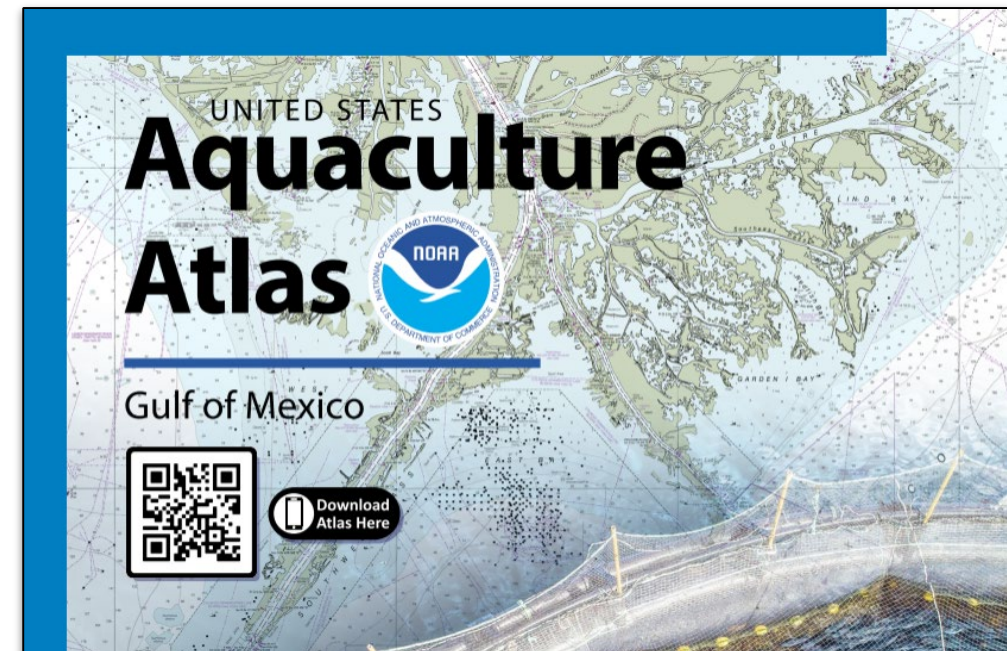


# Results of the Aquaculture Opportunity Atlas for the U.S. Gulf of Mexico

Marine Spatial Ecology Division  
National Centers for Coastal Ocean Science  
National Ocean Service



# Executive Order on Promoting American Seafood Competitiveness and Economic Growth

— ECONOMY & JOBS | Issued on: May 7, 2020



## Section 7: Aquaculture Opportunity Areas

- Calls for a total of 10 AOAs within 7 years
- AOAs can be in state or federal waters
- This is a planning exercise with spatial planning and environmental review
- Does not change permitting requirements



**What is an Aquaculture Opportunity Area?**

**Aquaculture Opportunity Areas** show high potential for commercial aquaculture. A science and community-based approach to identifying these areas helps minimize interference with other enterprises, account for current fishing patterns, and protect the ecosystem.

AOAs will expand economic opportunities in coastal and rural areas, and increase our nation's seafood security.

AOAs use the best available science to find appropriate spaces for sustainable aquaculture.

AOAs minimize interactions with other users, such as shipping, fishing, and the military.

**Assessment and Use of AOAs**

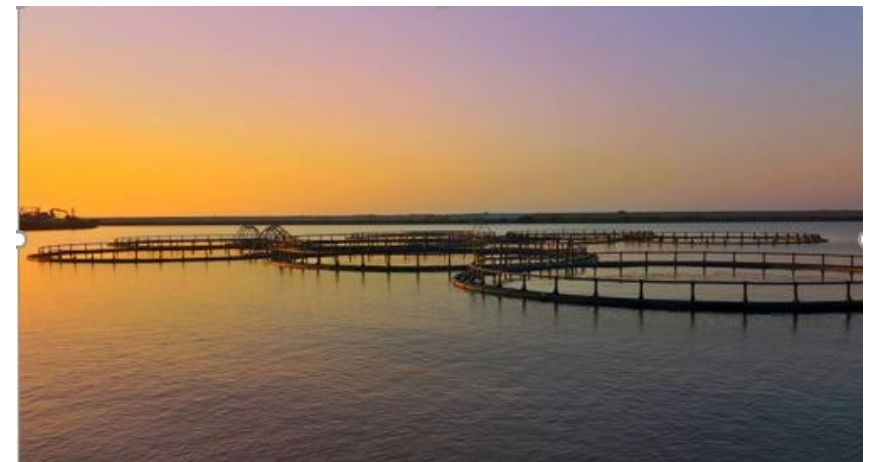
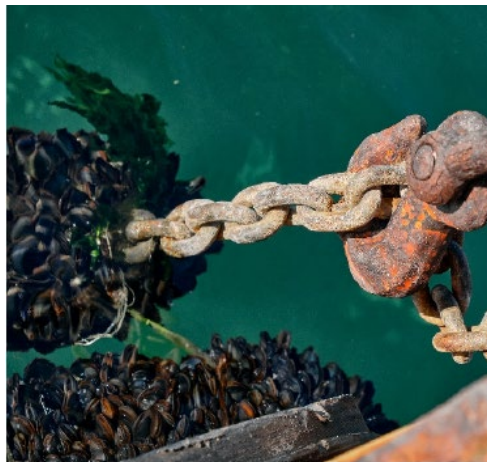
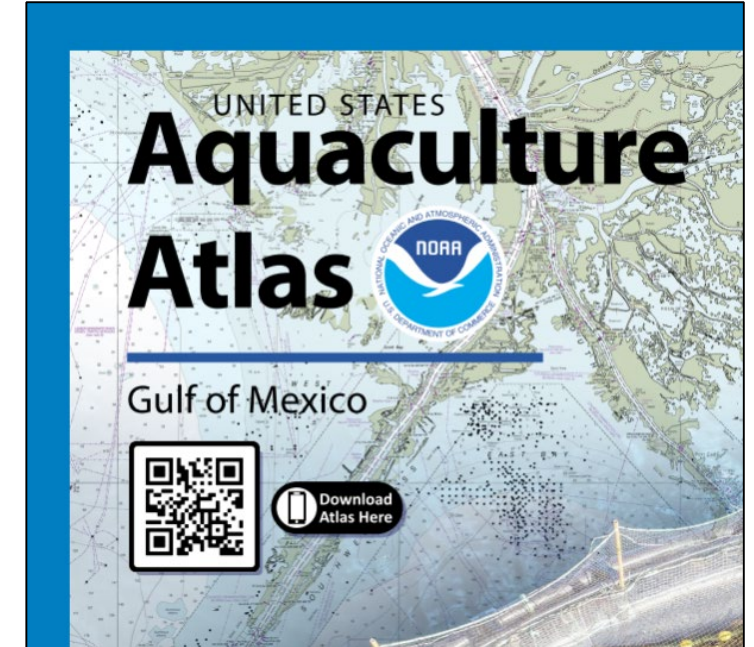
Stakeholder input is essential in the design and location of AOAs and NOAA expects these areas will be shaped through a public process that allows constituents to share their community and stewardship goals, as well as critical insights.

AOA size, exact location, and farm types will be determined through spatial analysis and public input to expand sustainable domestic seafood production while minimizing potential user conflicts. Farms will still need to go through the permitting process and environmental reviews.

Learn more: [fisheries.noaa.gov](https://fisheries.noaa.gov)

# Atlas at a Glance (Published Nov. 2022)

- Most comprehensive regional MSP ever conducted for US federal waters
- More than 200 data layers utilized
- Over 150 maps that describe the ocean in new and unique ways
- Comprehensive stakeholder engagement
- Framework for future AOAs and other ocean pioneering industries



# Center for Independent Experts

- Reviewers were highly skilled in marine spatial science
- Reviews were comprehensive (>300 comments)
- No major flaws were identified
- Reviewers praised the work as “*robust*” and “*state-of-the-art*”

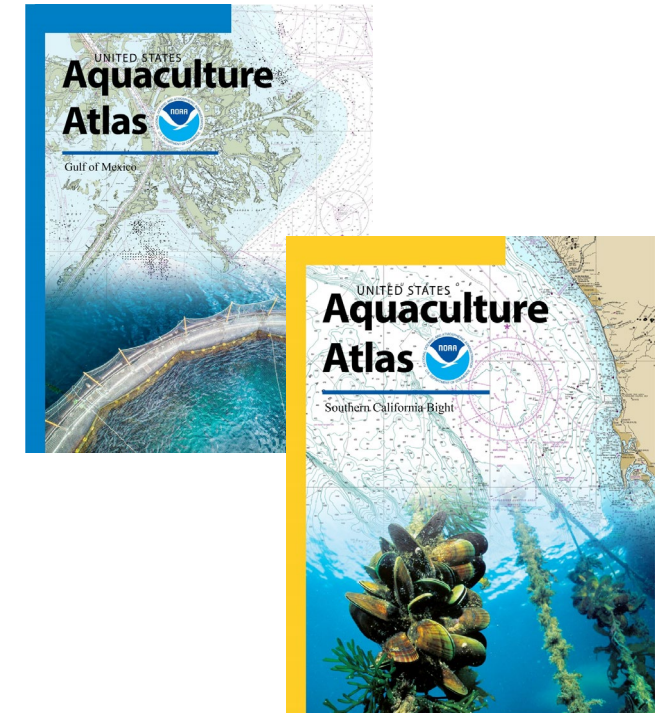
*“The methodological workflow is robust, and the application of geospatial instruments is well advanced...”* -Depellegrin

*“...the amount of data layers is impressive, and it suggests that the authors carried out an excellent and thorough search.”* - Filgueira

*“...the work described in both reports is of high scientific and technical quality and fulfils the goals that were set out.”* -Galparsoro

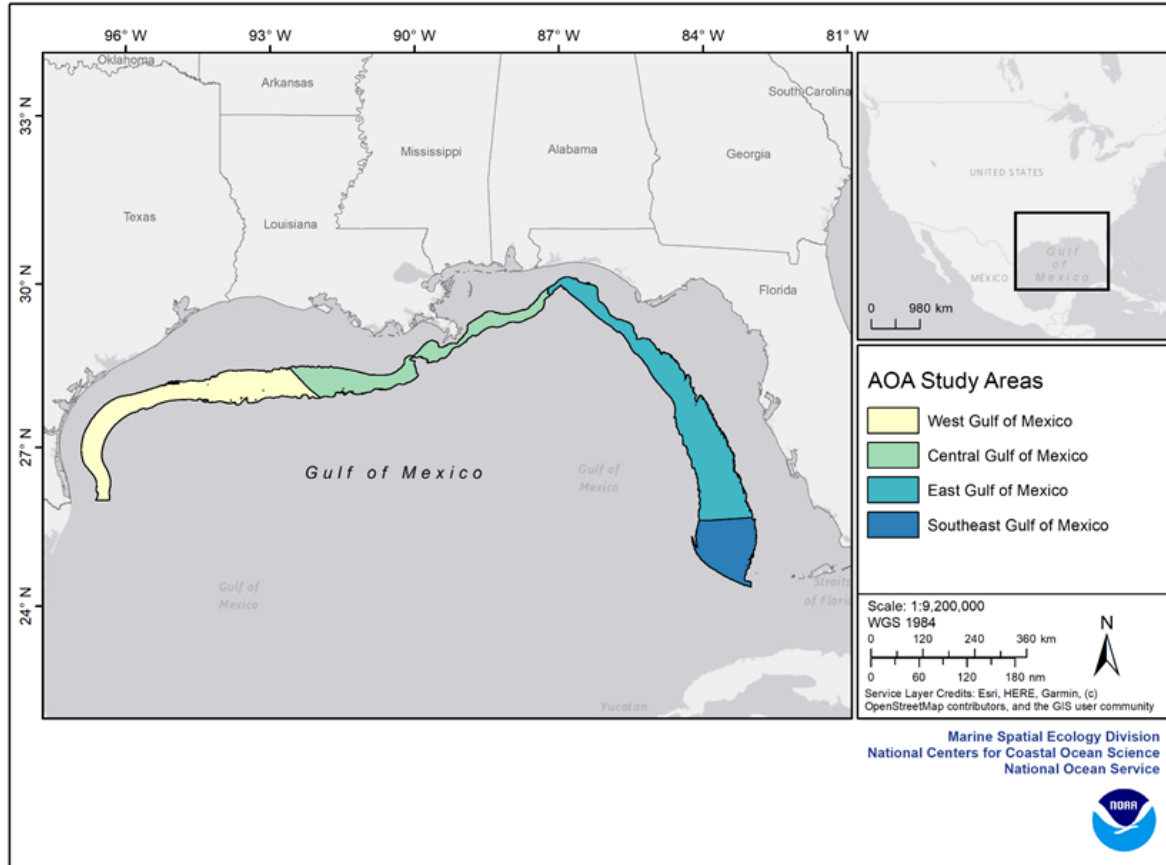
## Recommendations

- Add some detail to methods
- Further discuss assumptions and limitations
- Incorporate uncertainty analyses
- Address metadata structure and compliances
- Clarify this work as MSP in the sense of spatial analytics. It is not allocating space for aquaculture or ocean uses as is often observed with other countries.



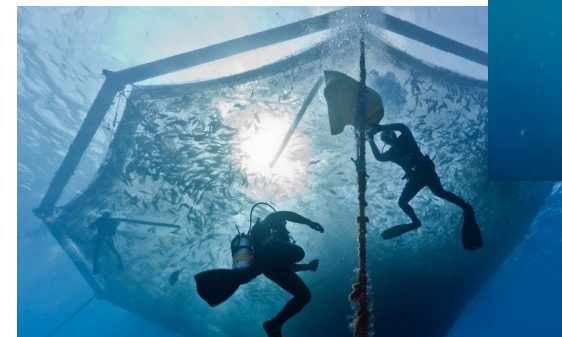
# Study Areas

## Gulf of Mexico



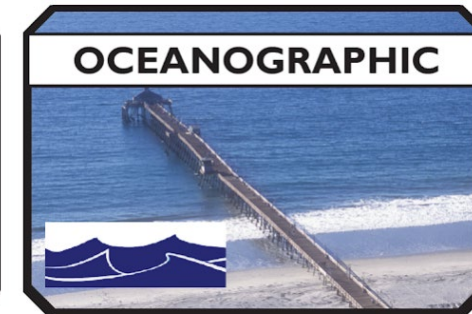
## Foundational rules

- USA Federal Waters (EEZ)
- Depth = 50 - 150 m
- Minimize distance from shore
- All types of aquaculture



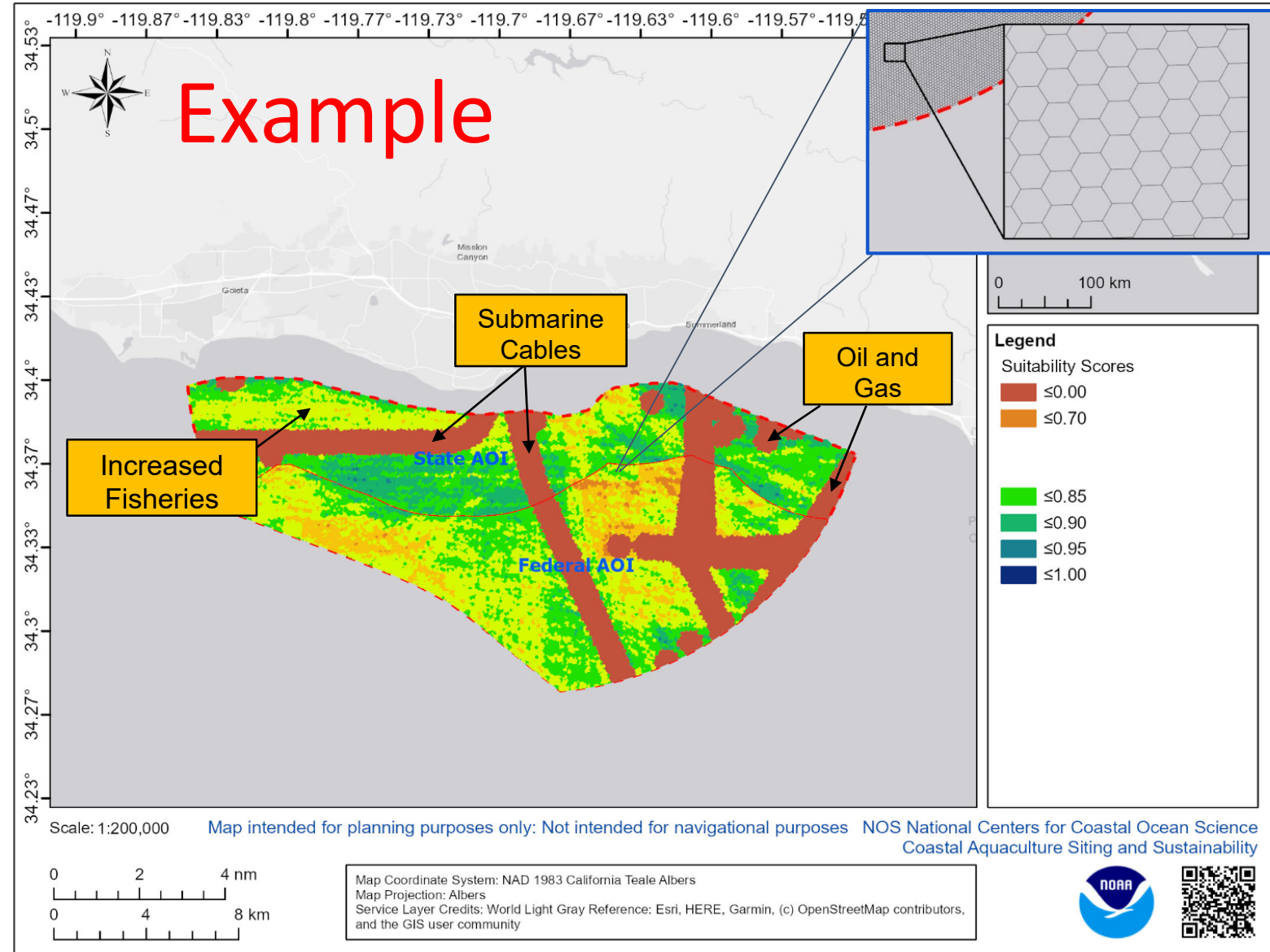
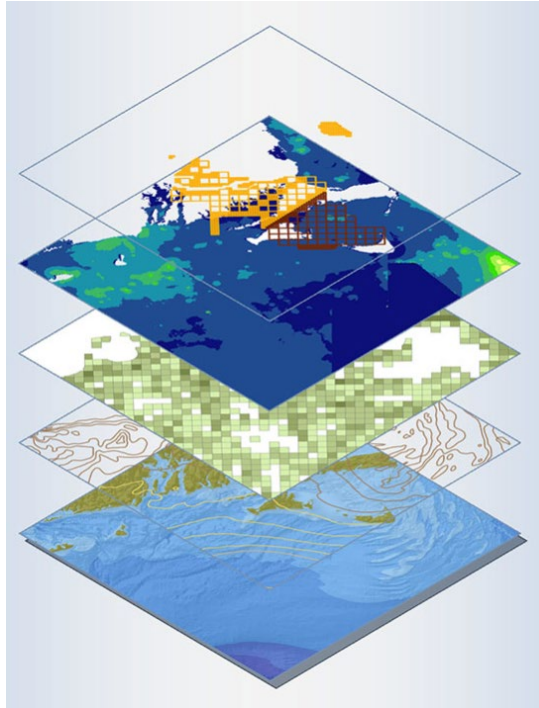
# Data inventory results

Data Layers	SoCal	GoMex
National Security	35	54
Natural Resources	77	92
Industry, Navigation, and Transportation	42	60
Fishing and Aquaculture	50	14
<b>Total layers</b>	<b>204</b>	<b>220</b>



# Suitability modeling

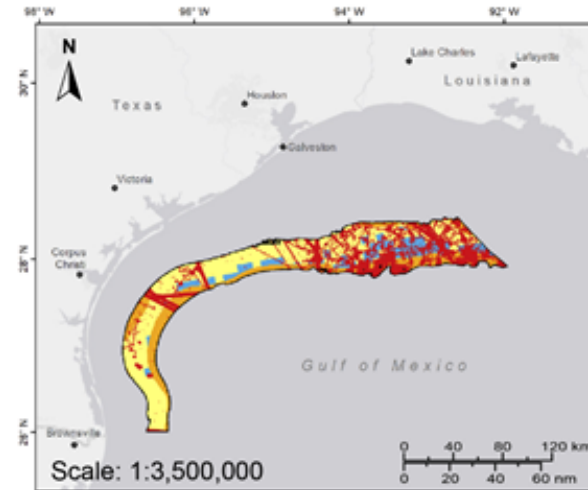
*We identify areas of highest opportunity for aquaculture. Areas that provide highest conservation and lowest conflict with other users.*



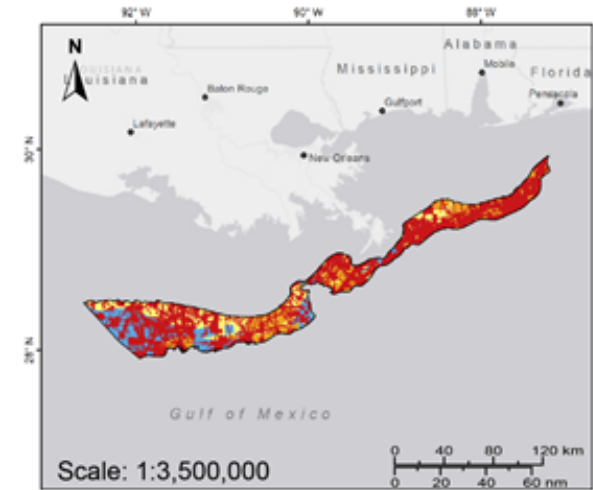
# Gulf of Mexico

## Final Suitability

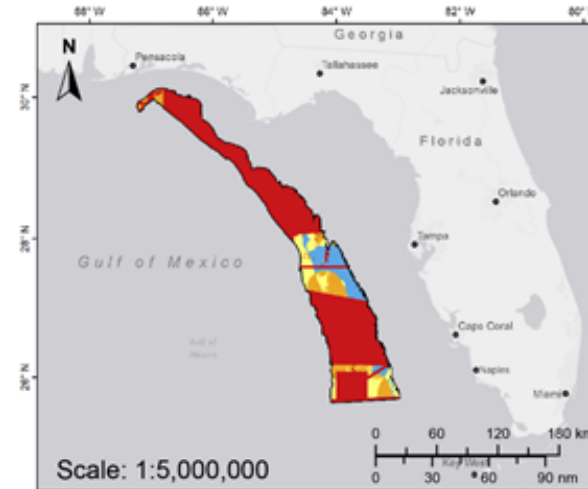
West Study Area



Central Study Area



East Study Area



Southeast Study Area



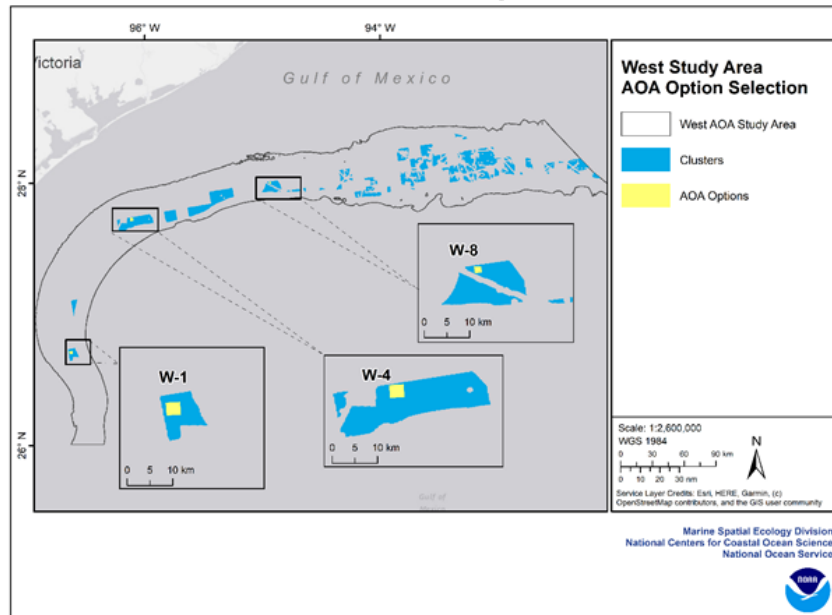
### Final Suitability



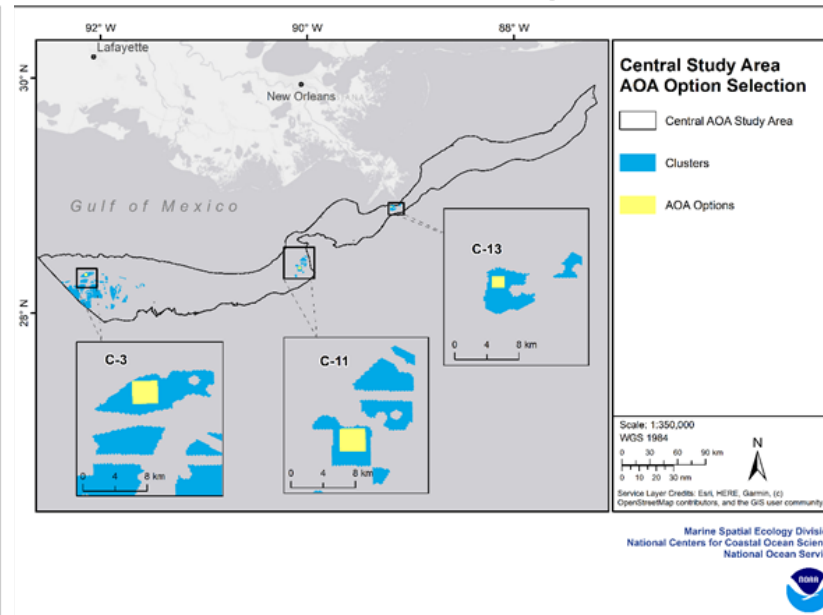
# Precision Siting Model

**Top 9 AOA options identified**  
A 30-nm dispersion rule applied to avoid overlap  
**13,500 acres**

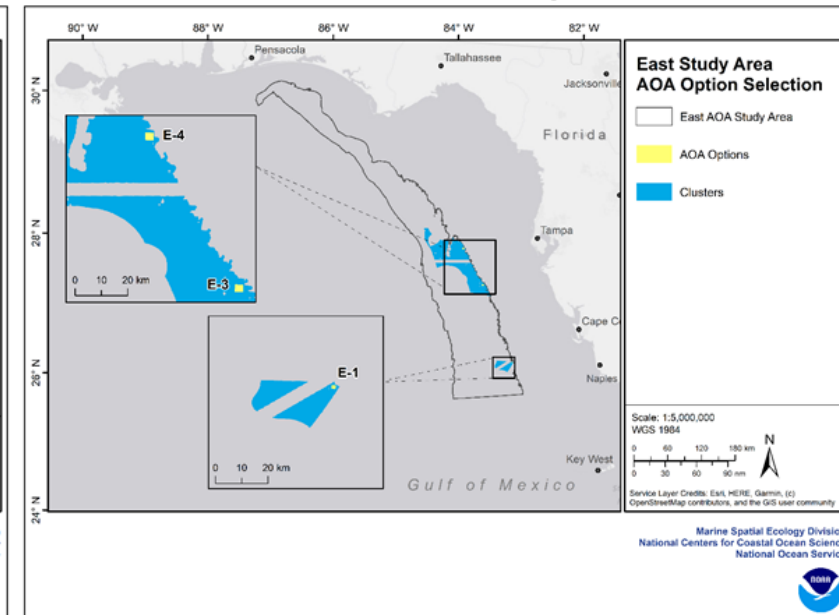
## West Region



## Central Region



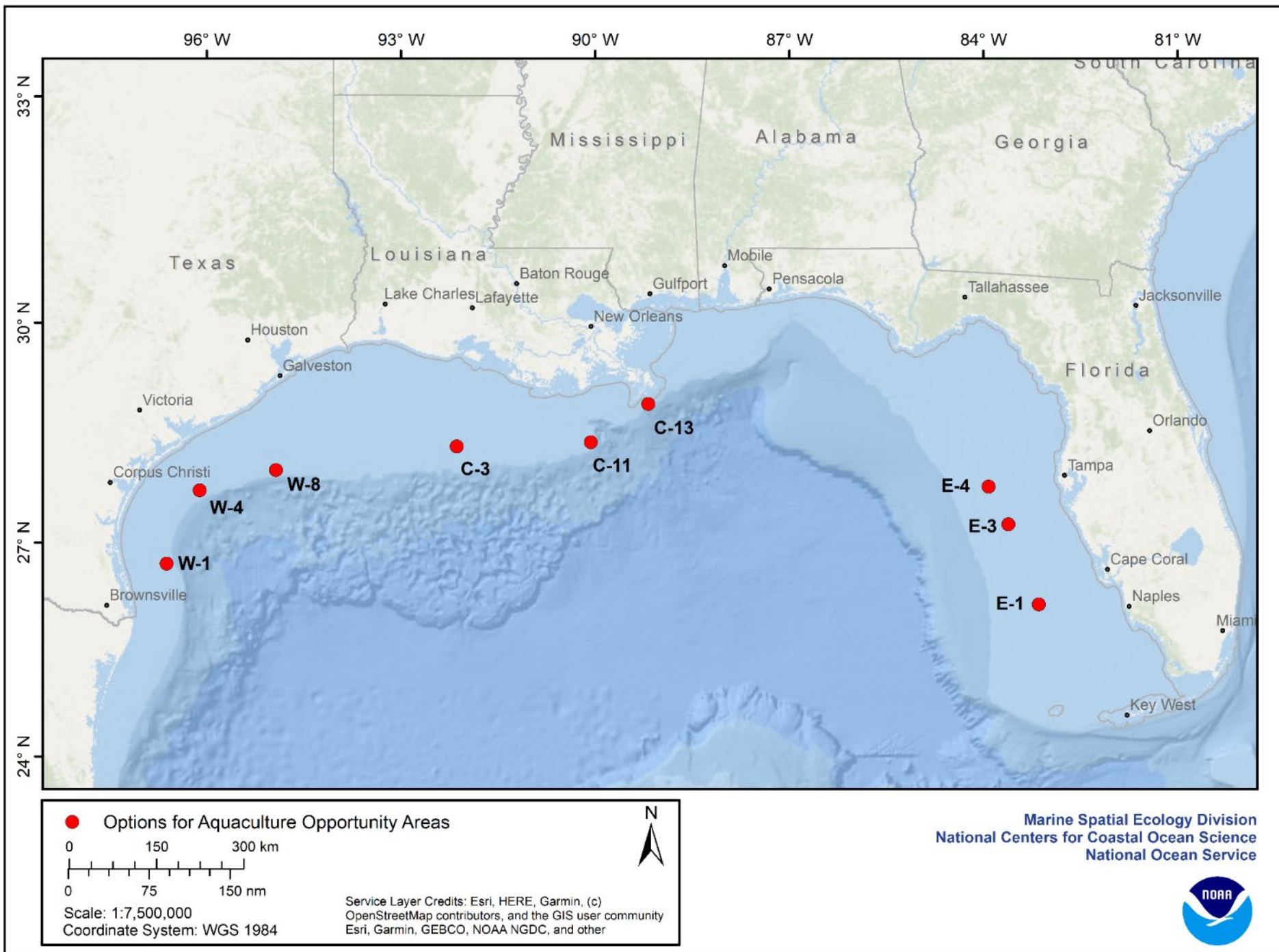
## East Region



Site	Size (acres)	Depth Average (m)	Closest Inlet (nm)
W-1	2,000	91	35
W-4	2,000	84	42
W-8	500	81	58

Site	Size (acres)	Depth Average (m)	Closest Inlet (nm)
C-3	2,000	61	72
C-11	2,000	82	41
C-13	500	62	5

Site	Size (acres)	Depth Average (m)	Closest Inlet (nm)
E-4	2,000	51	58
E-3	2,000	51	48
E-1	500	51	56



# Atlas Story - Fishing Data

- Strong collaboration with NMFS Sustainable Fisheries, Highly Migratory Species, Fishery Management Councils, State Agencies, Industry
- Assessed relative suitability based on fishing effort
- Gulf of Mexico model included 6 fisheries; 1 aquaculture operation



*..we found that the analytical approach to spatial planning applied by the National Ocean Service (NOS) in that AOA initiative to be the most useful tool for supporting this critical decision-making. - SSA*



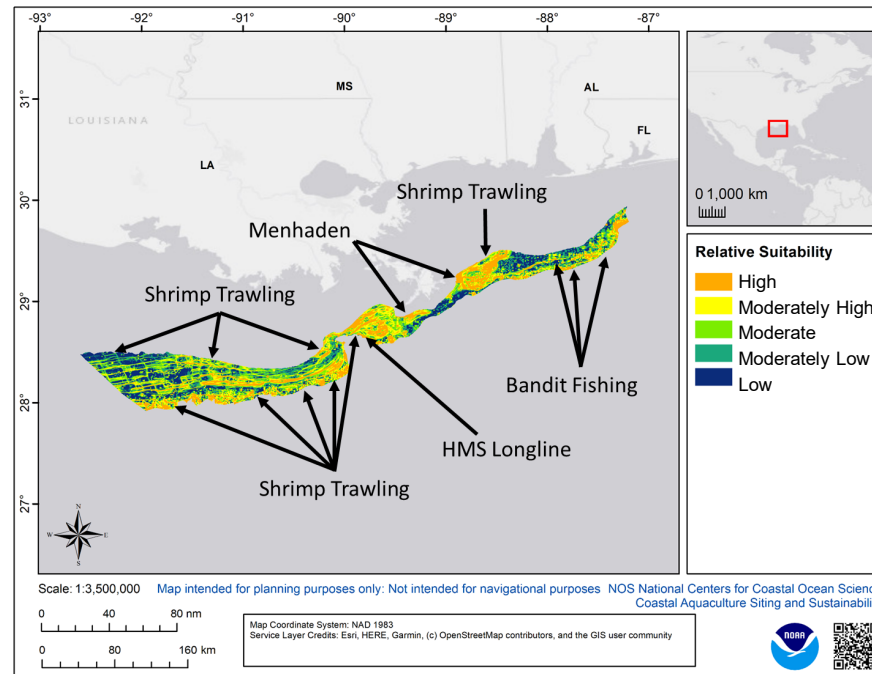
**Southern Shrimp Alliance**  
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727-934-5090 Fax 727-934-5362

September 28, 2021

The Honorable Richard W. Spinrad  
Administrator  
National Oceanic and Atmospheric Administration  
1401 Constitution Avenue, NW  
Washington, D.C. 20230

Dear Administrator Spinrad,

The Southern Shrimp Alliance (SSA) would like to draw your attention to what we believe is the critical role the National Oceanic and Atmospheric Administration (NOAA) must play in the development of offshore wind energy in the Gulf of Mexico (GOM) as part of the Biden Administration's commitment to advancing clean, renewable energy in the United States.



# Thanks!





Andrew Richard  
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NOAA Fisheries  
Southeast Regional Office

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