



*Marine Spatial Planning For Offshore
Aquaculture In Florida:
A First Look At Potential Options For Siting In
The Gulf Of Mexico*

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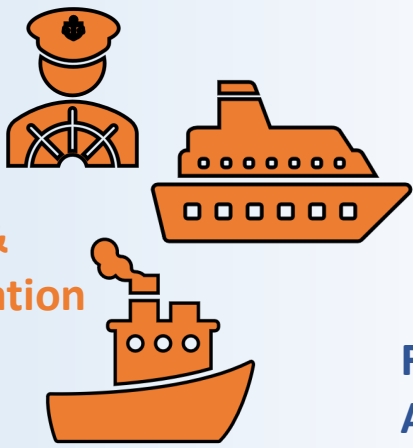
Co-Authors: Charlie M. Culpepper III, Portia Sapp,
Lisa Wickliffe, Jonathan Jossart, James Morris Jr., and
Kenneth Riley

Aquaculture America
March 2, 2022



Marine spatial planning is understanding and **planning for multiple uses** of coastal & ocean space

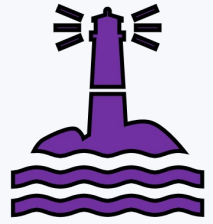
Shipping & Transportation



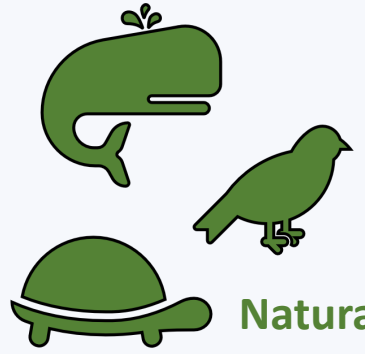
Fishing & Aquaculture



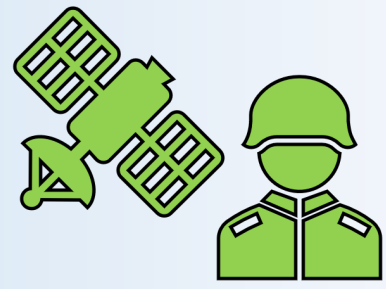
Cultural Resources & Communities



Natural Resources



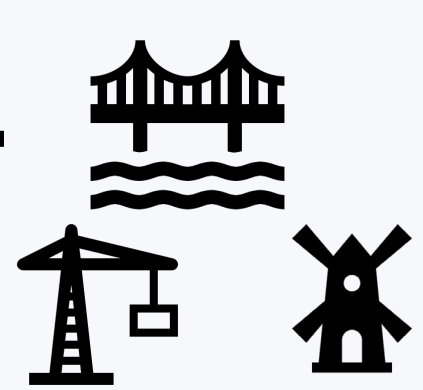
National Security/Military



Recreation & Tourism



Infrastructure & Energy





Where might we plan to site offshore aquaculture operations in the future?

“Aquaculture Spatial Planning in Florida: A Pilot Study to Assess Potential Offshore Aquaculture Zones along Florida’s Gulf Coast”



NCCOS

Kenneth L. Riley, Lisa C. Wickliffe,
Jonathan A. Jossart, and James A. Morris, Jr.

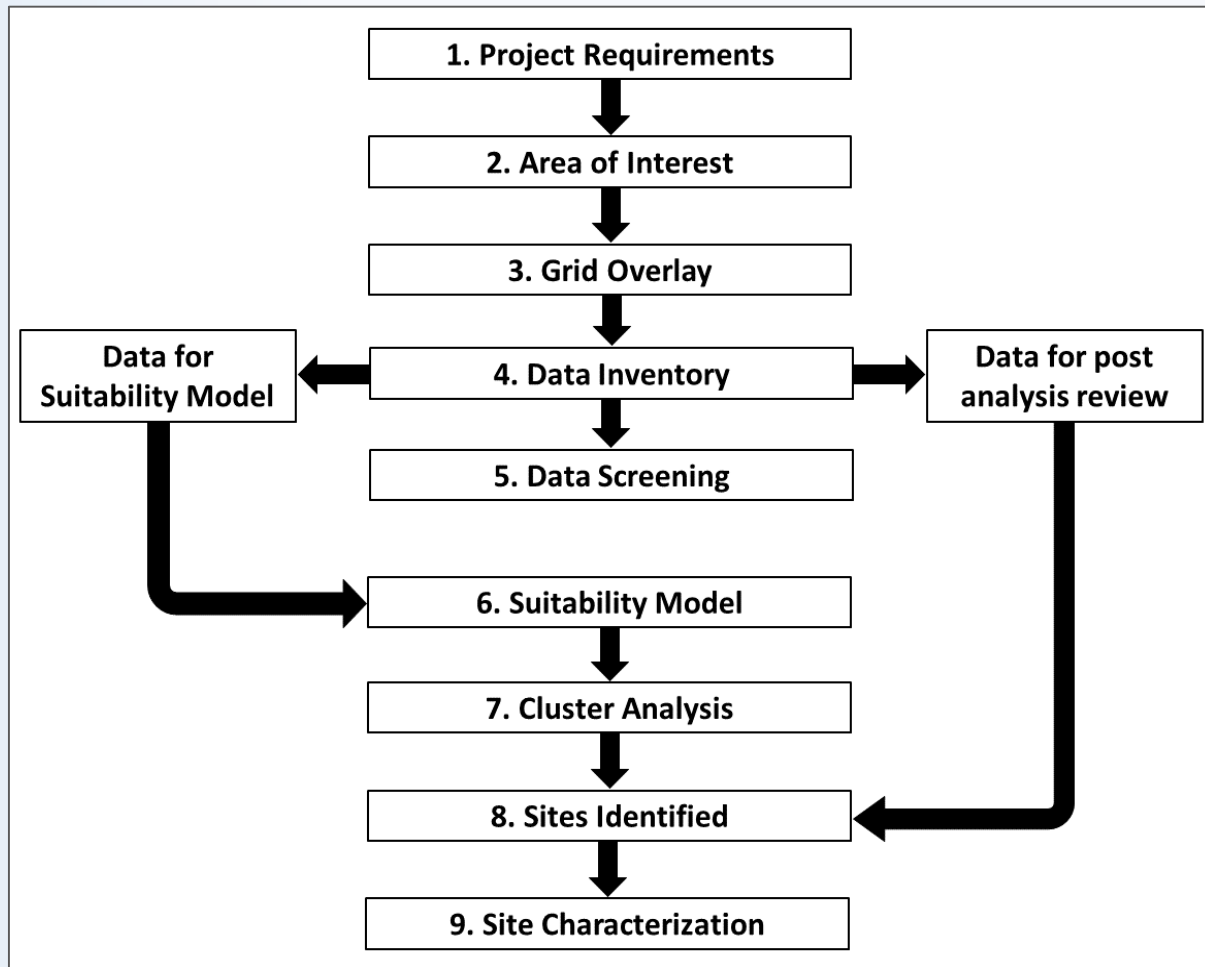


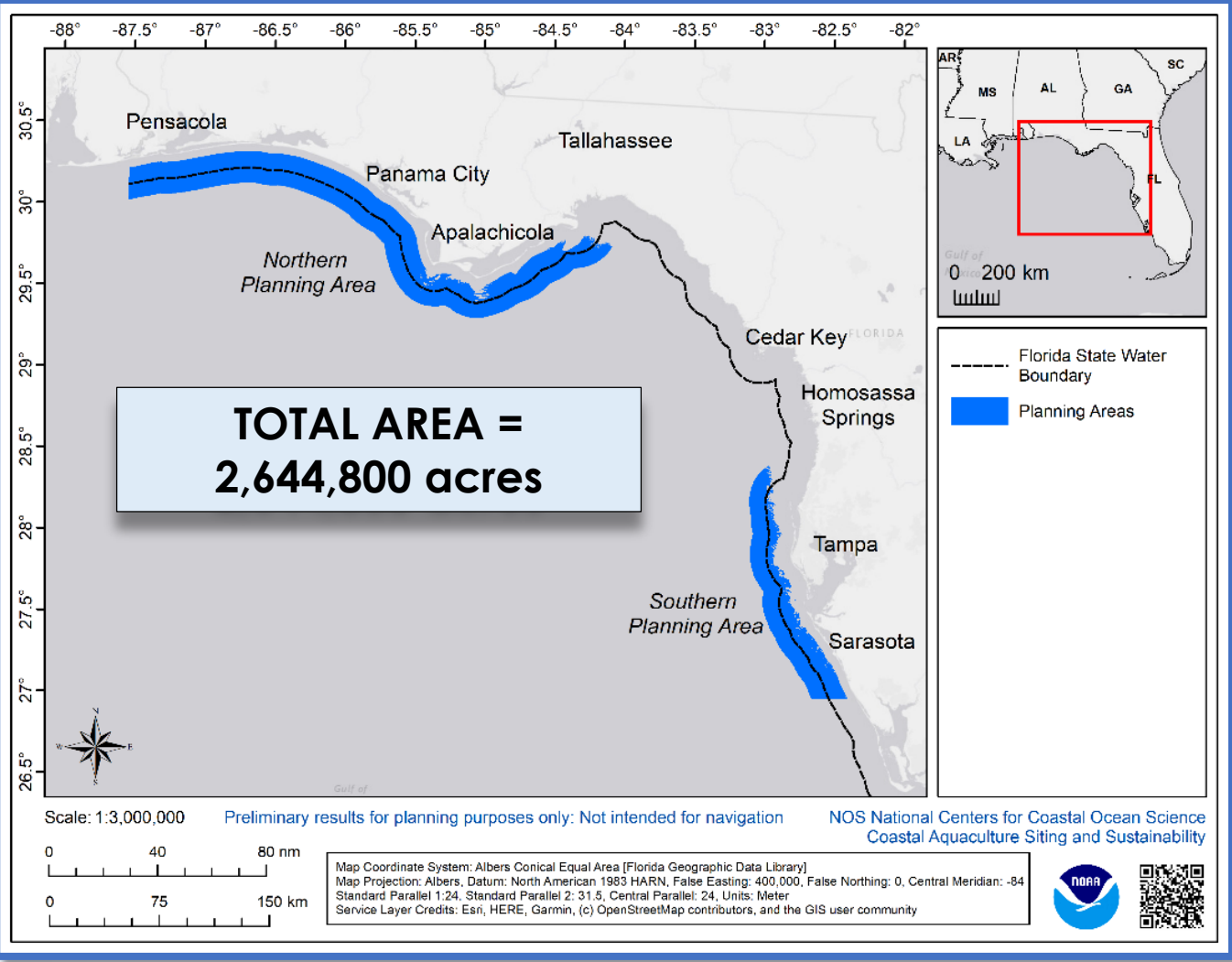
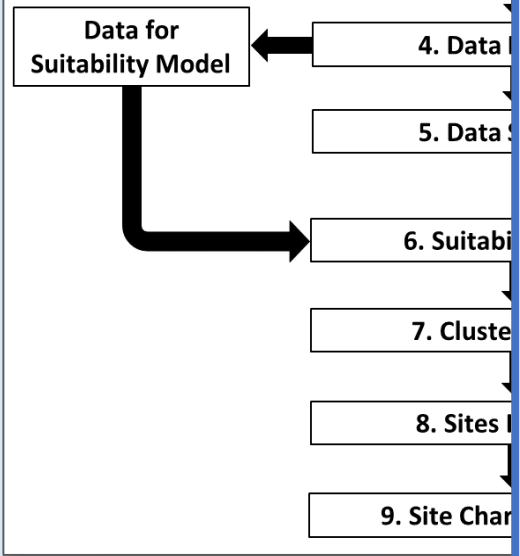
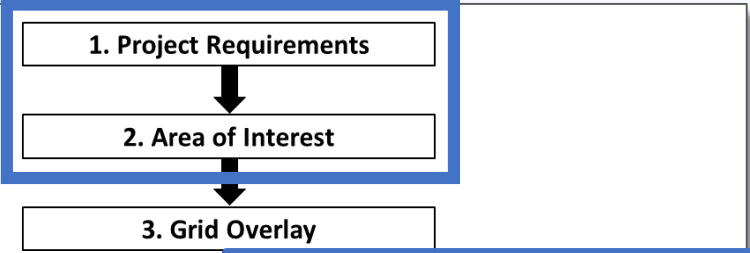
Marcy L. Cockrell, Charlie M. Culpepper III,
Portia Sapp, and Sarah Wander

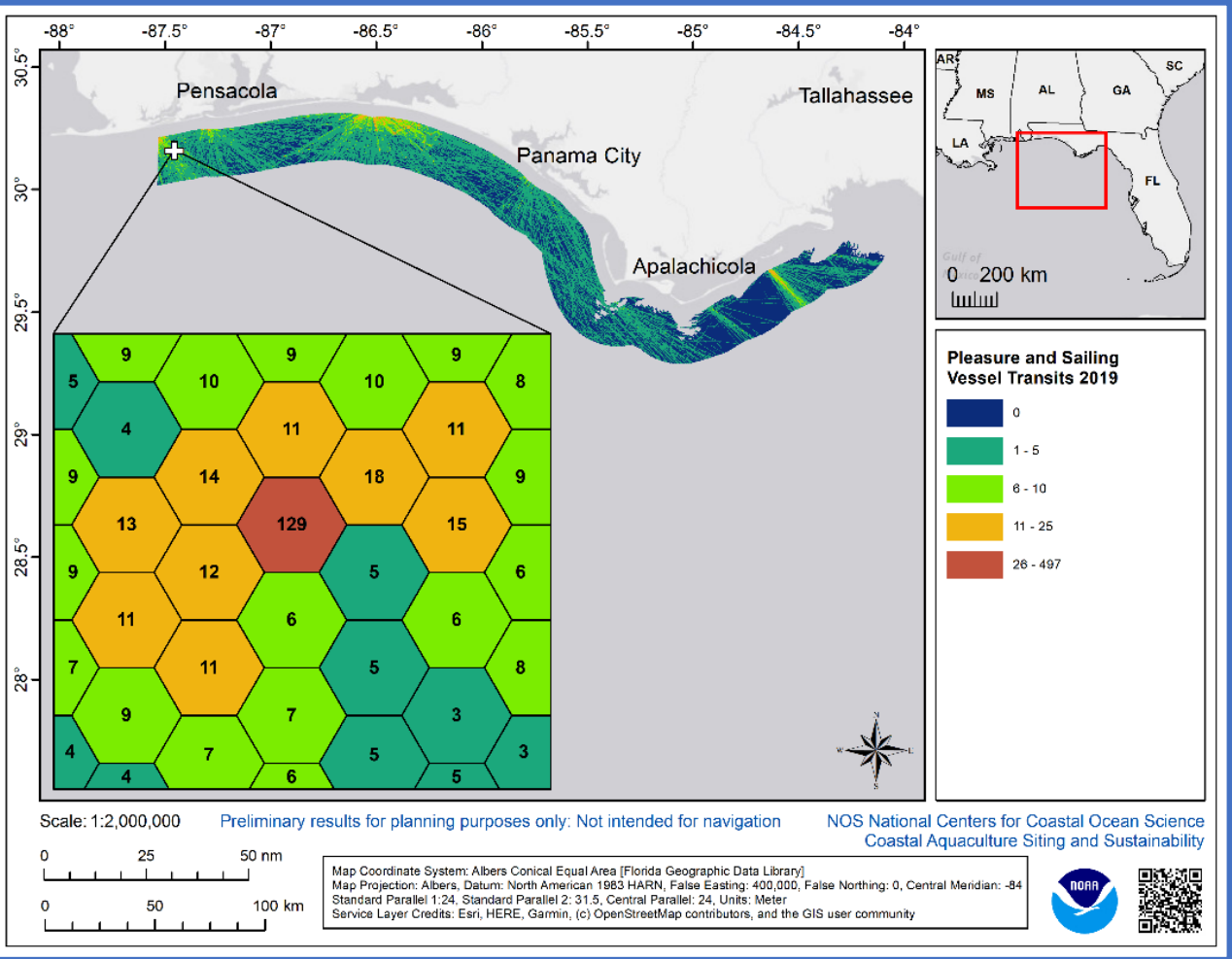
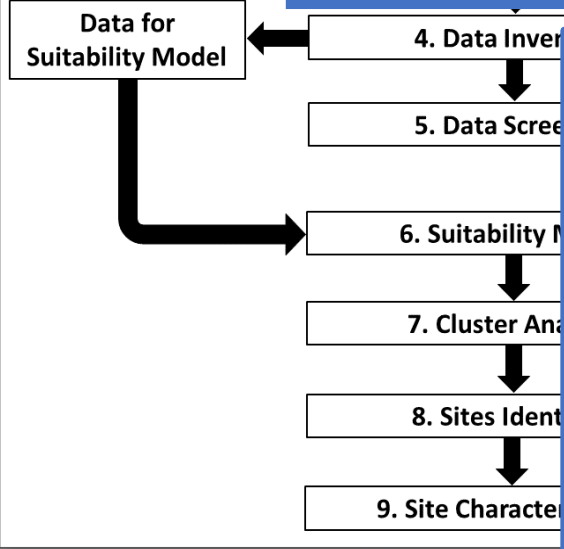
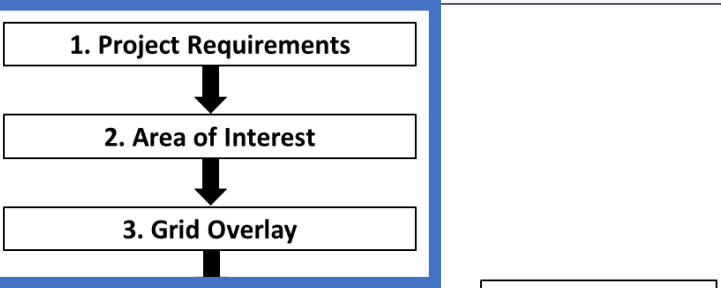


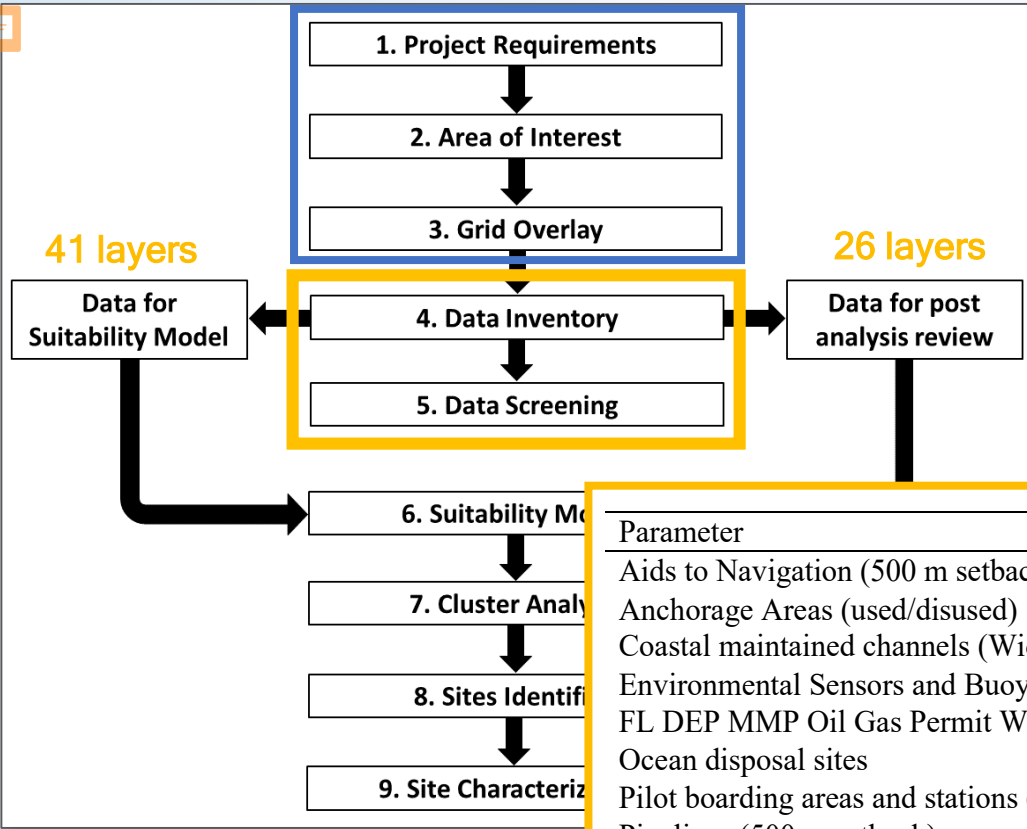
**This is not the federal AOA process, although it is analogous*

Where might we plan to site offshore aquaculture operations in the future?





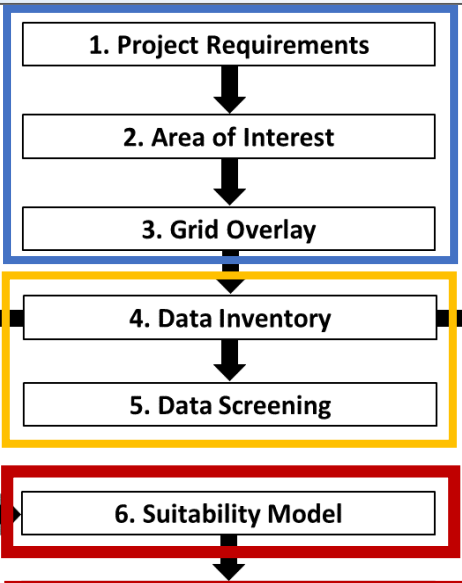




Example: Industry & Navigation Data

Parameter	North	South	Score
Aids to Navigation (500 m setback)	x	x	0
Anchorage Areas (used/disused)	x	x	0
Coastal maintained channels (Width and 1/2 setback)		x	0
Environmental Sensors and Buoys (500 m setback)	x	x	0
FL DEP MMP Oil Gas Permit Wells (500 m setback)	x	x	0
Ocean disposal sites	x		0
Pilot boarding areas and stations (500 m setback)	x	x	0
Pipelines (500 m setback)		x	0
Sand and gravel areas	x	x	0
Sand lease areas unrestricted		x	0
Shipping fairways (500 m setback)	x	x	0
Vessel Traffic 2019 - Cargo	x	x	Numerical
Vessel Traffic 2019 - Tanker	x	x	Numerical
Vessel Traffic 2019 - Tug and Tow	x	x	Numerical
Vessel Traffic 2019 - Pleasure/Sailing Craft	x	x	Numerical
Vessel Traffic 2019 - Passenger	x	x	Numerical
Vessel Traffic 2019 - Other	x	x	Numerical
Vessel Traffic 2019 - Fishing	x	x	Numerical
Vessel Traffic 2019 - Military	x	x	Numerical





41 layers

Data for Suitability Model

26 layers

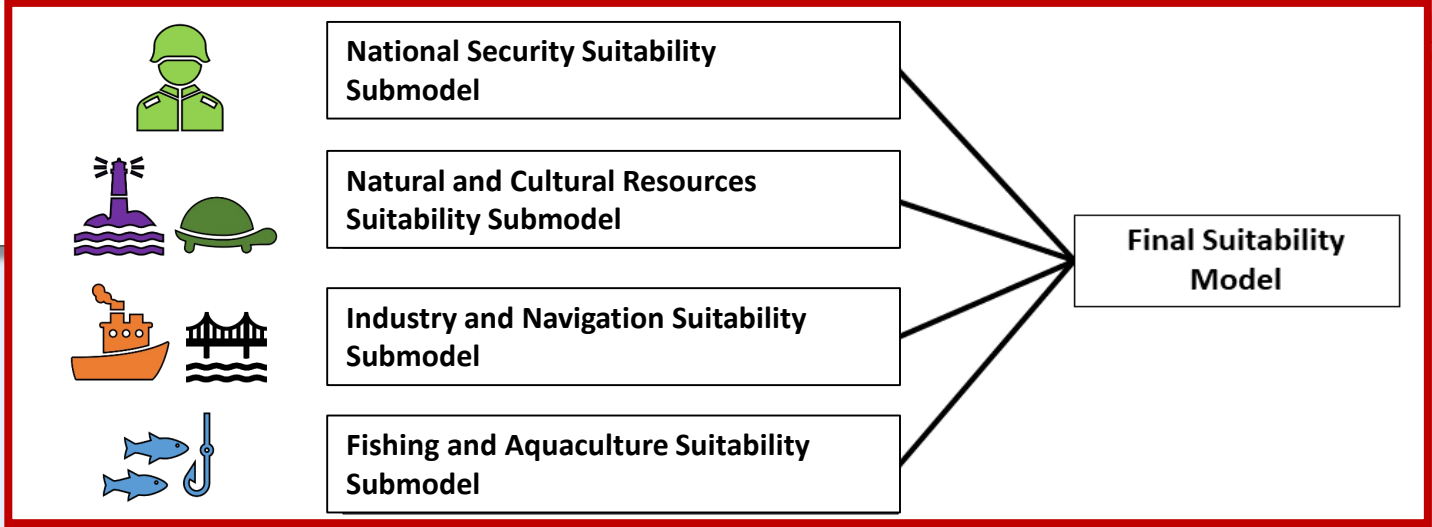
Data for post analysis review

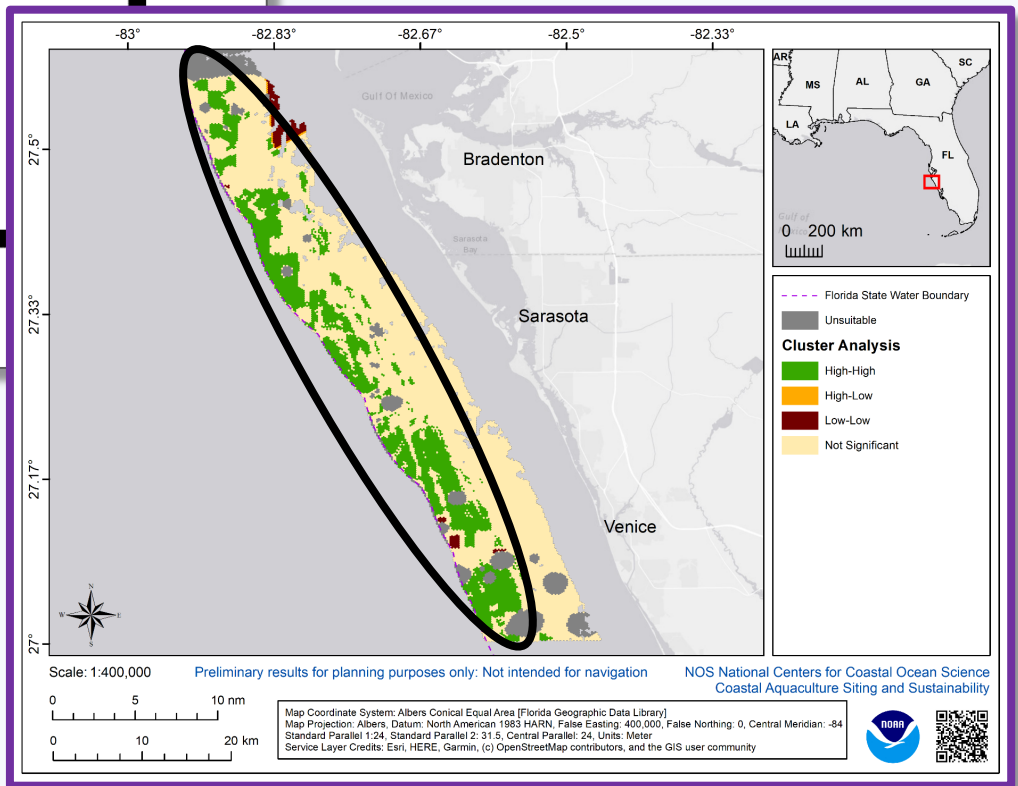
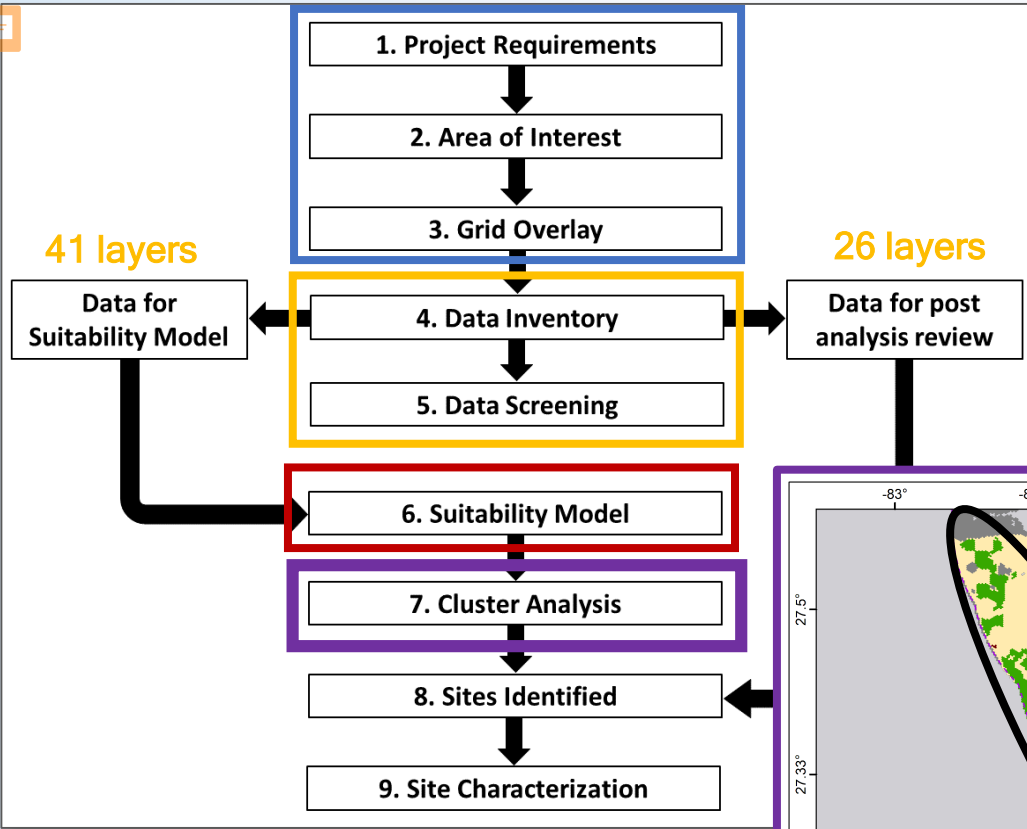
Parameter	North	South	Score
Individual Leases Aquaculture (500 m setback)	x		0
Live Rock Sites (500 m setback)	x	x	0
Head boat survey (2014-2020)	x	x	Numerical

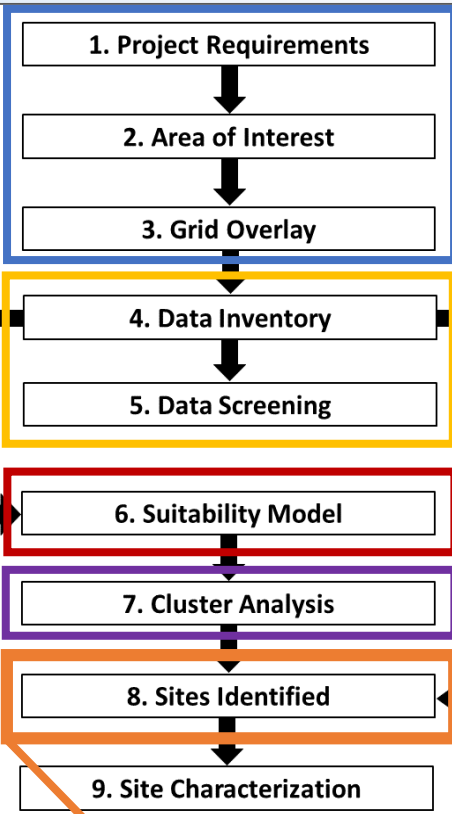
Parameter	North	South	Score
Danger Zones and Restricted Areas	x		0
Panama City Operating Area	x		0
Pensacola Operating Area	x		0.5
Unexploded Ordnance FUDs	x	x	0.5
Special Use Air space - W151A	x		0
Special Use Air space - W151B	x		0
Special Use Air space - W470A	x		0

Parameter	North	South	Score
Archeologically important sites	x		0
Artificial reefs (500 ft or 152.4 m setback)	x	x	0
Fish haven (500 ft or 152.4 m setback)	x	x	0
FL Parks SS Tarpon Preserve	x		0
FWC Potential coral hard bottom	x		0
Shipwrecks and obstructions (500 ft)	x		0

Parameter	North	South	Score
Aids to Navigation (500 m setback)	x	x	0
Anchorage Areas (used/disused)	x	x	0
Coastal maintained channels (Width and 1/2 setback)	x	x	0
Environmental Sensors and Buoys (500 m setback)	x	x	0
FL DEP MMP Oil Gas Permit Wells (500 m setback)	x	x	0
Ocean disposal sites	x	x	0
Pilot boarding areas and stations (500 m setback)	x	x	0
Pipelines (500 m setback)	x	x	0
Sand and gravel areas	x	x	0
Sand lease areas unrestricted	x	x	0
Shipping fairways (500 m setback)	x	x	0





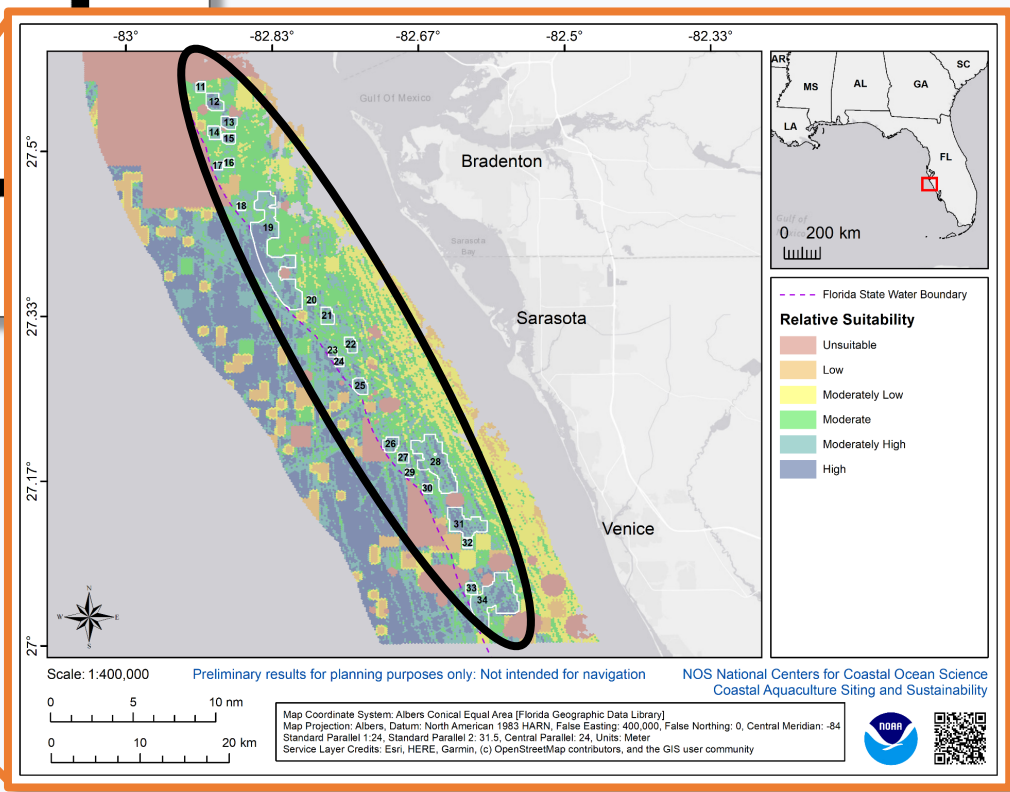
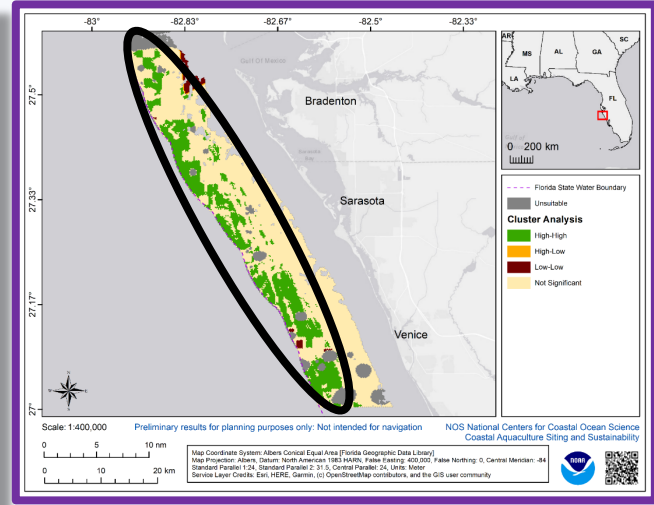


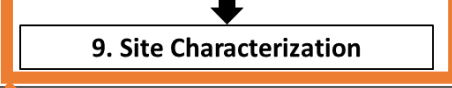
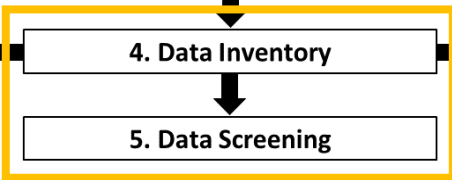
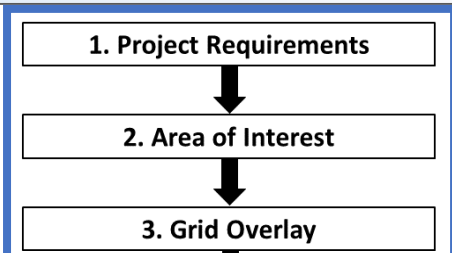
41 layers

Data for Suitability Model

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Data for post analysis review



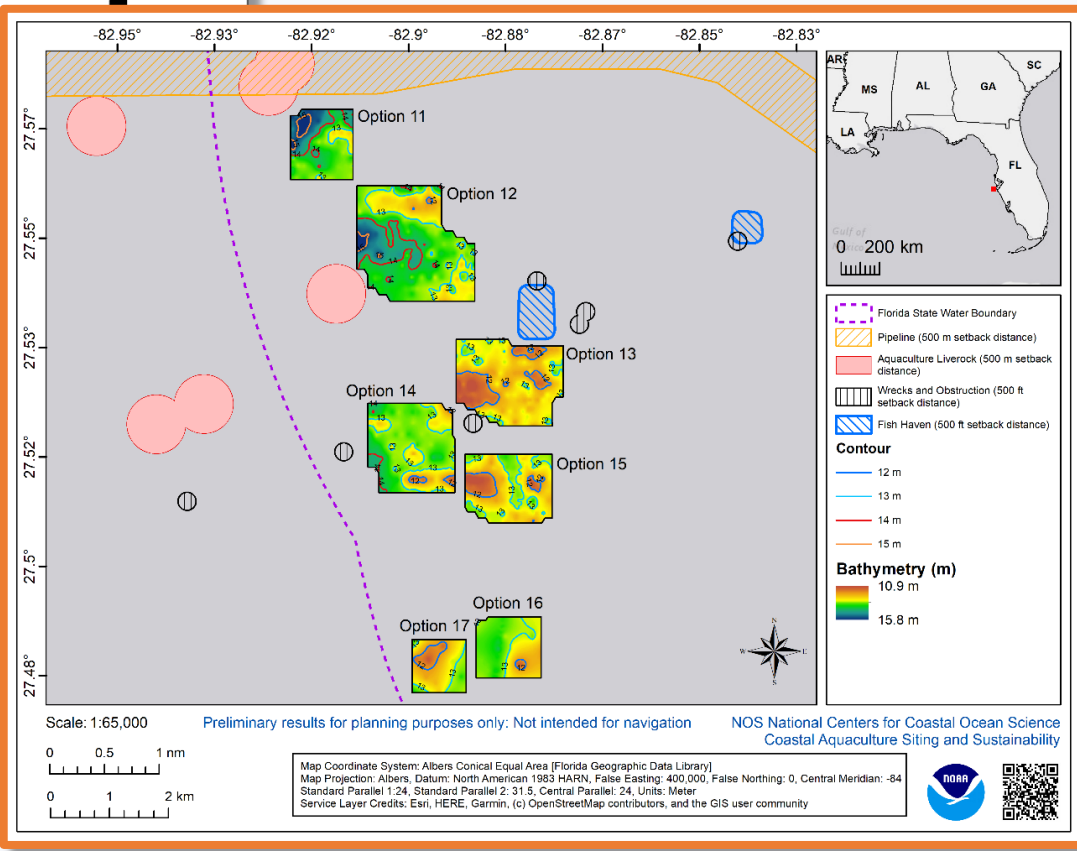
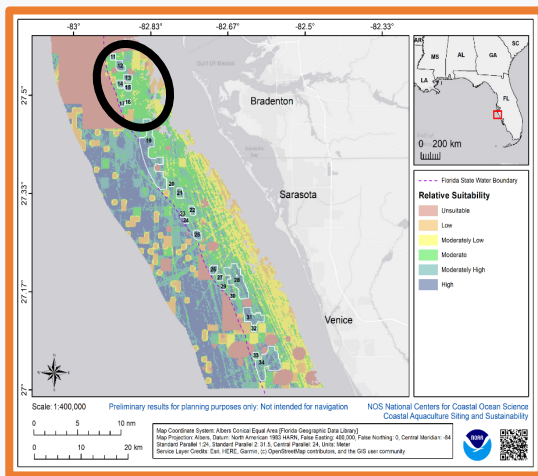


41 layers

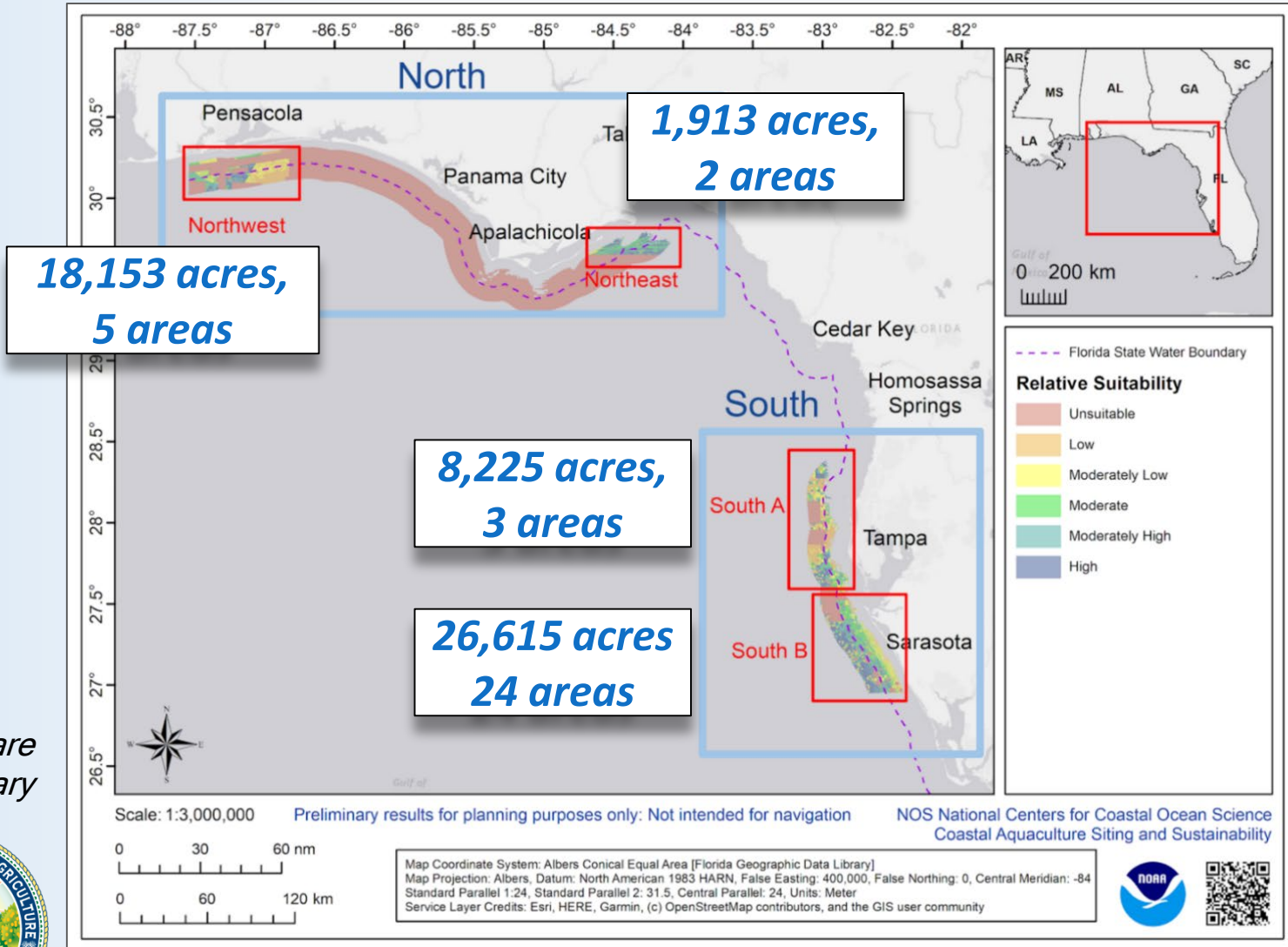
Data for Suitability Model

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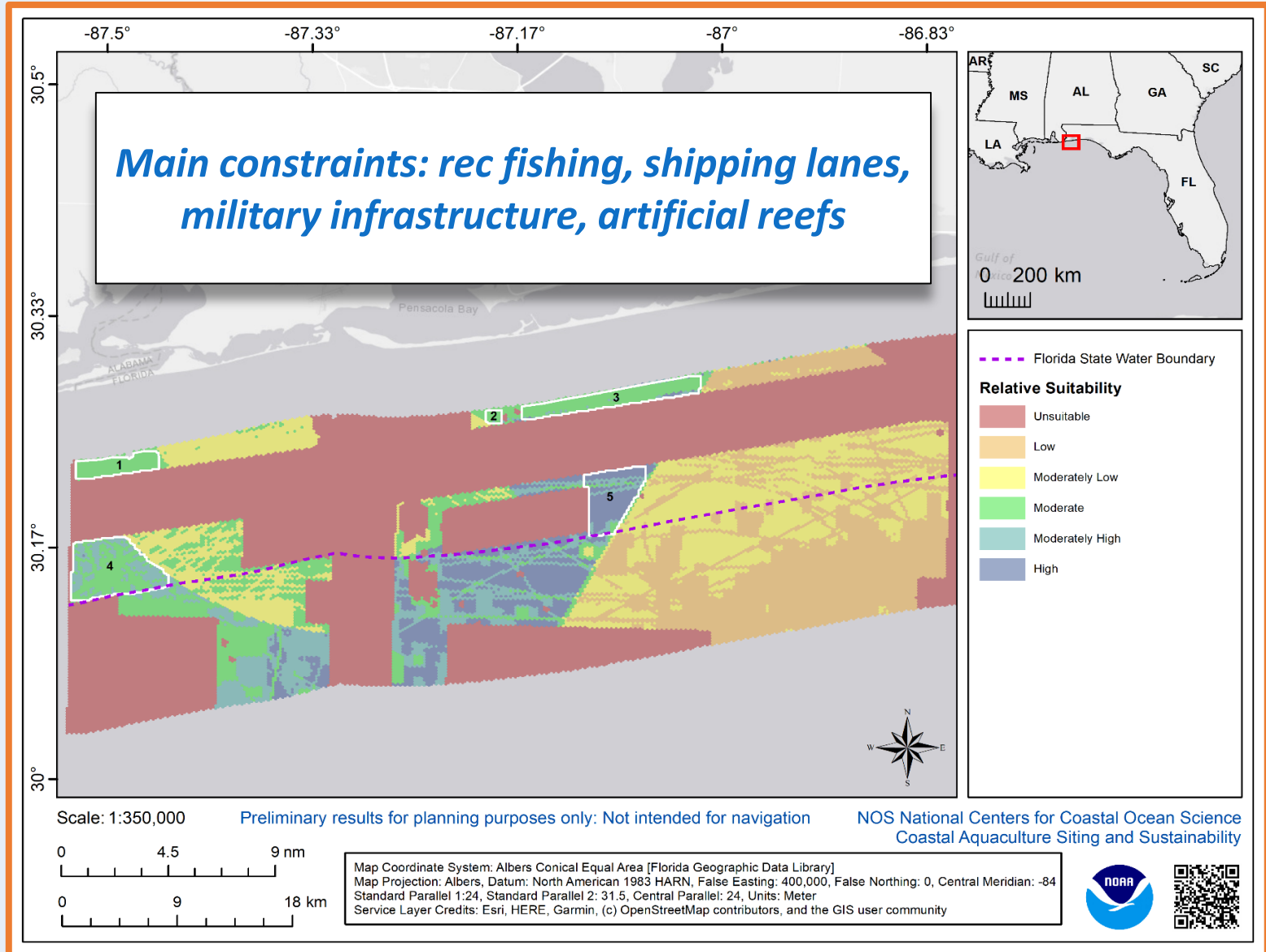
Total of 54,906 acres over 34 discrete areas potentially suitable for mariculture development



**All results are preliminary*



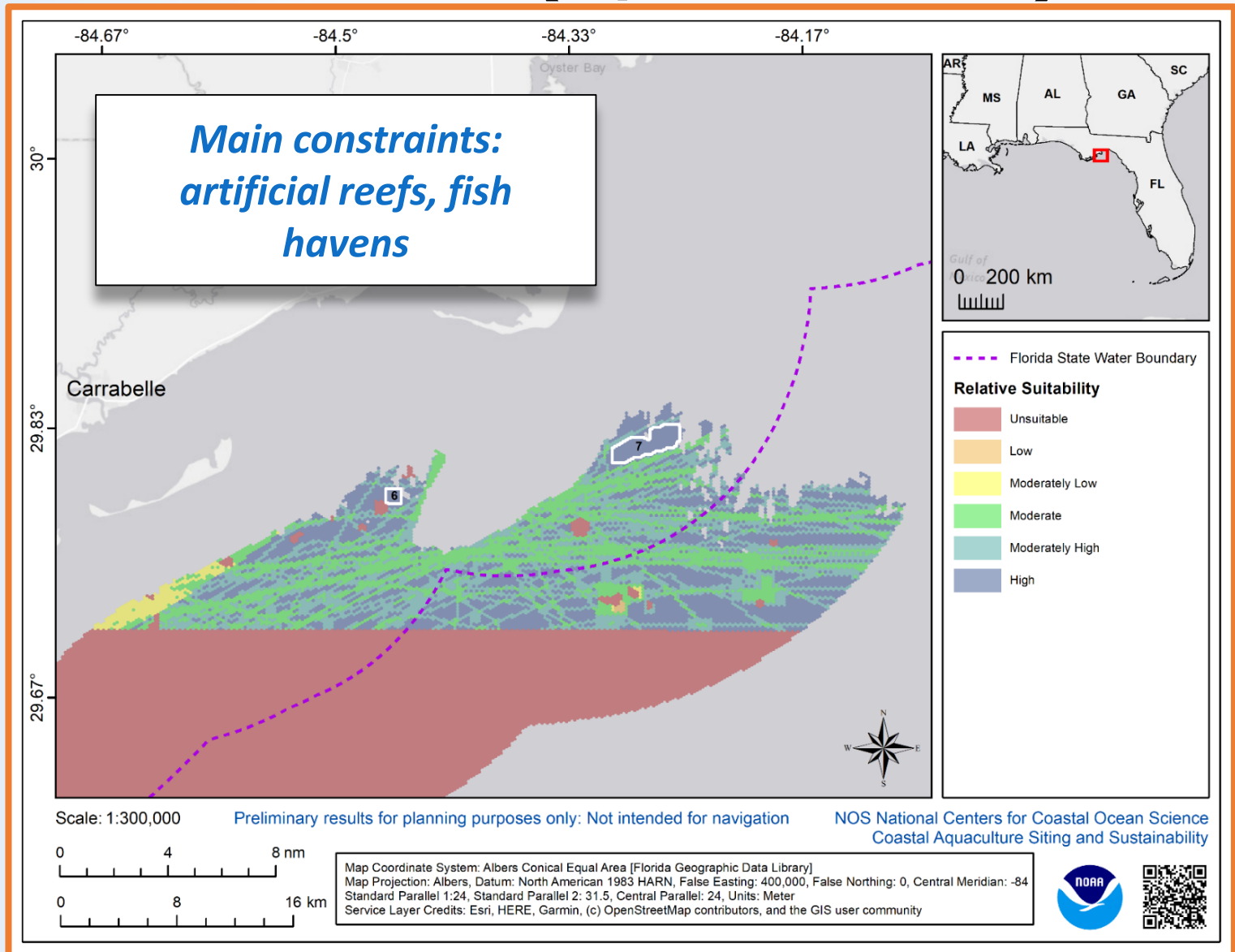
Northwest (Pensacola)



**All results are preliminary*



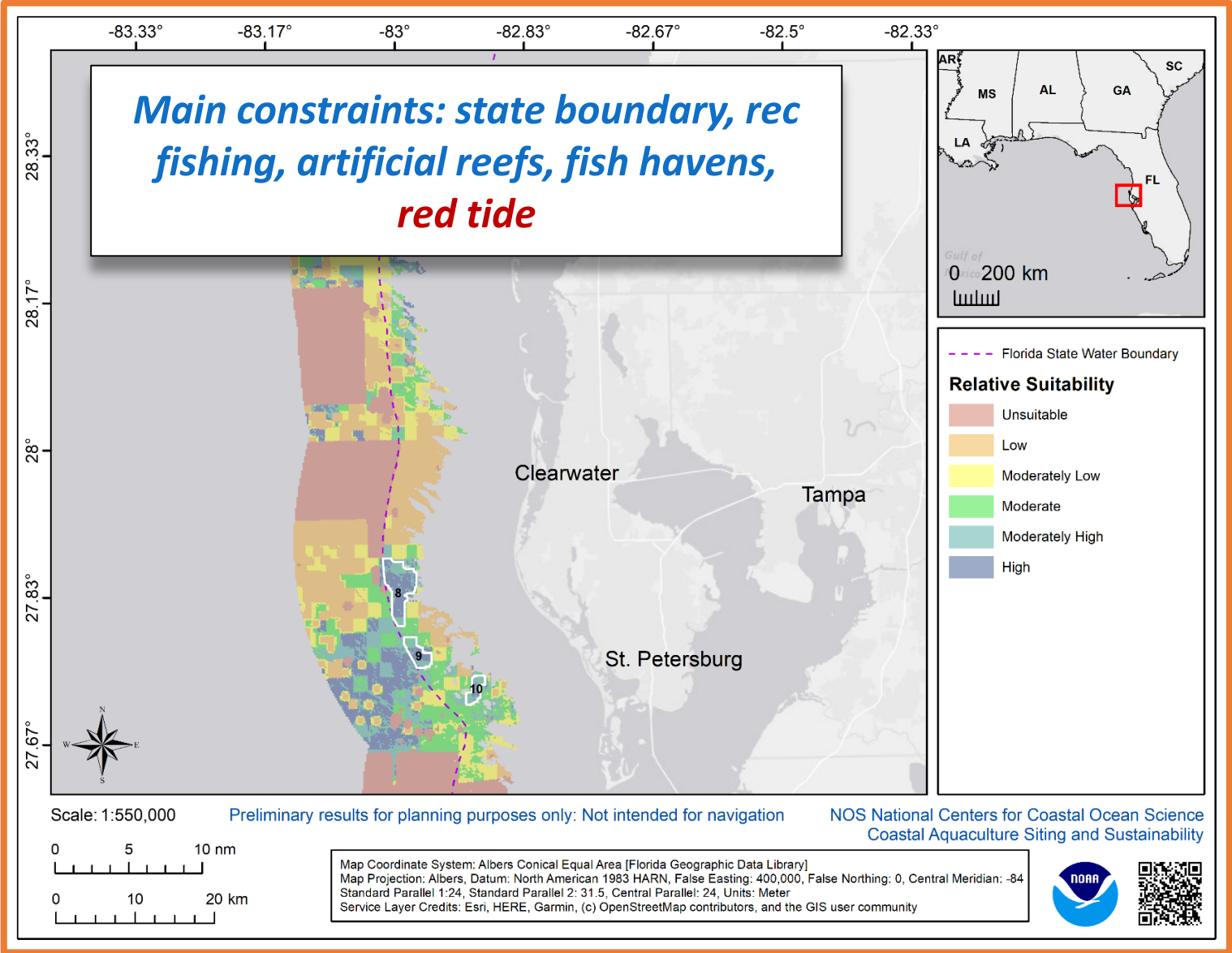
Northeast (Apalachicola)



**All results are preliminary*



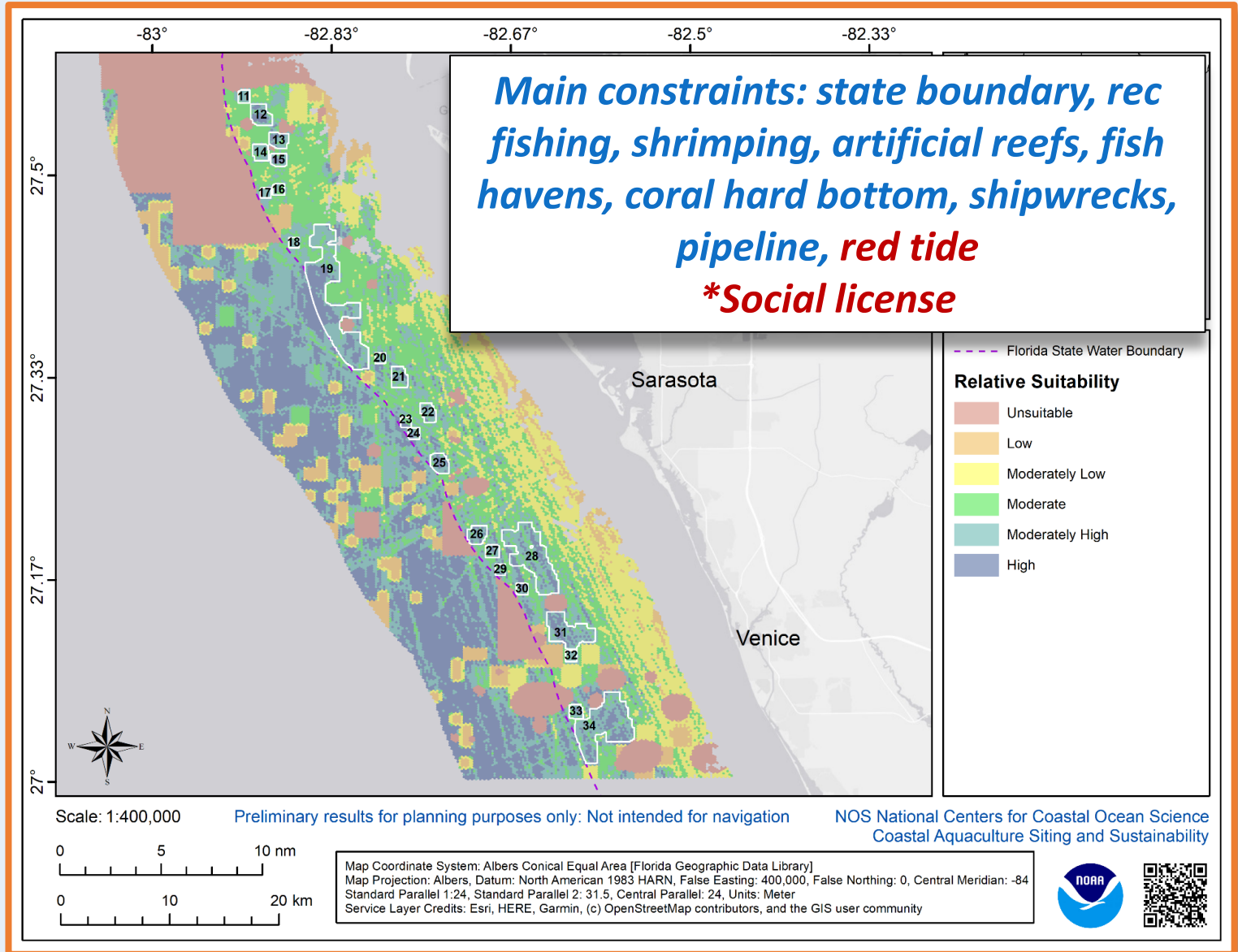
South A (Tampa)



**All results are preliminary*



South B (Sarasota)



**All results are preliminary*





Summary

- Using 41 layers in 4 suitability submodels, analysis revealed **34 potential areas for siting offshore operations.**
- **54,906 total acres** among 4 distinct regions
- Varying **regional and local considerations** for further characterization and investigation
- **Limitations/assumptions:** Data used, analysis parameters, non-weighted approach

***** RESULTS ARE PRELIMINARY *****





Future Work

- First technical report in revision
- Further **in-depth examination & characterization** of planning options
- **Work with stakeholders** to understand perceptions, knowledge and needs
 - Gulf States Marine Fisheries Commission: *“Developing Stakeholder Collaboration and Communication Products for Sustainable Mariculture Development in Florida State Waters of the Gulf of Mexico”*
- **Additional analysis** to eventually cover all state waters
- **Permitting considerations**

