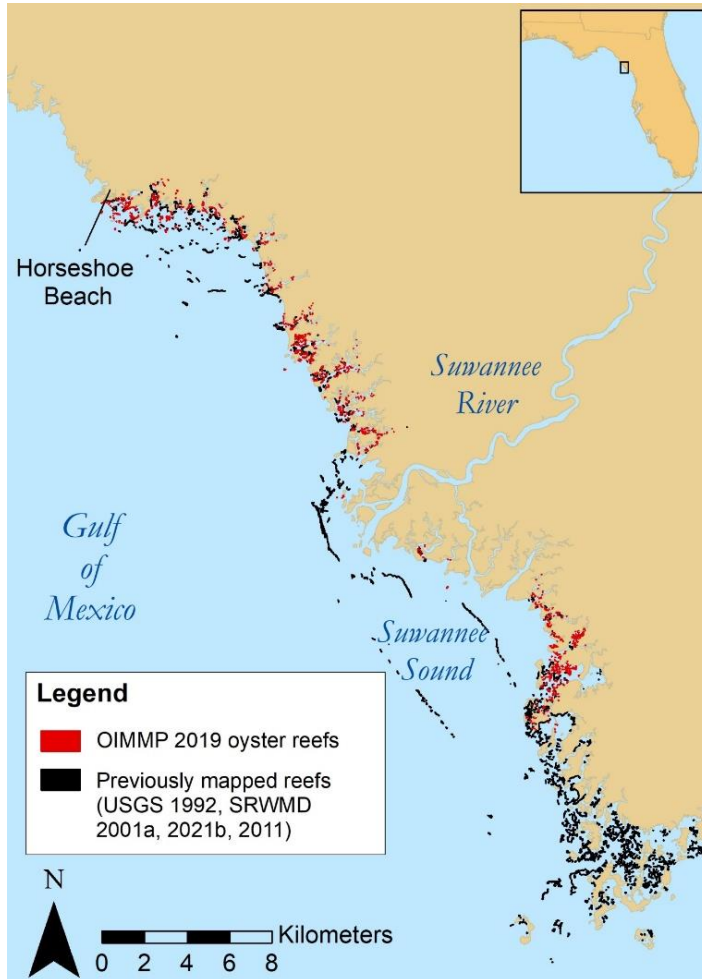
Statewide oyster map available for viewing and download at:

<http://geodata.myfwc.com/datasets/oyster-beds-in-florida>

Map is a compilation of many local oyster mapping efforts

Layer updated as new data sources become available

OIMMP Mapping and Monitoring



- Three mapping efforts completed to fill mapping gaps
- Several pilot monitoring studies
 - Methods comparisons (FWRI vs. NE FL methods, in situ vs. removal monitoring)



Questions or comments?



<https://myfwc.com/research/habitat/coastal-wetlands/projects/oimmp/>
<https://ocean.floridamarine.org/OIMMP/>

Statewide oyster map updates and plans

Kara Radabaugh

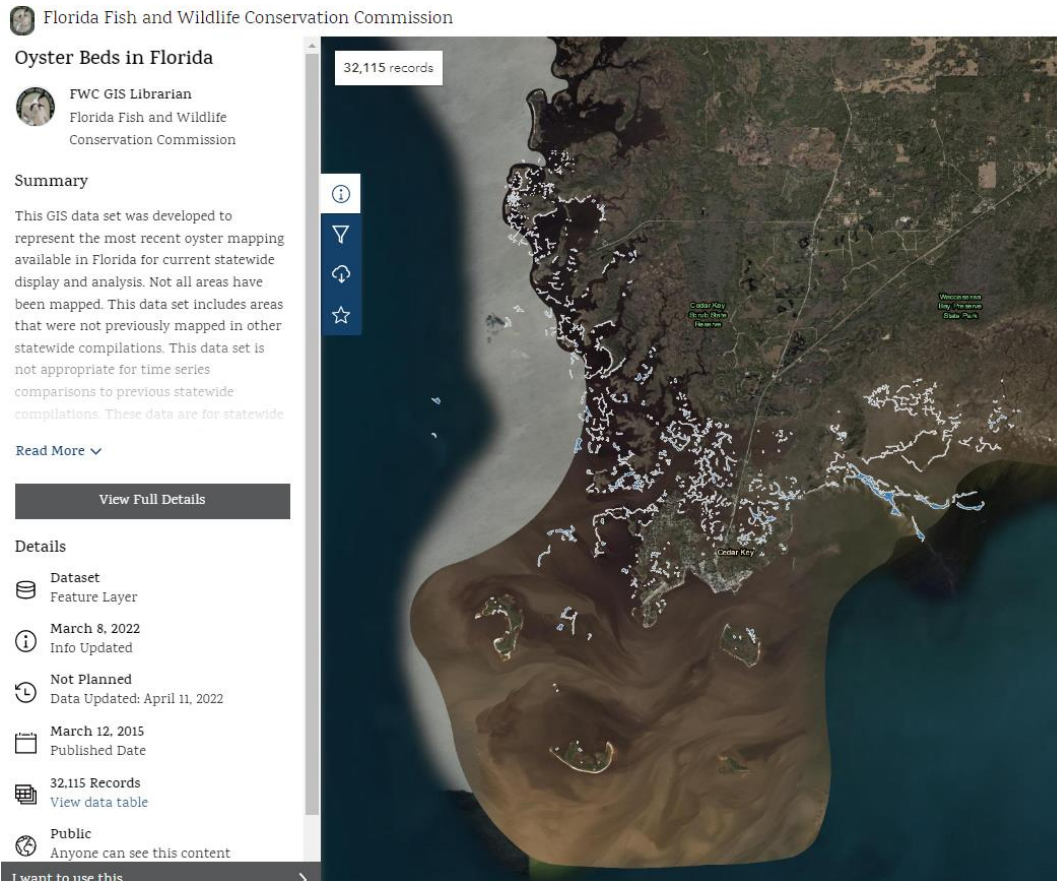
OIMMP/FORS Workshop

11 May 2022

Fish and Wildlife Research Institute



Oyster Beds in Florida Map

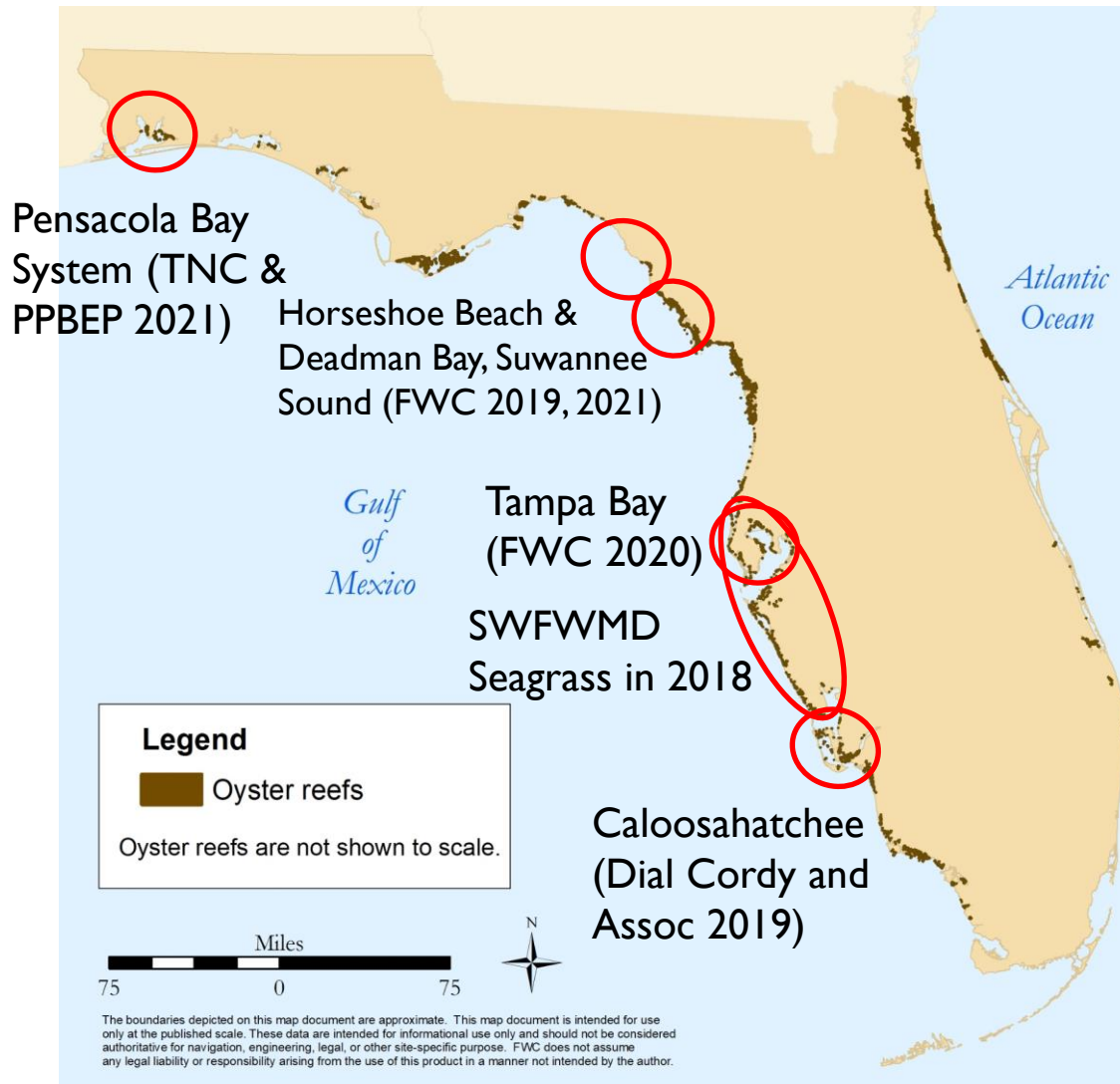


Statewide map of live oyster reefs available for download as shapefile, kml, and in browser interface at

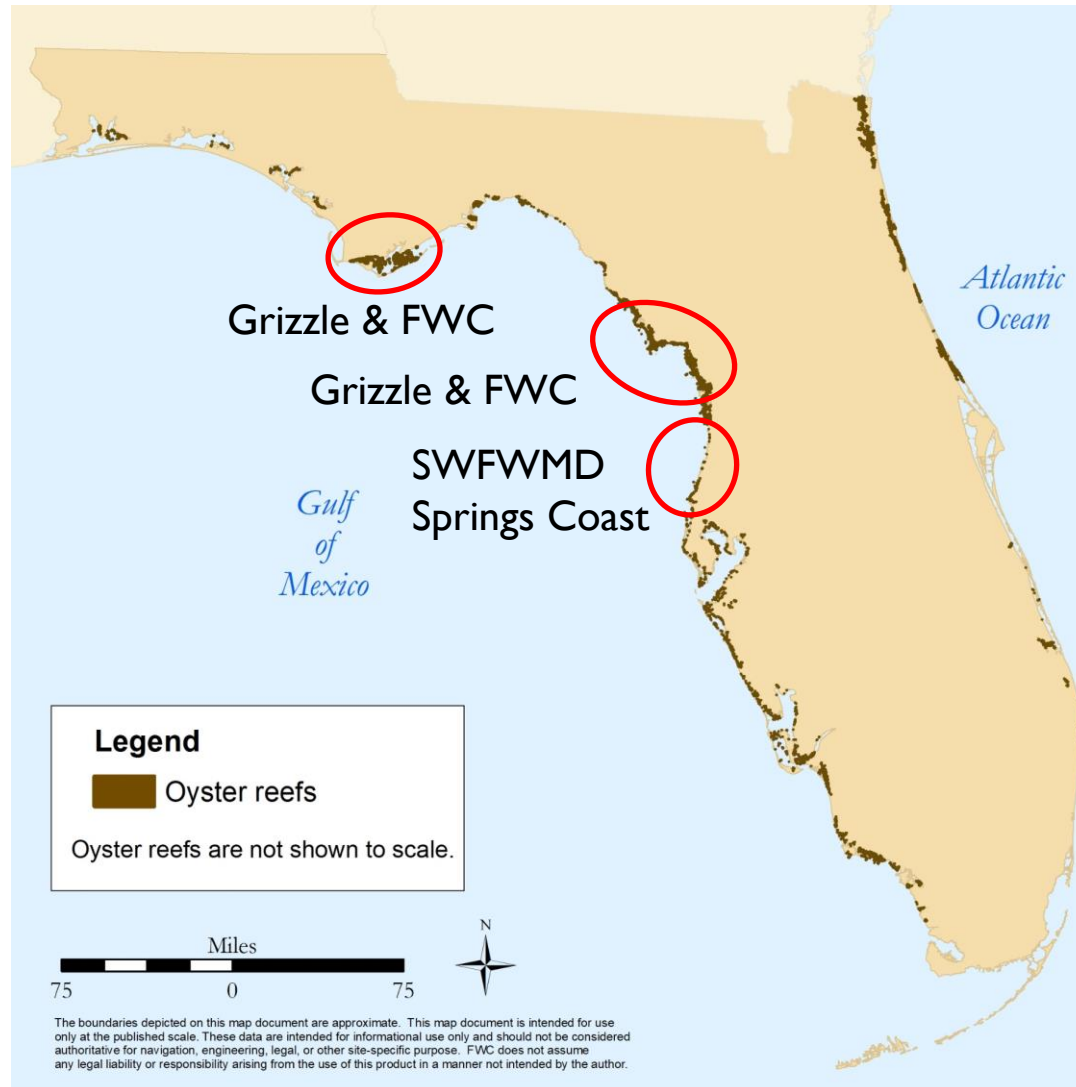
<http://geodata.myfwc.com/datasets/oyster-beds-in-florida>



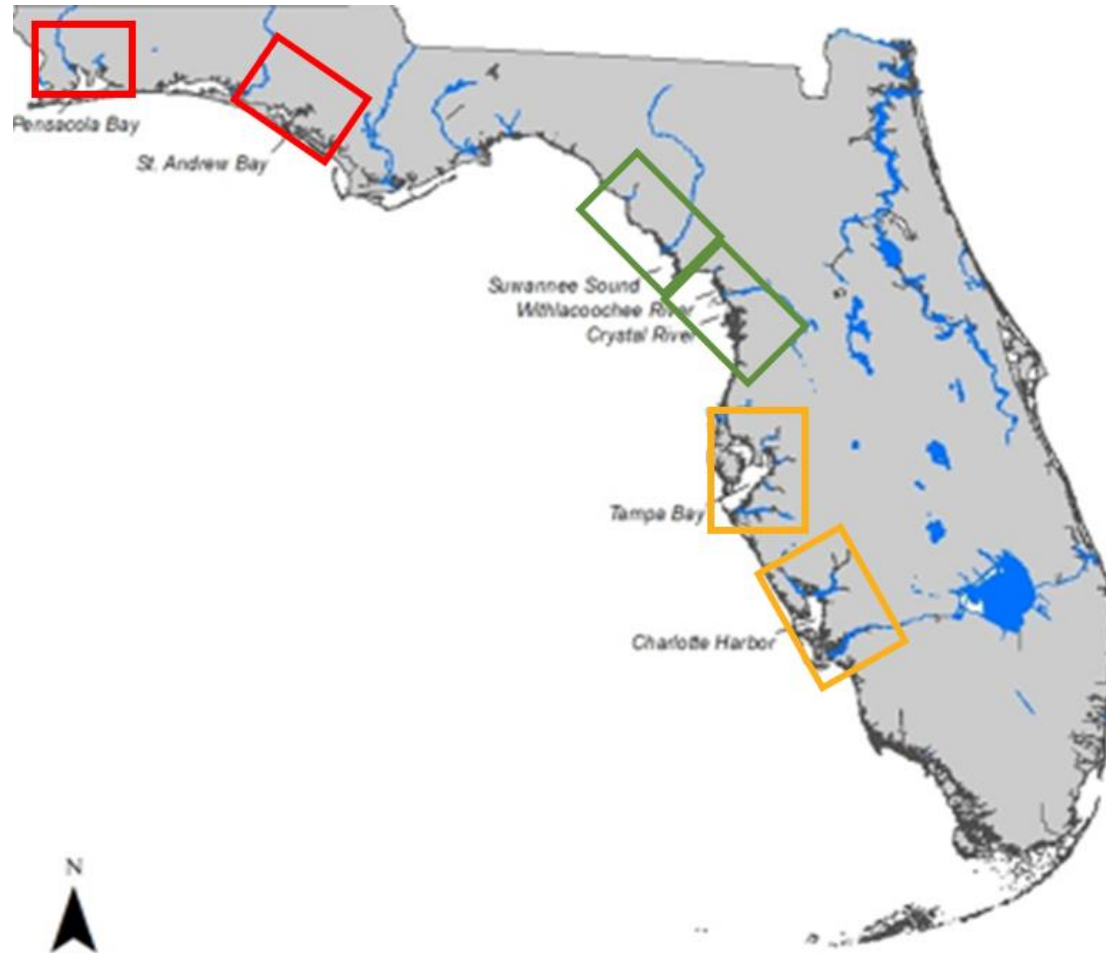
Updates since 2019



Future 2022 updates



Planned TIG mapping 2022-2025



Priority mapping gaps



Limitations of statewide map

- Old maps no longer easily accessible when replaced by new maps
- Complete maps may not be visible
 - Maps are clipped if they overlap with adjacent mapping efforts
- Map of live reefs only
 - Some projects map dead reefs/loose shell or vegetation



Photo credit: Nikki Dix




Index of oyster maps

- Coming in 2023: Index of all oyster maps
 - Past and present
 - Total mapped extent
 - Categories mapped (dead vs. live reef, vegetation, etc.)
 - Where to download shapefile and report citation



Restoration Breakout Groups

- 
1. What are the main stumbling blocks for large-scale oyster restoration in Florida, and what can we do to address them?
 2. What are the recurring challenges in the permitting process?
 3. What are the most important metrics for evaluating new oyster restoration materials? How can we work to make these metrics comparable across materials/projects?
 4. What are the primary threats to oysters and oyster restoration going to be in the next decade?
 5. How are you or your institutions addressing interactions with other species/resources that may create challenges for restoration actions (e.g., sawfish, horseshoe crabs, shorebirds, archeological resources)?

OIMMP

- Led by FWC Fish and Wildlife Research Institute
- Started in 2016
- Grant funded (SWG, DEP)
- Mapping and monitoring focus (but inclusive of other topics)
- Statewide report with ongoing updates
- Ongoing mapping compiling and gap filling
- Pilot monitoring programs
- Workshops 2017-2022
- Websites, email list

**FWC with
partners**

**Shared
members**

**Aim to improve
communication**

**Promote
collaboration and
oyster data
sharing**

**2022
workshop**

FORS

- Facilitated by FWC Habitat and Species Conservation
- Started in 2019
- Not grant funded
- Recovery and management science focus
- Science-based guidance (mapping, monitoring, modeling, ecosystem services quantification & restoration)
- Working subcommittees
- Ongoing community of practice
- Quarterly online meetings



What's next?

- Continue updating OIMMP chapters and filling data gaps
- Complete mapping index
- Send recent publications to kara.radabaugh@myfwc.com for distribution on OIMMP email list
- Please share maps to update statewide map
- TIG mapping, monitoring, HSI

Workshop Conclusion

Thank you for coming!

