

# BOEM

Bureau of Ocean Energy  
Management

## **Bureau of Ocean Energy Management (BOEM), Gulf of Mexico Region (GOMR) Renewable Energy Program**

### **Gulf of Mexico Fisheries Summit**

**Wednesday, January 19, 2022 and Thursday, January 20, 2022**

**9:00 AM – 12:00 PM CT**

**1:00 PM - 4:00 PM CT**



# Opening Remarks & Affiliation Poll



# Meeting Objectives

- **Share the Bureau of Ocean Energy Management (BOEM) Gulf of Mexico Region's upcoming plans, activities, and schedules for offshore renewable energy, including the Call Area, Environmental Assessment, and potential next steps in the BOEM leasing process.**
- **Discuss fisheries concerns related to offshore renewable energy in the Gulf of Mexico Region.**
- **Establish and strengthen relationships between the fishing industry and BOEM.**

# Agenda

Time	Discussion Topic
9:00 a.m.	<b>Welcome &amp; Introductions</b>
9:10	<b>Offshore Renewable Energy Process</b>
9:35	<b>Gulf of Mexico Aquaculture Atlas</b>
10:00	<i>Break</i>
10:10	<b>Environmental Review Process</b>
10:35	<b>Fisheries Frequently Asked Questions</b>
11:00	<i>Break</i>
11:10	<b>Discussion-Q&amp;A</b>
12:00 p.m.	<i>Adjourn</i>

# Proposed Ground Rules

- **“Honor” the agenda**
- **Participate actively and respectfully**
- **Focus comments and speak concisely**
- **Speak in order; facilitator will mind the queue**
- **Speak clearly into the microphone.**
- **Mute yourself when not speaking**
- **Click the “raised hand” button to comment or ask a question**

***\*Please note, the presentations for the meeting are being recorded.***

# Offshore Renewable Energy Process



# BOEM

Bureau of Ocean Energy  
Management

## BOEM GOM Renewable Energy Update

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**Tershara Matthews**

*Chief, Emerging Programs,  
Gulf of Mexico Regional Office*

Fisheries Summit

January 19th and 20th, 2022



# BOEM's Mission Responsibilities

**OCS Lands Act:** "... vital national resource ... expeditious and orderly development ... environmental safeguards"

**Energy Policy Act of 2005:** "... energy from sources other than oil and gas ..."



**Gulf of Mexico OCS**



# Administration Goals

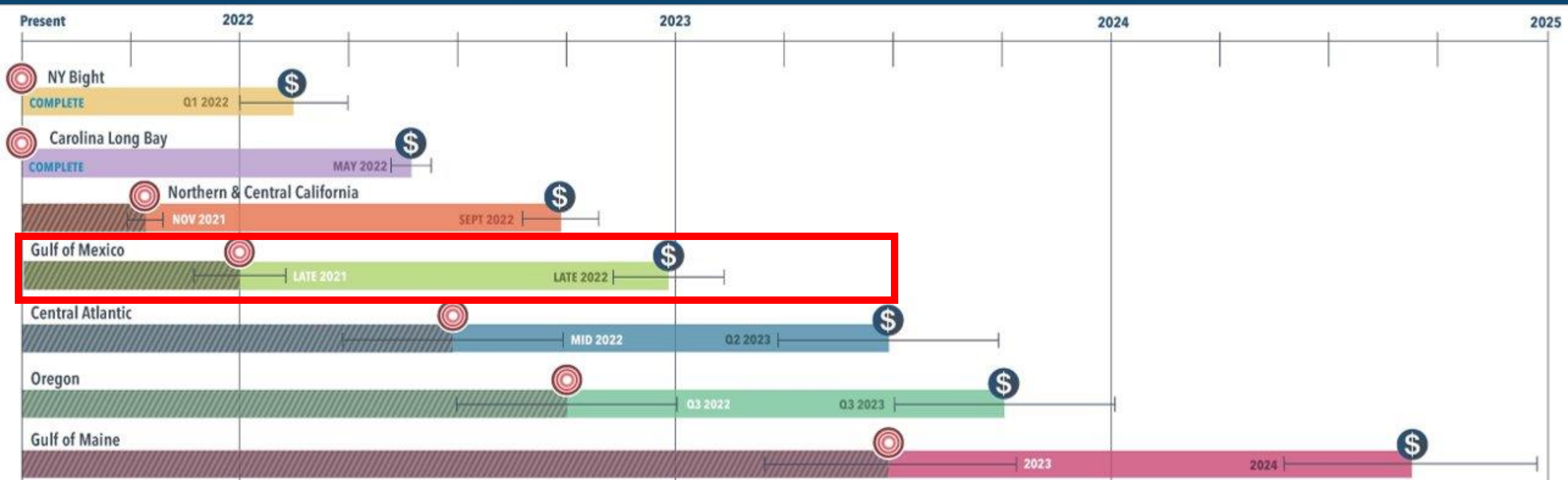
- President Biden issued **Executive Order 14008** that called for the Interior Department to identify steps to increase responsible renewable energy development on public lands and waters
- First-ever **national offshore wind goal** to deploy **30 gigawatts of offshore wind by 2030**, which would create nearly **80,000 jobs**.



# Offshore Wind Leasing Path Forward for 2021-2025



# Leasing Path Forward for 2021-2025



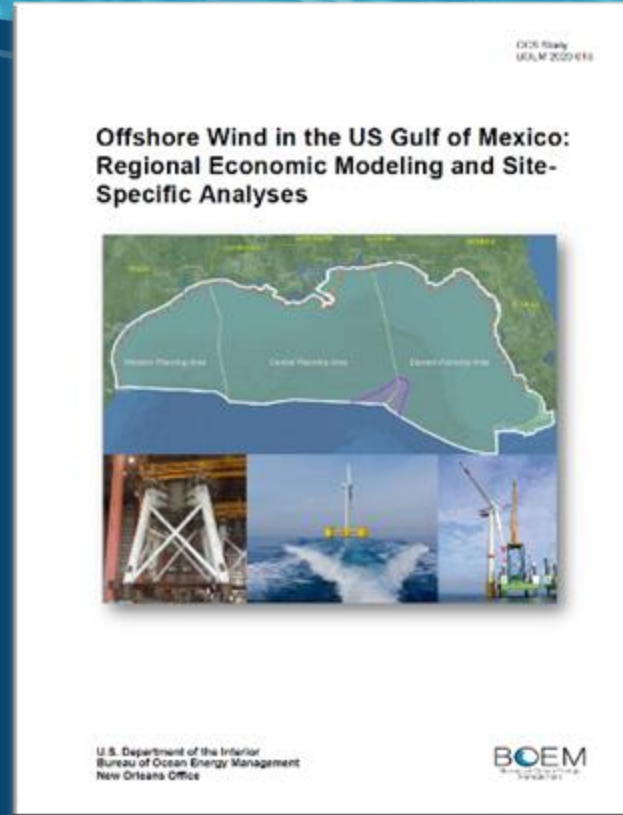
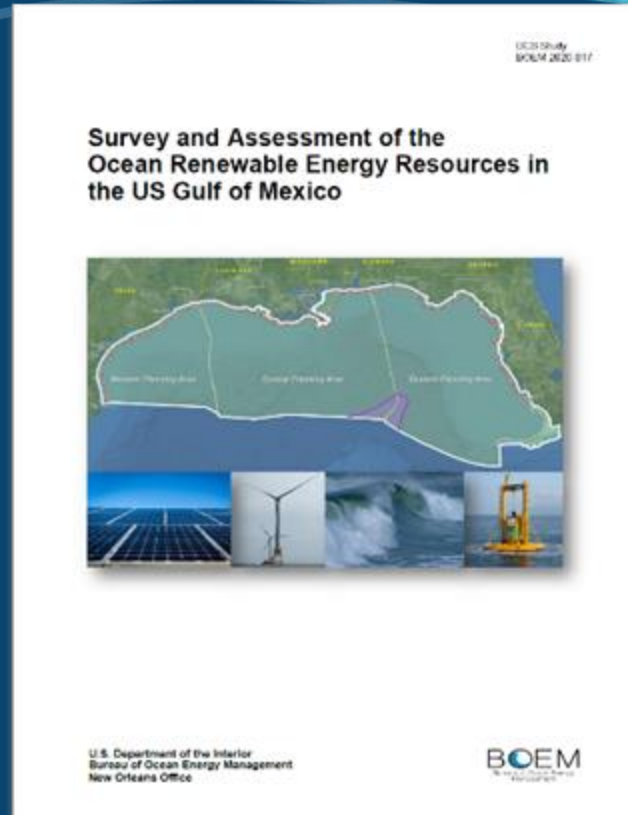
# Gulf of Mexico Outer Continental Shelf Renewable Energy

## Agenda

- **Background**
- **Renewable Leasing Process**
- **Next Steps**



# BOEM Sponsored Two NREL Studies on Gulf of Mexico (GOM) Through an Interagency Agreement— Published in 2020



## Special Acknowledgements:

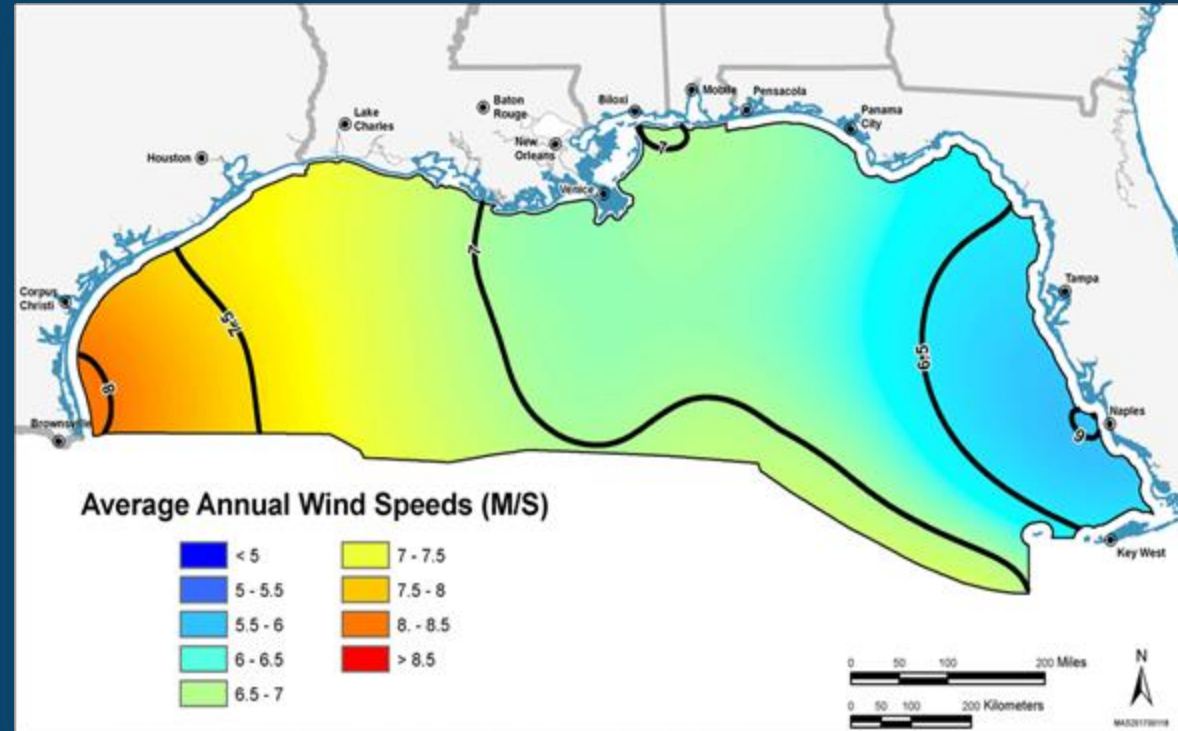
- **Mike Celata**, BOEM's GOM Regional Director
- **Rebecca Green** for initiating the project
- **Andrea Heckman** the BOEM project manager
- **Tershara Matthews**, current coordinator

Musial W, Tegen S, Driscoll R, Spitsen P, Roberts O, Kilcher L, Scott G, and Beiter P (National Renewable Energy Laboratory and the Alliance for Sustainable Energy, LLC, Golden, CO). 2019. Survey and assessment of the ocean renewable resources in the US Gulf of Mexico. New Orleans (LA): Bureau of Ocean Energy Management. Contract No.: M17PG00012. Report No.: OCS Study BOEM 2020-017. [https://espis.boem.gov/final%20reports/BOEM\\_2020-017.pdf](https://espis.boem.gov/final%20reports/BOEM_2020-017.pdf)

Musial W, Beiter P, Stefek J, Scott G, Heimiller D, Stehly T, Tegen S, Roberts O, Greco T, Keyser D (National Renewable Energy Laboratory and the Alliance for Sustainable Energy, LLC, Golden, CO). 2020. Offshore wind in the US Gulf of Mexico: regional economic modeling and site-specific analyses. New Orleans (LA): Bureau of Ocean Energy Management. 94 p. Contract No.: M17PG00012. Report No.: OCS Study BOEM 2020-018. [https://espis.boem.gov/final%20reports/BOEM\\_2020-018.pdf](https://espis.boem.gov/final%20reports/BOEM_2020-018.pdf)

# Gulf of Mexico Renewable Energy

- Louisiana Governor Edwards requested a Task Force on October 26, 2020.
- December 2020, Gulf of Mexico Region responded to the LA Task Force Request Letter with a region-based Task Force approach. The inaugural GOM Regional Task Force Meeting was held on June 15, 2021.
- Conducting outreach and engagement to collect data and information.
- Advantages: Proximity to oil and gas supply chain – leverage existing capabilities
- Challenges: Hurricanes – major hurricanes could increase turbine and substructure costs



# BOEM Renewable Energy Process: Overview



## Planning & Analysis

~ 2 YEARS

- Intergovernmental Task Force
- Request for Information or Call for Information and Nominations
- Area Identification
- Environmental Reviews



## Leasing

~ 1-2 YEARS

- Publish Leasing Notices
- Conduct Auction or Negotiate Lease Terms
- Issue Lease(s)



## Site Assessment

UP TO 5 YEARS

- Site Characterization
- Site Assessment Plan

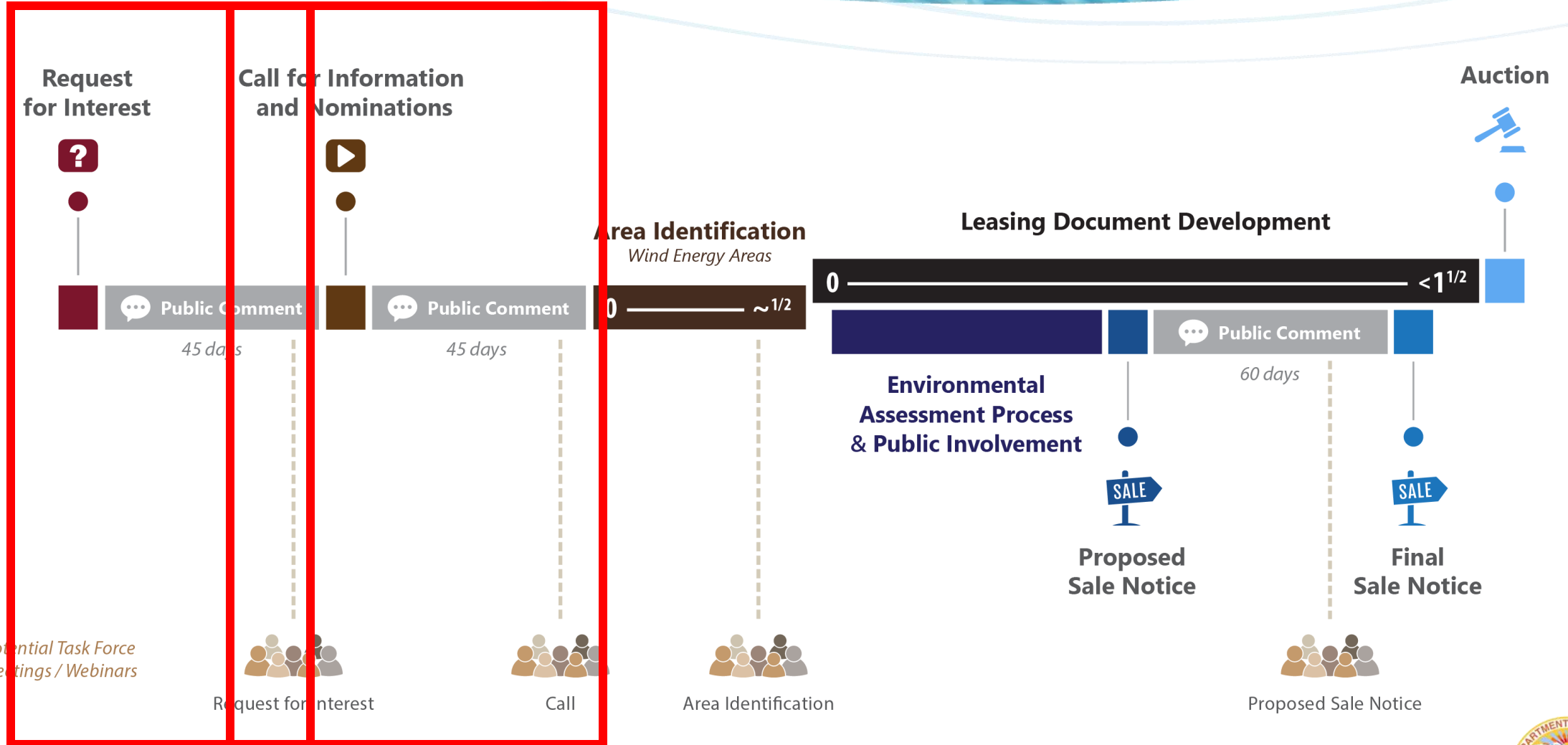


## Construction & Operations

~ 2 YEARS (+25)

- Construction & Operations Plan
- Facility Design Report and Fabrication & Installation Report
- Decommissioning
- Environmental and Technical Reviews

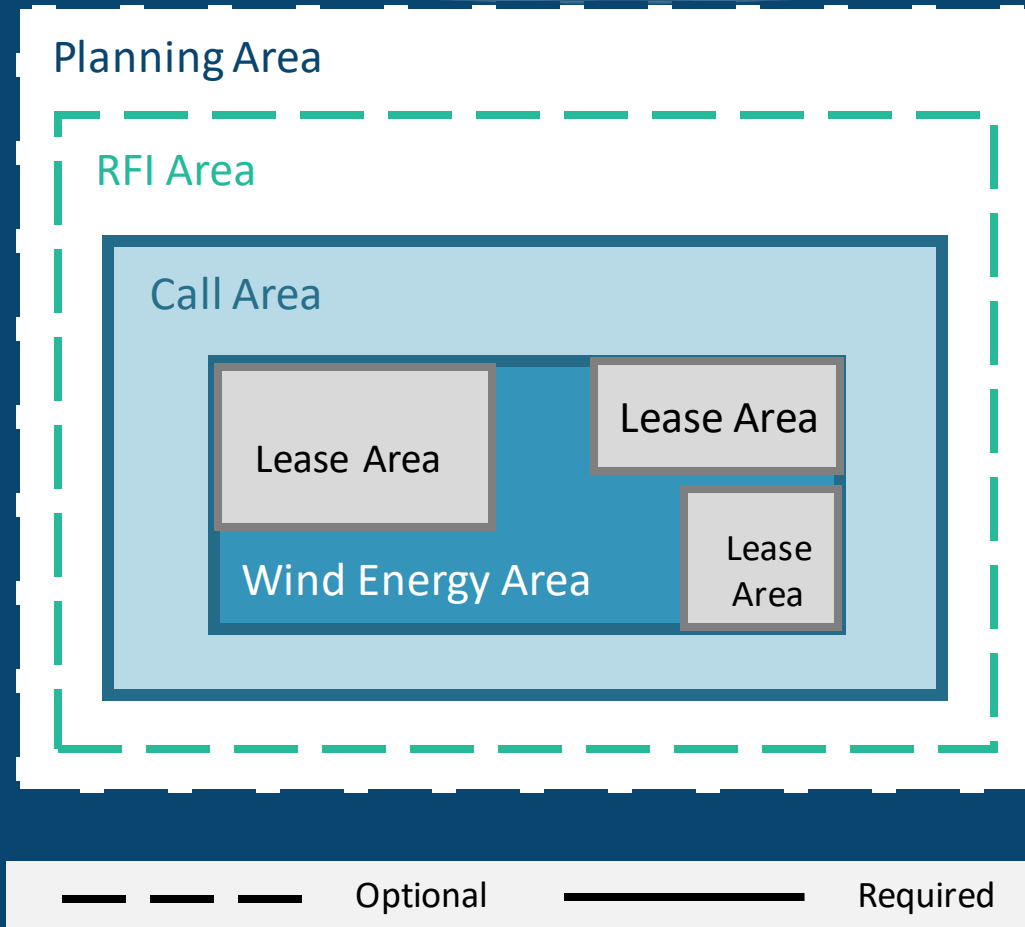
# Renewable Energy Process: Focus on Pre-Lease Activities



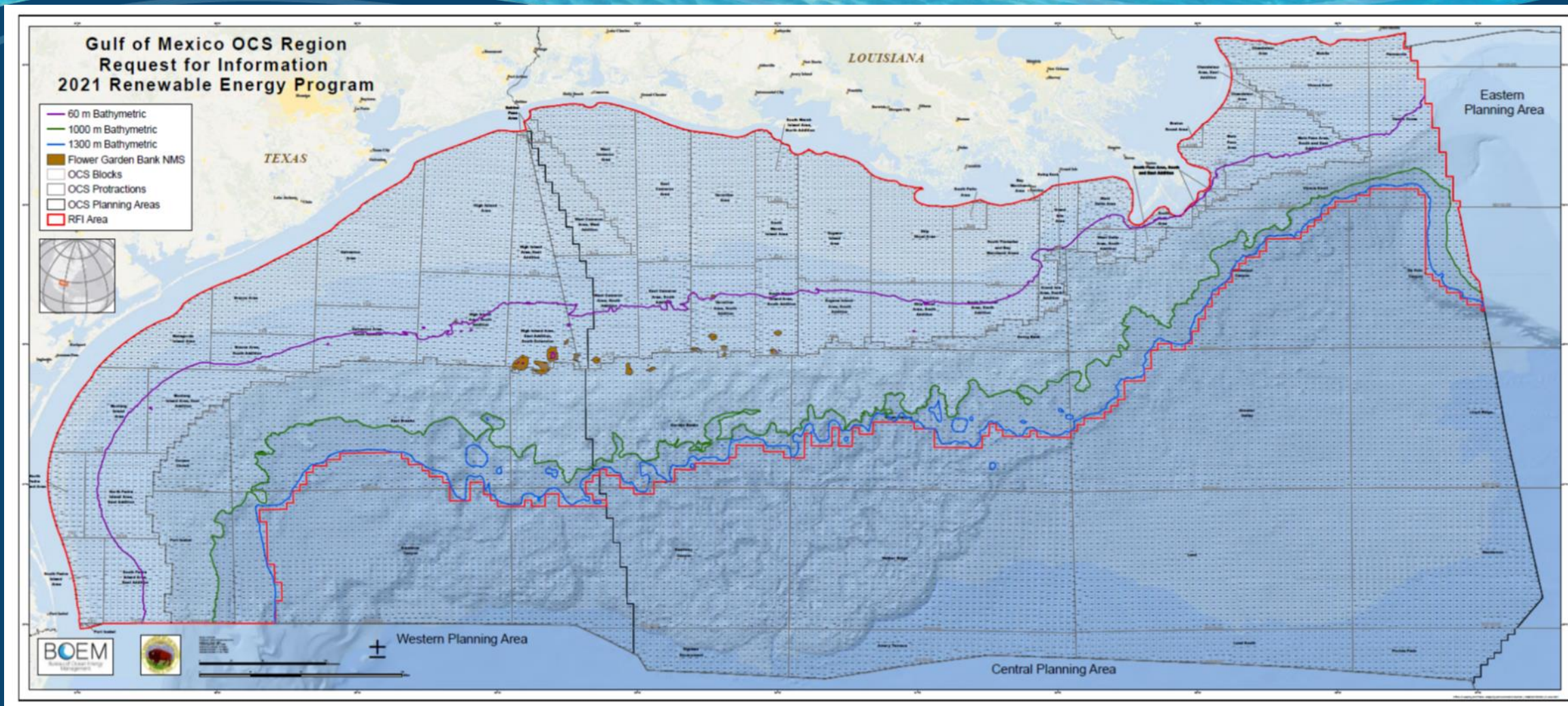


# Renewable Energy Process: Area Identification

- Call Areas for special consideration
- Initial identification of areas that may be suitable
- Conditions in the Call Area
- Shed potential for oneability
- Area developed for leasing



# Request for Interest (RFI) Area












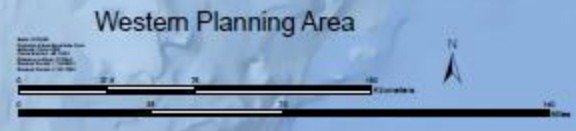
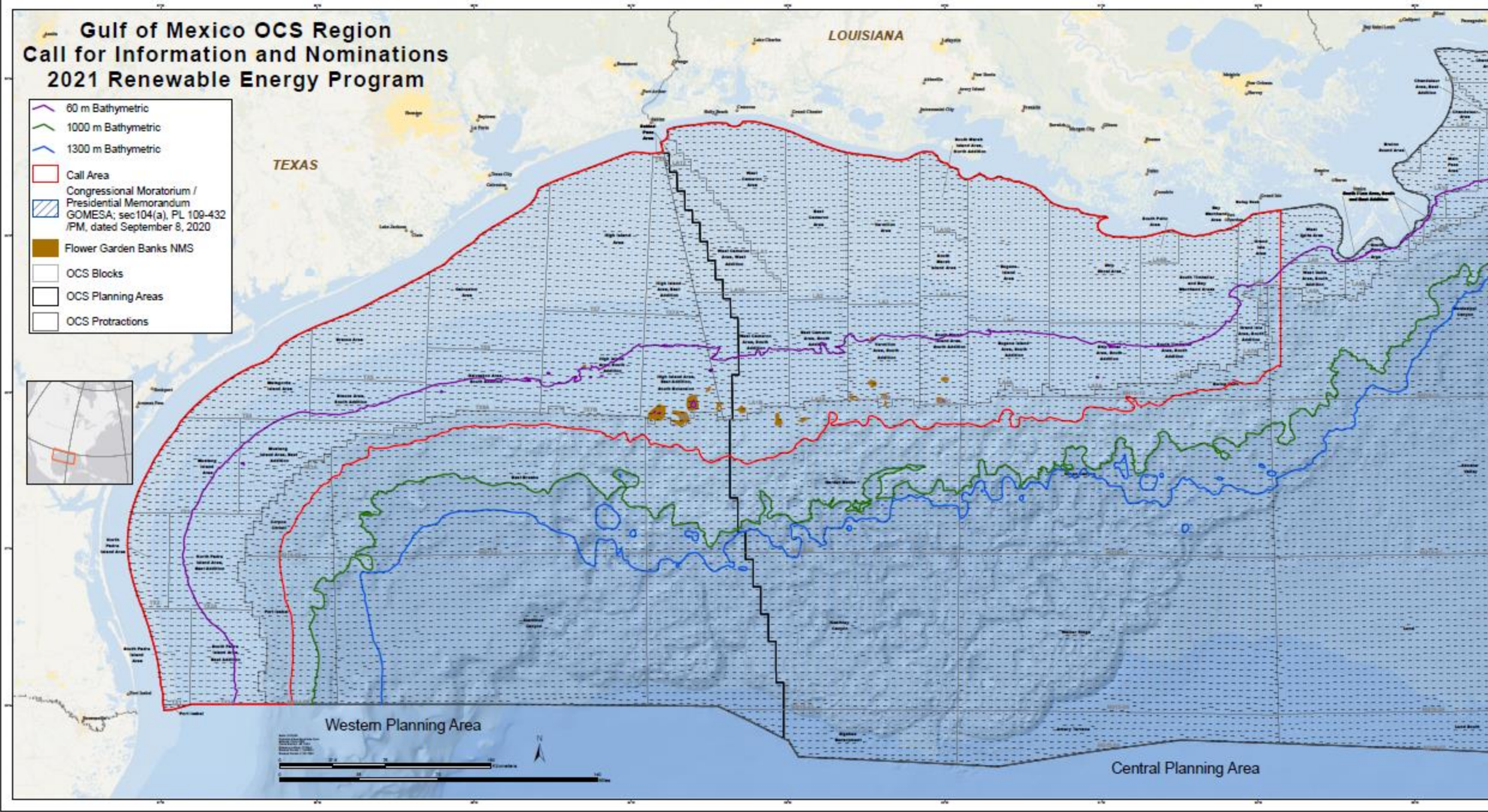
# RFI Comment Summary

Stakeholder Comments	Number of comments
Private Citizens	10
State Agencies (LA)	2
Federal Agencies	2
Universities	1
Non-governmental Organizations (NGOs)	14
Industry	10
Total Comments	39



# Gulf of Mexico OCS Region Call for Information and Nominations 2021 Renewable Energy Program

-  60 m Bathymetric
-  1000 m Bathymetric
-  1300 m Bathymetric
-  Call Area
-  Congressional Moratorium /  
Presidential Memorandum  
GOMESA; sec104(a), PL 109-432  
/PM, dated September 8, 2020
-  Flower Garden Banks NMS
-  OCS Blocks
-  OCS Planning Areas
-  OCS Protractions



Central Planning Area

# Call Comment Summary

Stakeholder Comments	Number of comments
Private Citizens	10
State Agencies	1
Federal Agencies	5
Universities	0
Non-governmental Organizations (NGOs)	16
Industry	8
Total Comments	40



# Gulf of Mexico OCS Region Call for Information and Nominations 2021 Renewable Energy Program

- 60 m Bathymetric
- 1000 m Bathymetric
- 1300 m Bathymetric
- Call Area
- RFI Area
- Flower Garden Banks NMS
- OCS Blocks
- OCS Planning Areas
- OCS Protraction

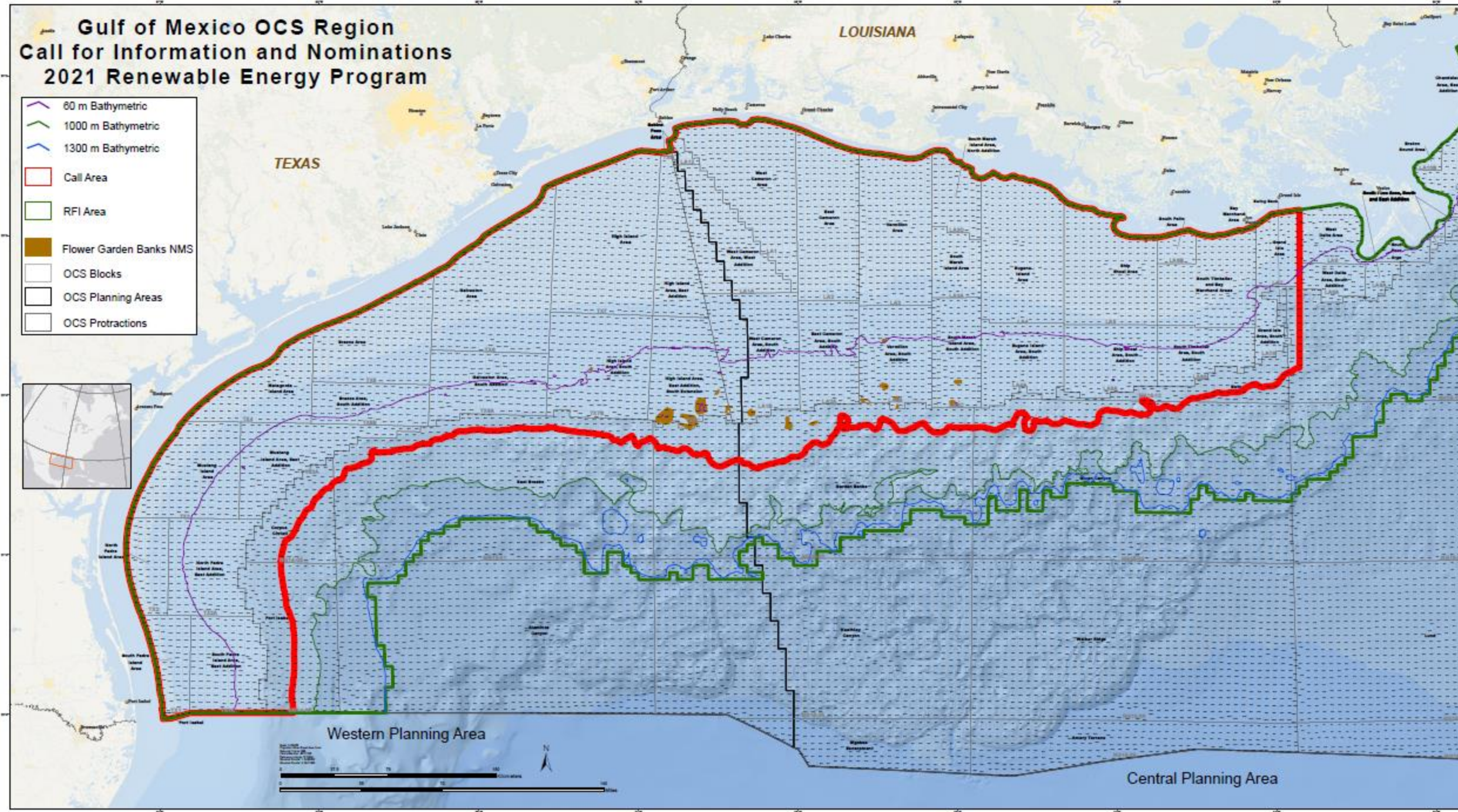
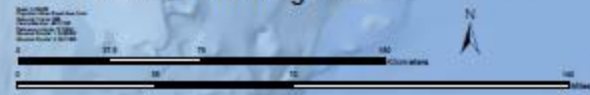


TEXAS

LOUISIANA

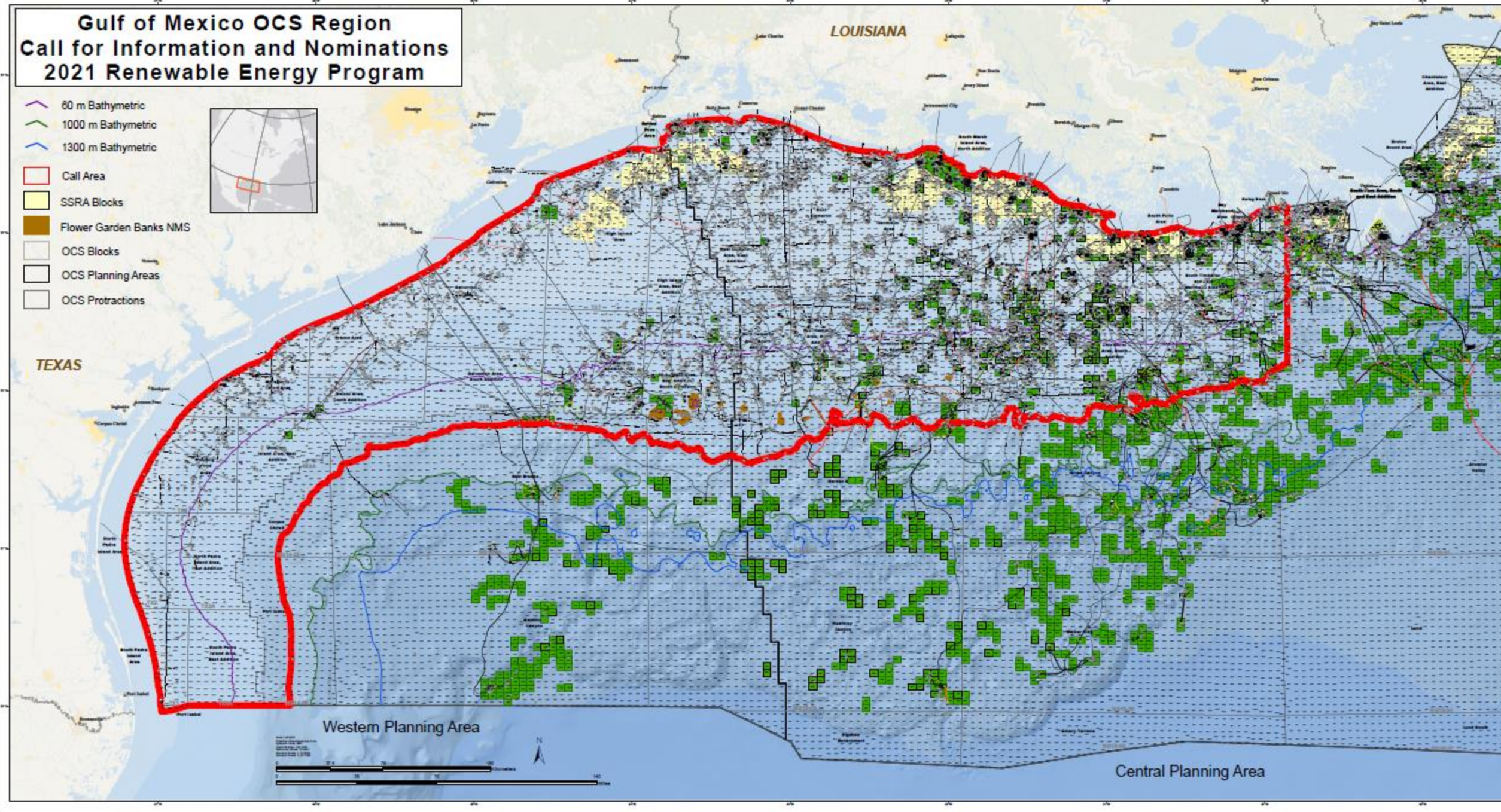
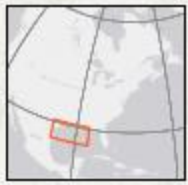
Western Planning Area

Central Planning Area



# Gulf of Mexico OCS Region Call for Information and Nominations 2021 Renewable Energy Program

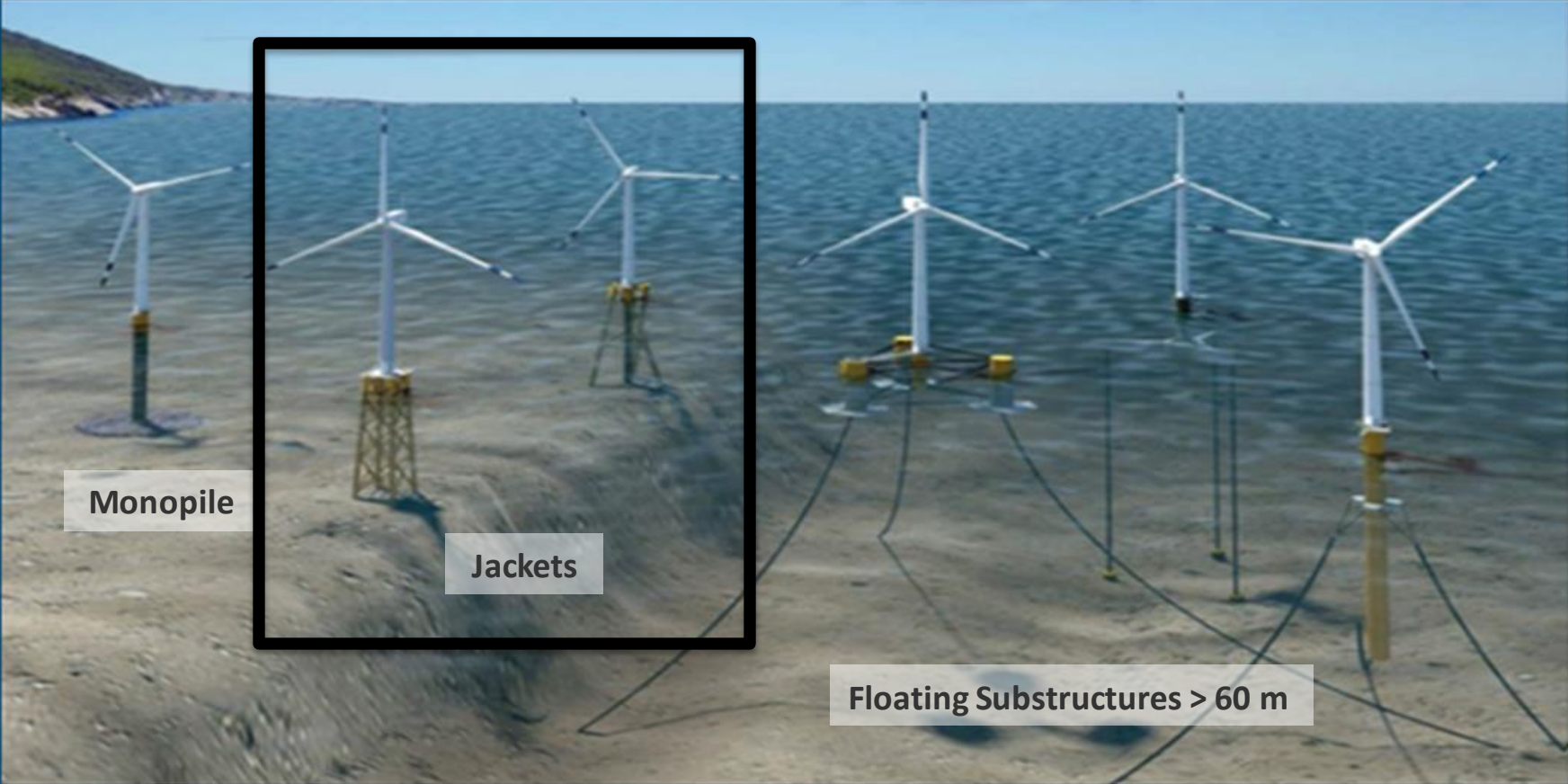
- 60 m Bathymetric
- 1000 m Bathymetric
- 1300 m Bathymetric
- Call Area
- SSRA Blocks
- Flower Garden Banks NMS
- OCS Blocks
- OCS Planning Areas
- OCS Protractions



Western Planning Area

Central Planning Area

# Offshore Wind Turbine Structures



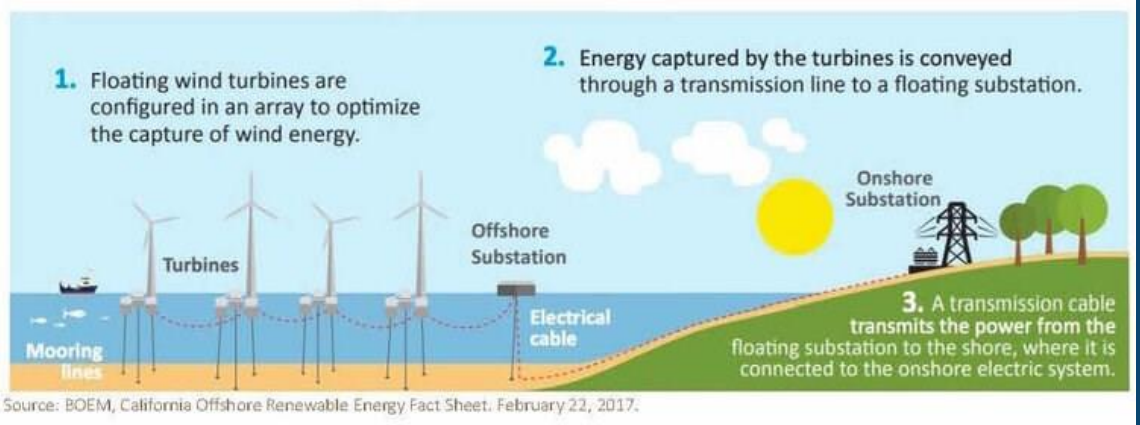
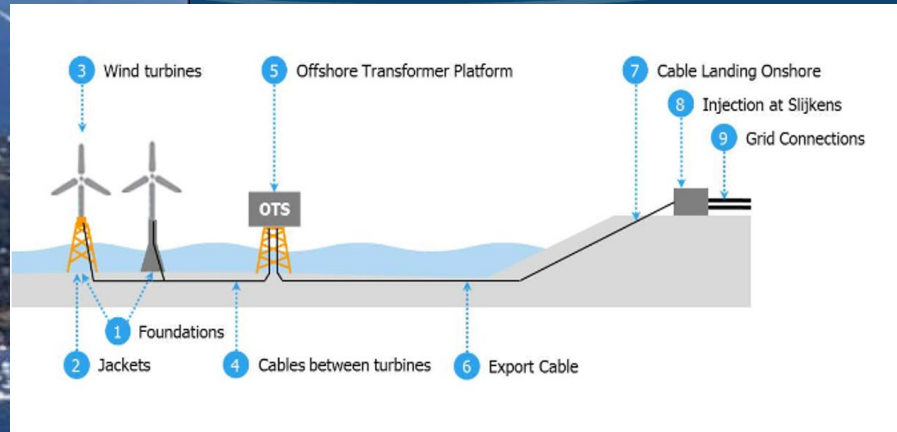
Monopile

Jackets

Floating Substructures > 60 m







Source: BOEM, California Offshore Renewable Energy Fact Sheet, February 22, 2017.



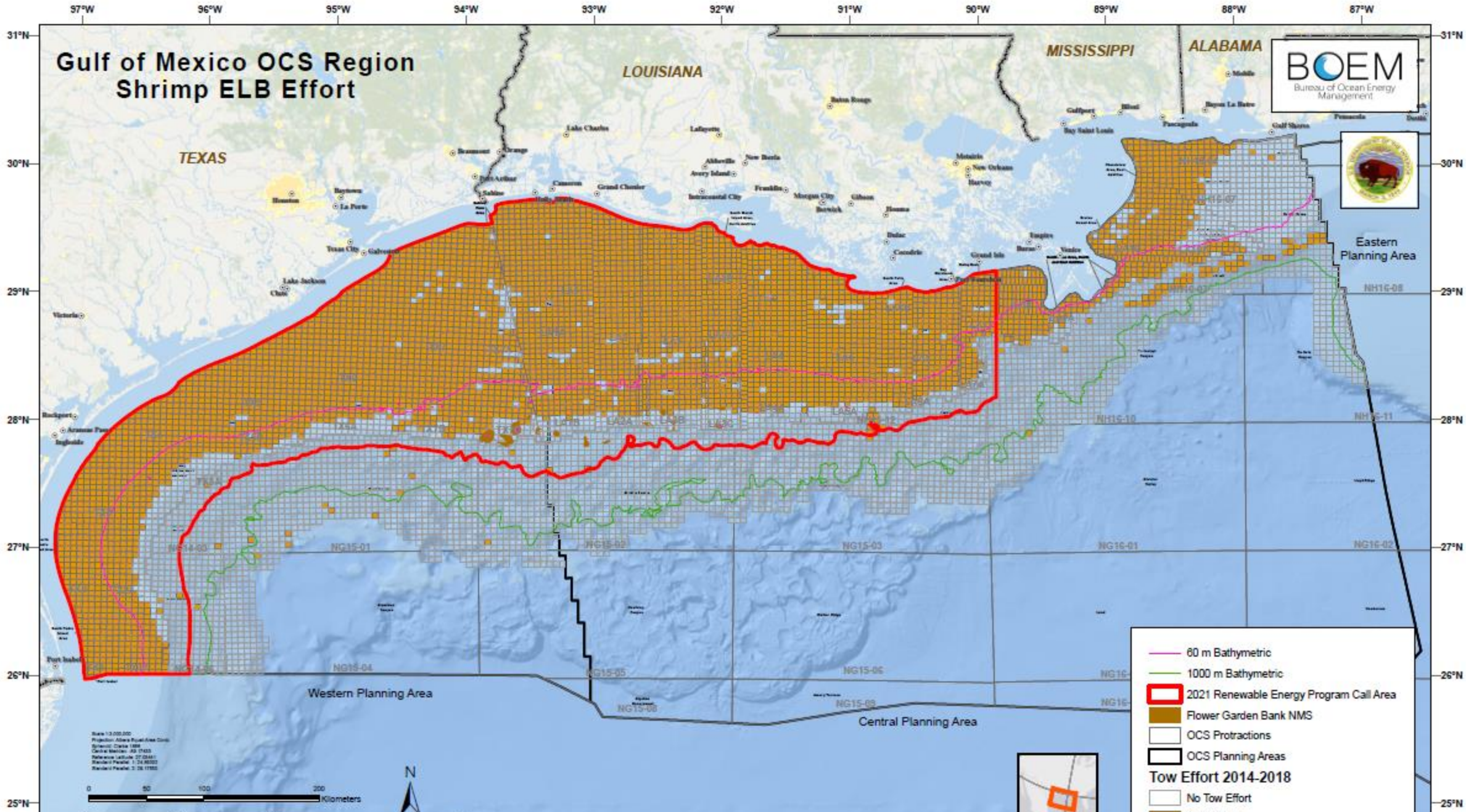
# Stakeholder Engagement Milestones

Stakeholder Engagement	Date
State of Louisiana	Dec 2020-Oct 2021
State of Alabama	January, March 2021
USACE Resource Agency Regional Meeting	January 28, 2021
DOI Restore Team	February 4, 2021
Federal Partners Meeting	February 24, 2021
Gulf States Marine Fisheries Commission	March 17, 2021
NOAA	April 6, 2021
DoD	April 9, 2021
The Business Network for Offshore Wind	April 22, 2021
State of Mississippi	April 2021
The Business Network for Offshore Wind	May 6, 2021
OOC Wind Workshop	May 10, 2021
GOM Fishery Management Council	May 26, 2021
Tribal Informational Meeting	June 10, 2021
BOEM GOM Task Force Meeting	June 15, 2021
LA Wind Week	June 21-25, 2021

Stakeholder Engagement	Date
Gulf of Mexico Alliance Offshore Wind Webinar	June 30, 2021
LA Oyster Task Force Meeting	July 20, 2021
LA Crab Task Force Meeting	August 3, 2021
LA Shrimp Task Force Meeting	August 4, 2021
GOM Fishery Management Council	August 25, 2021
LA Finfish Task Force Meeting	August 25, 2021
Reef Fish Stakeholders' Alliance	September 10, 2021
NOAA-NMFS	September 24, 2021
Gulf States Marine Fisheries Commission	October 20, 2021
Coasts, Oceans, Ports, and Rivers Institute (COPRI)	October 28, 2021
National Academy of Engineering	November 5, 2021
SERPPAS Energy Working Group Meeting	November 10, 2021
Shrimp Advisory Panel	December 8, 2021
Fisheries Mitigation Workshop	December 15, 2021

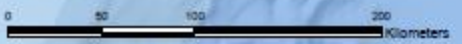


# Gulf of Mexico OCS Region Shrimp ELB Effort



— 60 m Bathymetric  
— 1000 m Bathymetric  
 2021 Renewable Energy Program Call Area  
 Flower Garden Bank NMS  
 OCS Protractions  
 OCS Planning Areas  
**Tow Effort 2014-2018**  
 No Tow Effort  
 Tow Effort

Scale 1:3,000,000  
 Projection: Albers Equal Area Conic  
 Spheroid: Clarke 1886  
 Central Meridian: 93.0000  
 Reference Latitude: 27.0000  
 Standard Parallel 1: 26.8600  
 Standard Parallel 2: 28.1400

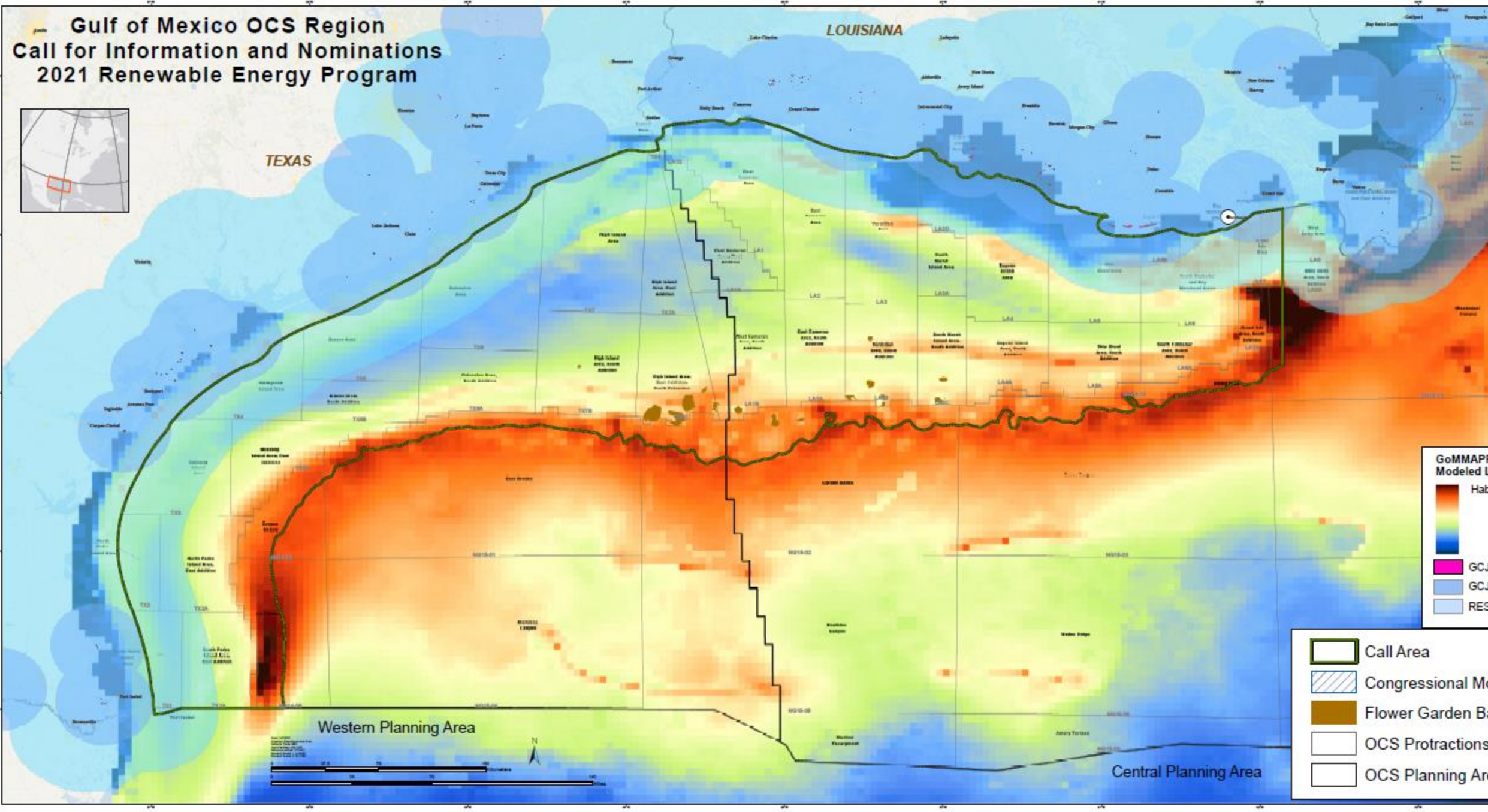


# Gulf of Mexico OCS Region Call for Information and Nominations 2021 Renewable Energy Program



TEXAS

LOUISIANA



**GoMMAPS 2  
Modeled Location**

- Habitat Suitability
- GCJV B...
- GCJV B...
- RESTOR...

- Call Area
- Congressional Moratorium
- Flower Garden Bank
- OCS Protractions
- OCS Planning Areas

Western Planning Area

Central Planning Area

# GOM Offshore Wind Energy Leasing Status

- **June 11, 2021:** Request of Interest (RFI) published in the Federal Register.
- **June 15, 2021:** BOEM GOM Inaugural Intergovernmental Renewable Task Force (Task Force) Meeting to present and gather information.
- **July 26, 2021:** Comment Period for the RFI Closed.
  - BOEM received 39 RFI comments.
- **November 1, 2021:** BOEM published the Call for Information and Nominations (Call) in the Federal Register. Docket Number BOEM-2021-0077
- **December 16, 2021:** Comment Period for the Call Closed.
  - BOEM received 39 Call comments.
- **Next Steps:**
  - Fisheries Summit-January 19 and 20, 2022
  - Hold the 2<sup>nd</sup> Task Force Meeting-February 2, 2022
  - Start the Environmental Assessment on the Call Area- Scoping Comment Period Closes on February 9
  - Identify Wind Energy Areas
- Stay informed about BOEM GOM activities at



# Team Members

GOM Regional Director:

Michael Celata – [Michael.celata@boem.gov](mailto:Michael.celata@boem.gov)

Chief of Emerging Programs:

Tershara Matthews - [Tershara.Matthews@boem.gov](mailto:Tershara.Matthews@boem.gov)

Renewable Energy Coordinator:

Idrissa Boubé - [idrissa.boubé@boem.gov](mailto:idrissa.boubé@boem.gov)

Regional Tribal Liaison:

Douglas Jones – [douglas.jones@boem.gov](mailto:douglas.jones@boem.gov)

Data Management:

Dana Inzinna - [Dana.Inzinna@boem.gov](mailto:Dana.Inzinna@boem.gov)

Communications:

John Filostrat - [john.filostrat@boem.gov](mailto:john.filostrat@boem.gov)

Hillary McKey - [Hillary.mckey@boem.gov](mailto:Hillary.mckey@boem.gov)



# BOEM

Bureau of Ocean Energy Management  
U.S. Department of the Interior



BOEM.gov



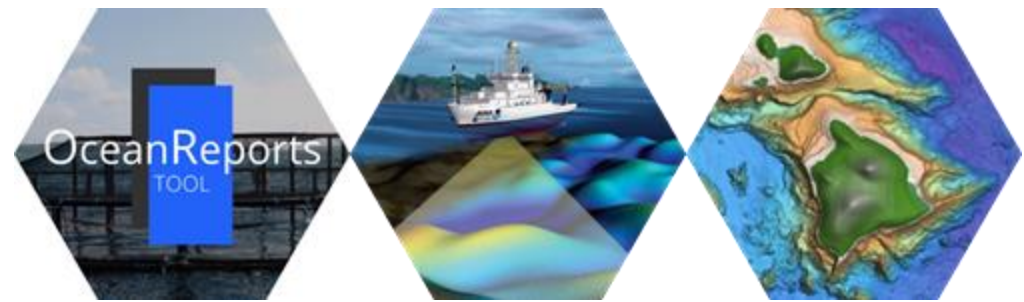
Tershara Matthews | [Tershara.matthews@boem.gov](mailto:Tershara.matthews@boem.gov)



# Gulf of Mexico Aquaculture Atlas







# Marine Spatial Analyses to Inform Wind Energy Siting in the Gulf of Mexico

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

Contacts: [James.Morris@noaa.gov](mailto:James.Morris@noaa.gov); [Mark.Monaco@noaa.gov](mailto:Mark.Monaco@noaa.gov)



# Marine Spatial Ecology Division

*Informing Conservation, Management, and Industry*

## Marine spatial planning

How can we balance ocean uses + conservation?

## Mapping Habitat and Species Distributions:

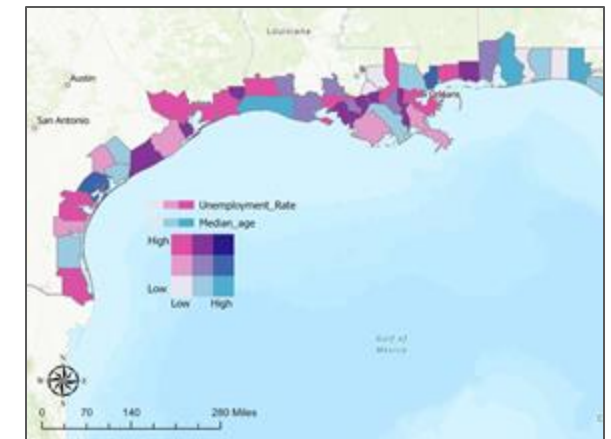
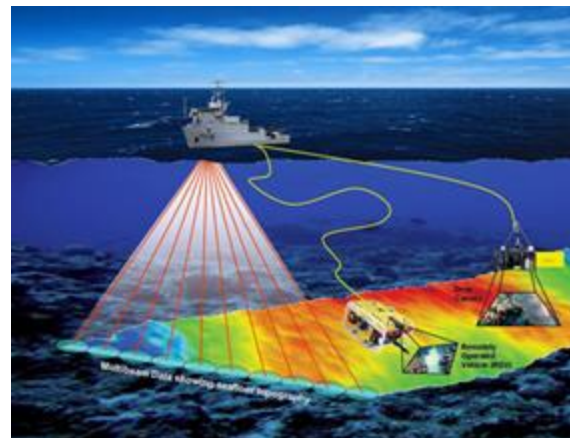
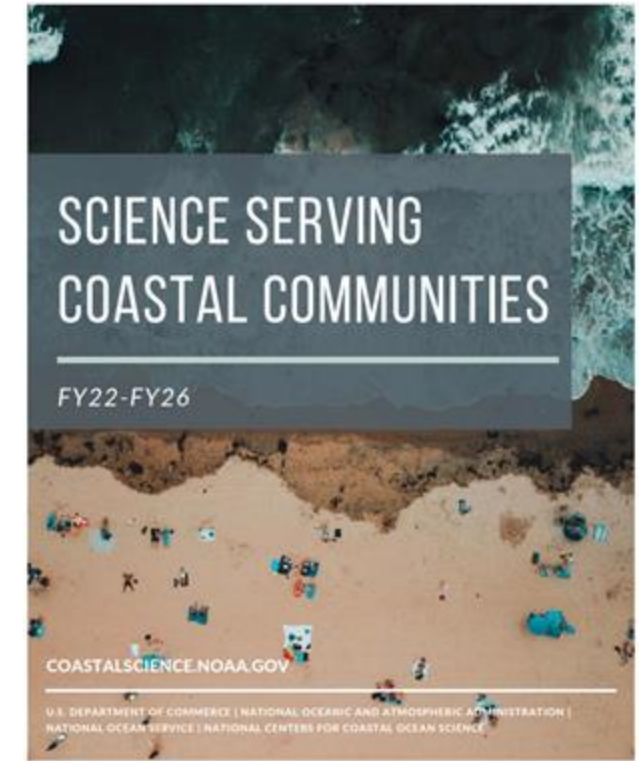
How many fish and where?

## Sanctuary Boundaries:

How should we change the Sanctuary boundaries?

## Informing Fisheries Management Council Decisions:

Where and how should we protect marine resources?



# NOAA's Role in Wind Energy

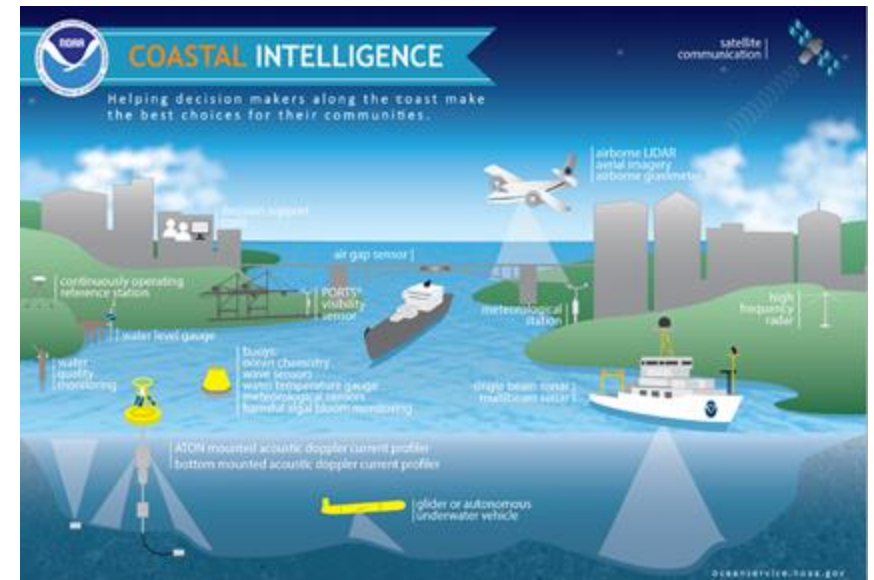
## Goals and Mandates

- Natural resource stewardship
- Empowering the blue economy
- Enabling ocean use and management
- Enabling renewable energy



## Capabilities and services

- Marine spatial planning
- Protected species consultations
- Habitat consultations
- Integrated Ecosystem Assessments
- Fisheries management
- Weather and climate forecasting
- Other ocean intelligence





# COASTAL INTELLIGENCE

satellite  
communication



Helping decision makers along the coast make the best choices for their communities.

airborne LIDAR  
aerial imagery  
airborne gravimeter



decision support  
tools



air gap sensor



continuously operating  
reference station



PORTS®  
visibility  
sensor



water level gauge



water  
quality  
monitoring



buoys:  
ocean chemistry  
wave sensors  
water temperature gauge  
meteorological sensors  
harmful algal bloom monitoring



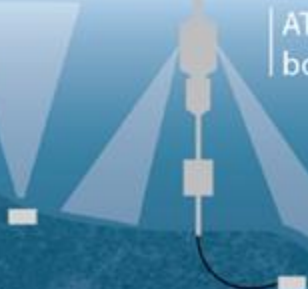
single beam sonar  
multibeam sonar



high  
frequency  
radar



ATON mounted acoustic doppler current profiler  
bottom mounted acoustic doppler current profiler



glider or autonomous  
underwater vehicle



# Unleash the power of big data and geospatial science!

See our work featured in:



AquaData  
Catalog

33 million

The number of data layers we analyze to find the right space for your ocean industry

A photograph of an offshore wind farm with several white wind turbines on yellow jackets in the ocean under a clear blue sky. The largest turbine is in the foreground on the left, with others receding into the distance.

TAKE YOUR  
**OCEAN PROJECT**  
TO THE NEXT LEVEL



**OceanReports**

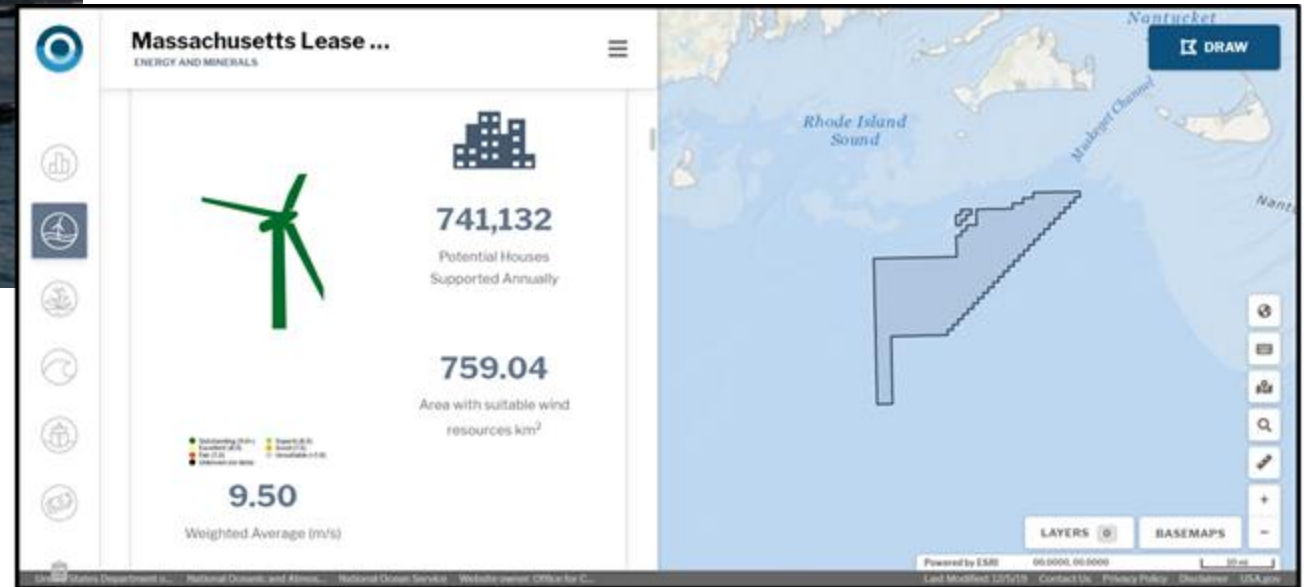
A BOEM/NOAA PARTNERSHIP



## Analyze and Reduce Risk

Explore what is happening in your ocean neighborhood

An automated spatial analytical tool for any Ocean Neighborhood in US waters



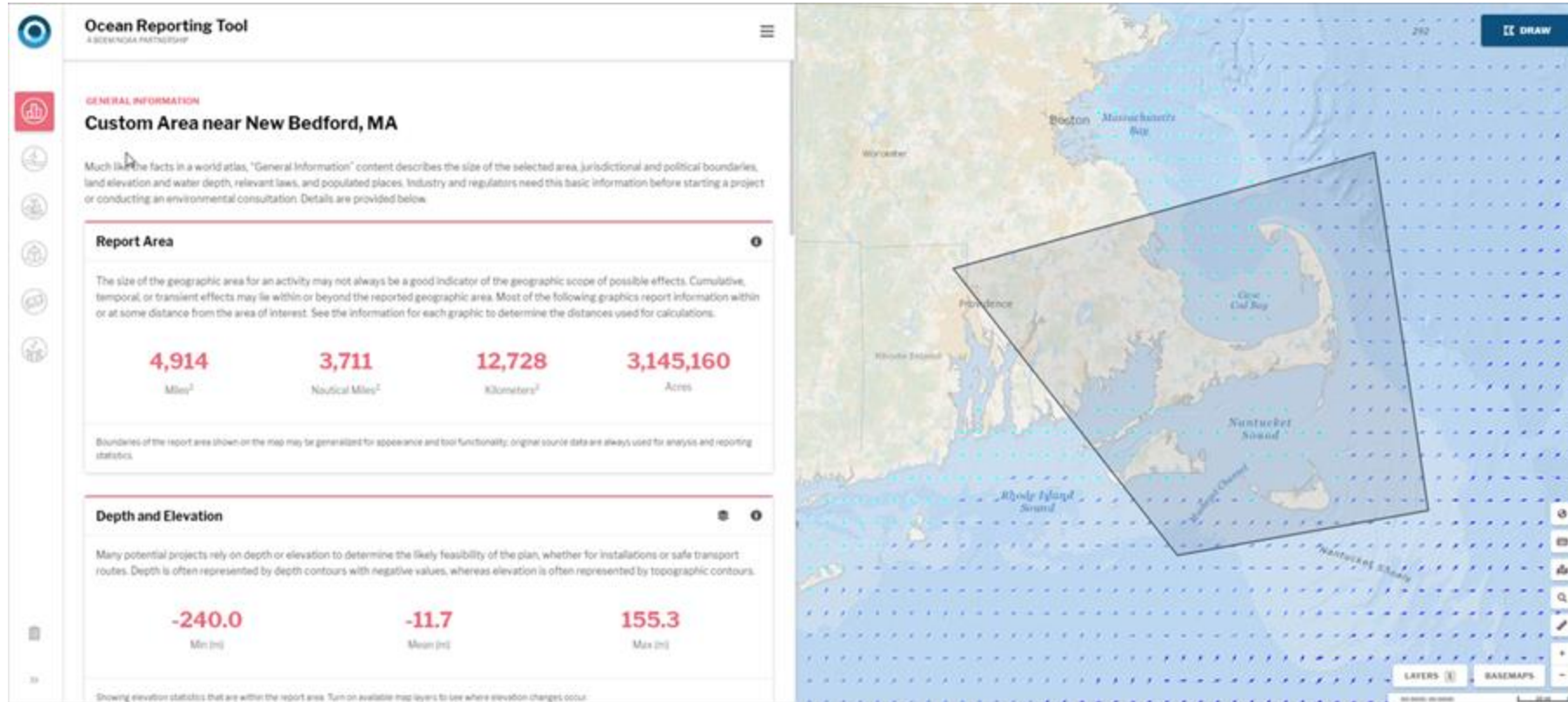
81 Infographics

159 Vector & Raster Layers

98 Queries

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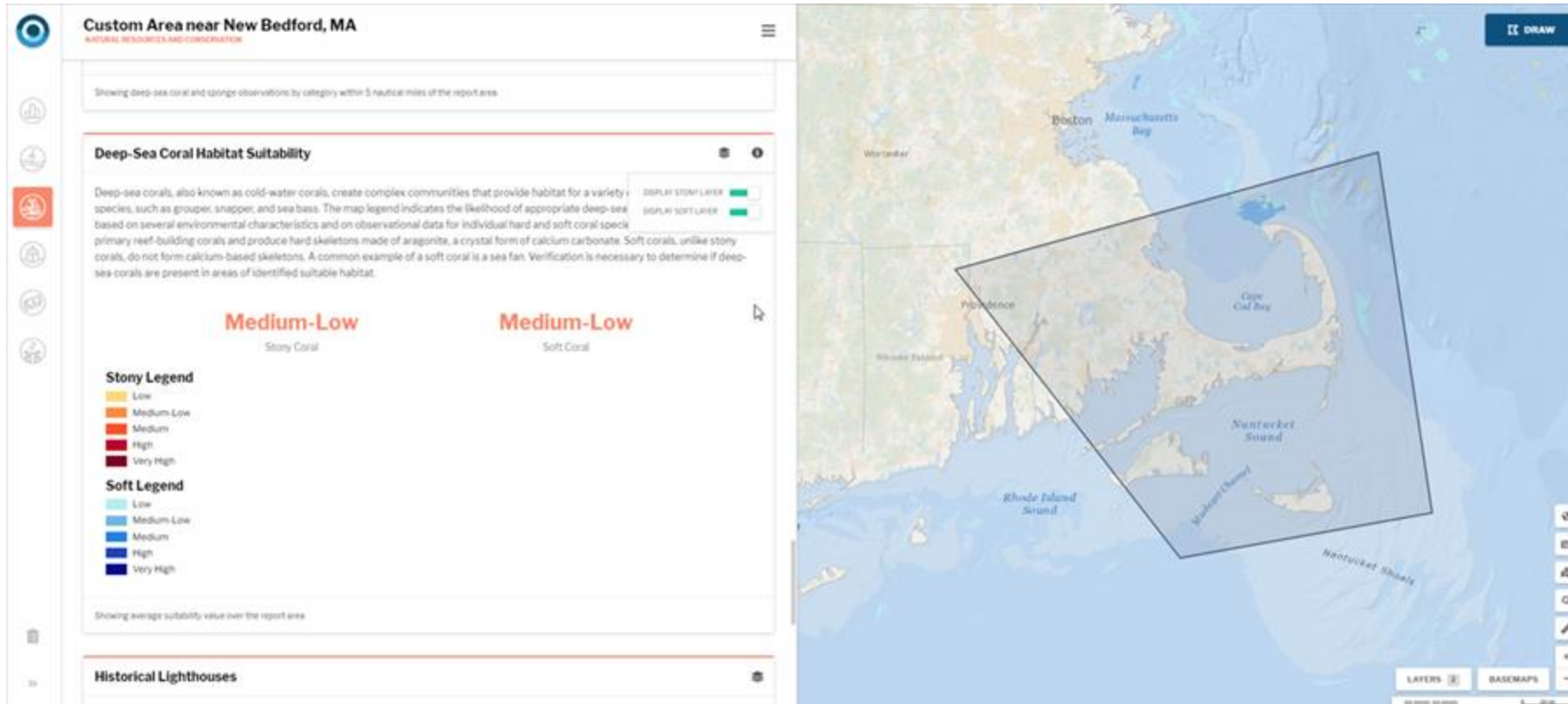
# Ocean Reports: General Information



**Report Area**  
**Depth/Elevation**  
**Populated Places**  
**Federal/State/County**  
**Jurisdictions**

**Congressional/Legislative Districts**  
**Federal Statutes**  
**Tribal Lands**





**Endangered Species**

**ESA-Critical Habitat Designations**

**Habitat Areas of Particular Concern**

**Managed Highly Migratory Species**

**Audubon Important Bird Areas**

**Protected Areas**

**Artificial Reefs**

**Shallow Corals**

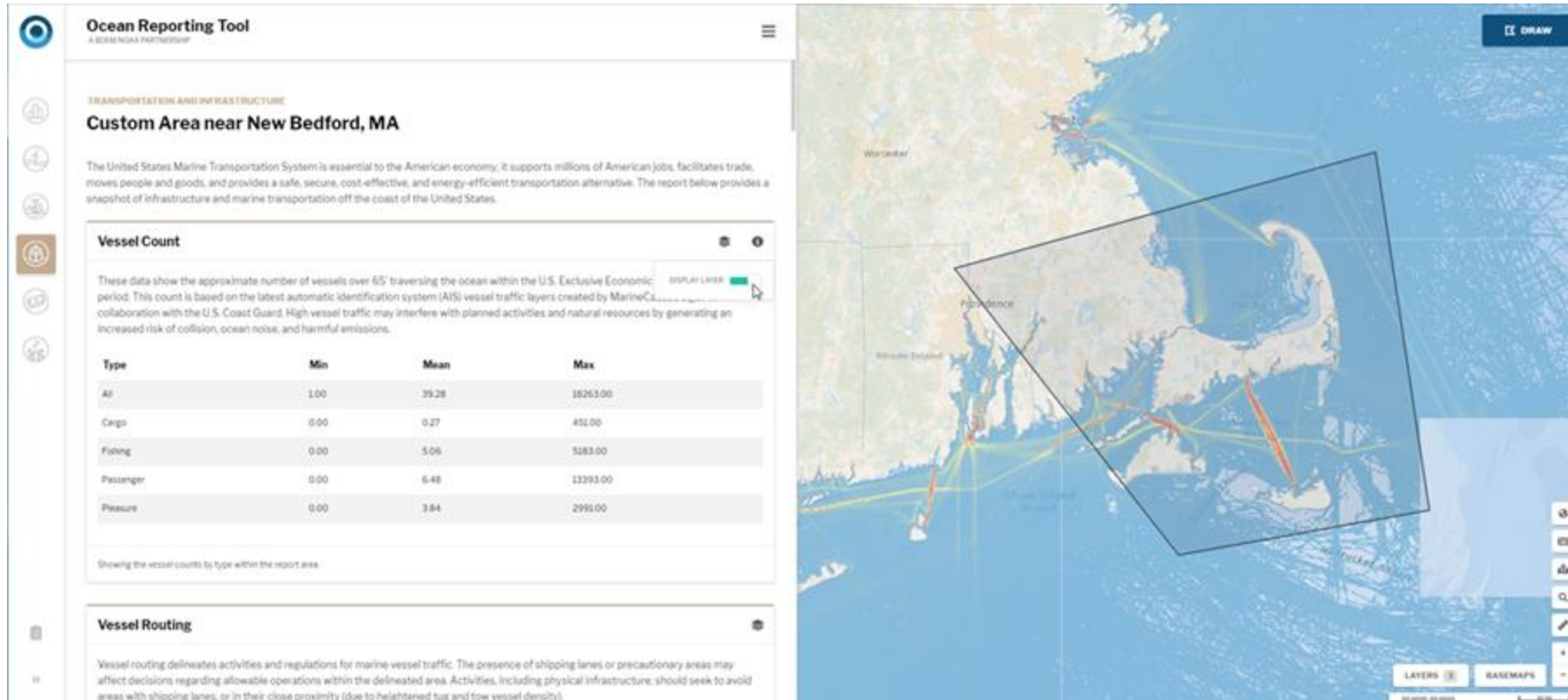
**Deep-sea Sponge/Coral Obs.**

**Deep-sea Coral Habitat Suitability**

**Historical Lighthouses**

**Cetacean Biologically Important Areas**

# Ocean Reports: Transportation and Infrastructure NATIONAL CENTERS FOR COASTAL OCEAN SCIENCE

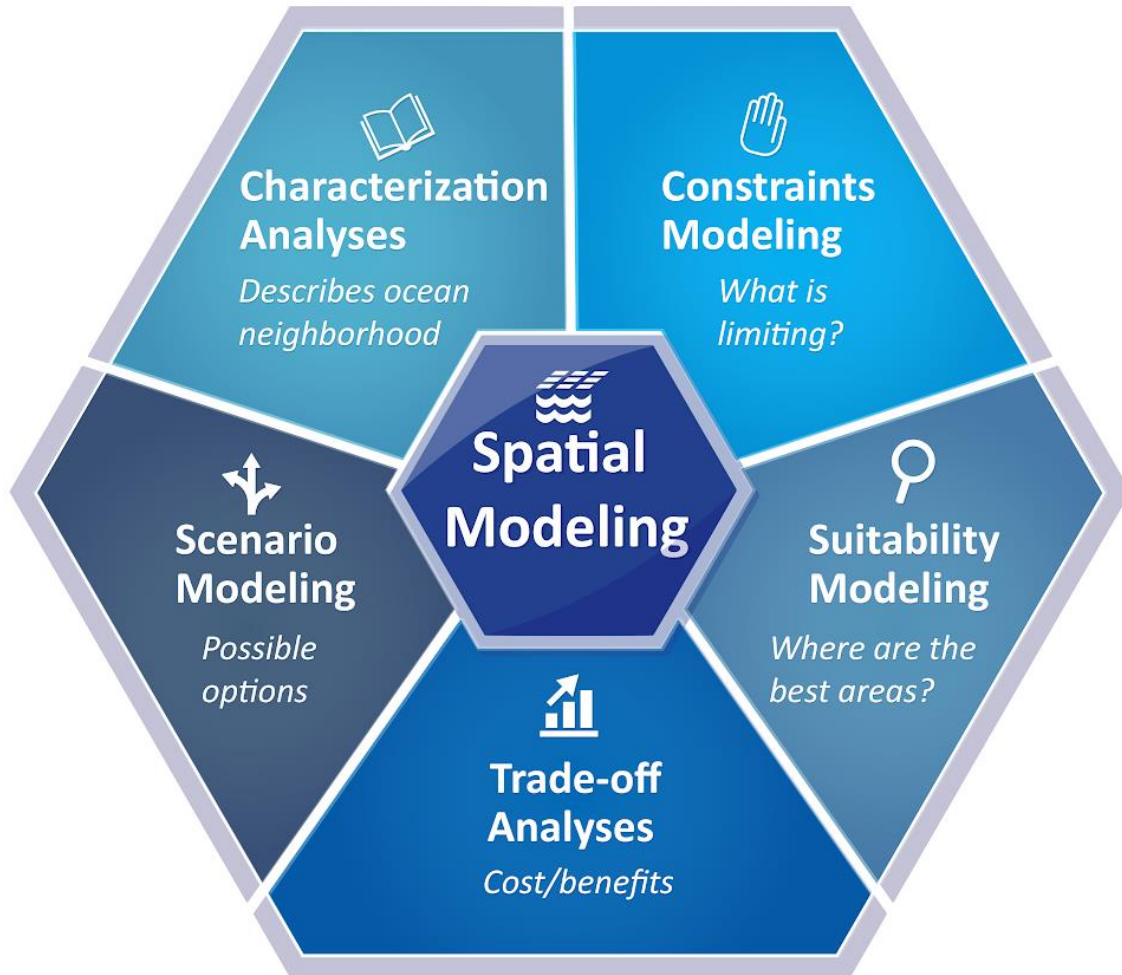


**AIS Vessel Count**  
**Vessel Routing**  
**Right Whale Mgmt. Areas**  
**Anchorage Areas**  
**Pilot Boarding**  
**Ports**

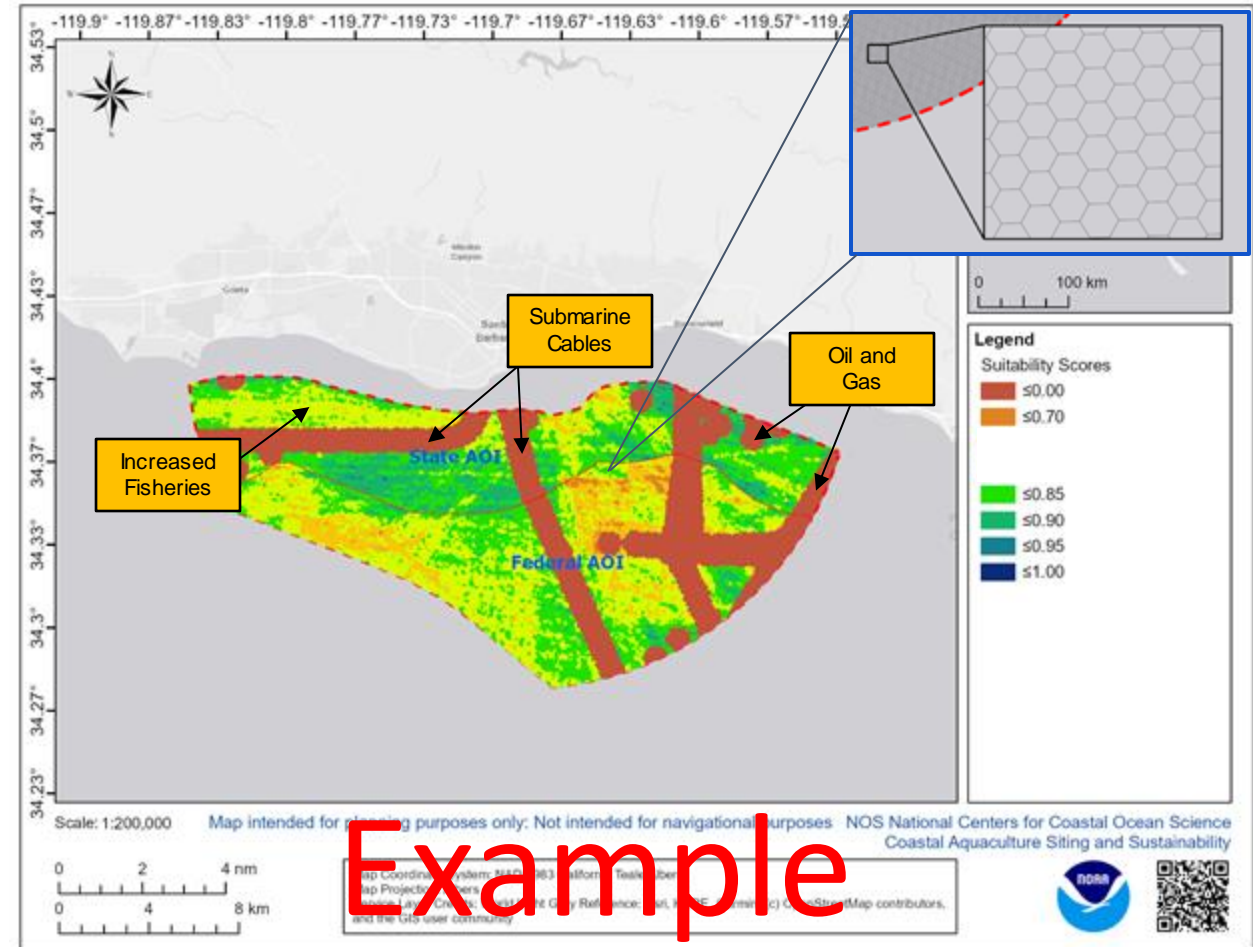
**Unexploded Ordnances**  
**Formerly Used Defense Sites**  
**Wrecks/Obstructions**  
**Cables and Pipelines**  
**Wastewater Outfalls**  
**Aquaculture**

**Coastal Maintained Channels**  
**Danger Zones/Restricted Areas**  
**Oil Lightering Zones**  
**Deepwater Ports**  
**Oil/Gas Platforms**  
**Oil/Gas Wells**

# Spatial Modeling

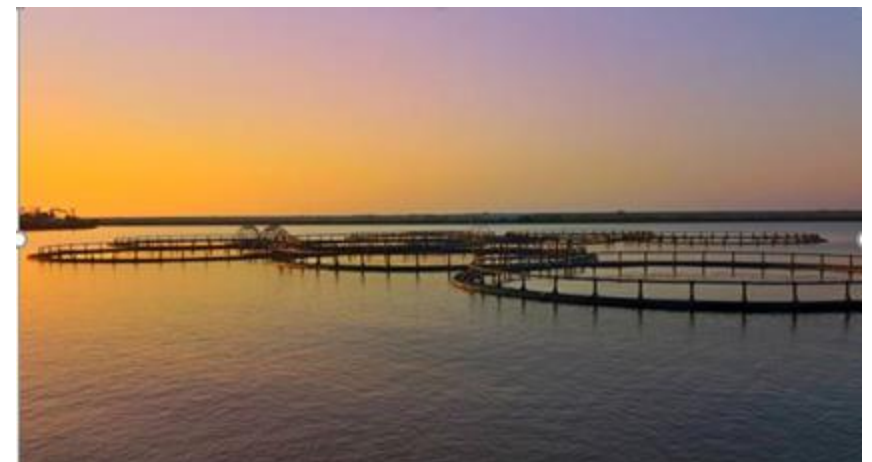
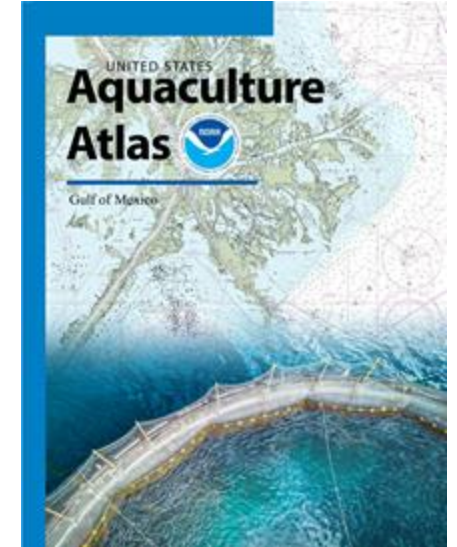
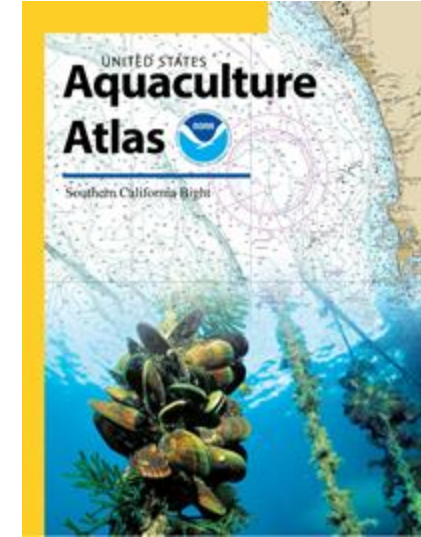


A **spatial suitability model** weights locations relative to each other based on a given criteria.



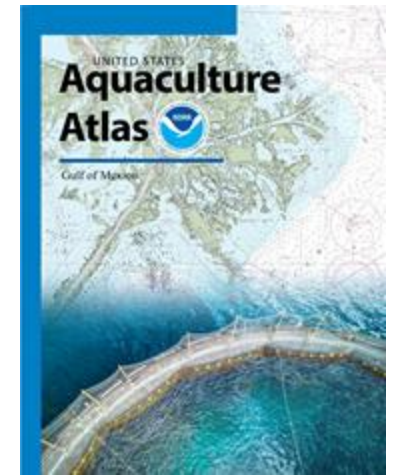
# Aquaculture Opportunity Atlases

- Comprehensive regional marine spatial analyses
- 200+ data layers utilized in each atlas
- 150+ maps in each atlas
- Comprehensive stakeholder engagement
- Framework for future marine spatial planning



# Fishing Data - GoMex Aquaculture Atlas

- Collaborations 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





**Southern Shrimp Alliance**  
 P.O. Box 1577 Tarpon Springs, FL 34688  
 955 E. MLK Dr. Suite D Tarpon Springs, FL 34689  
 727-934-5090 Fax 727-934-5362

September 28, 2021

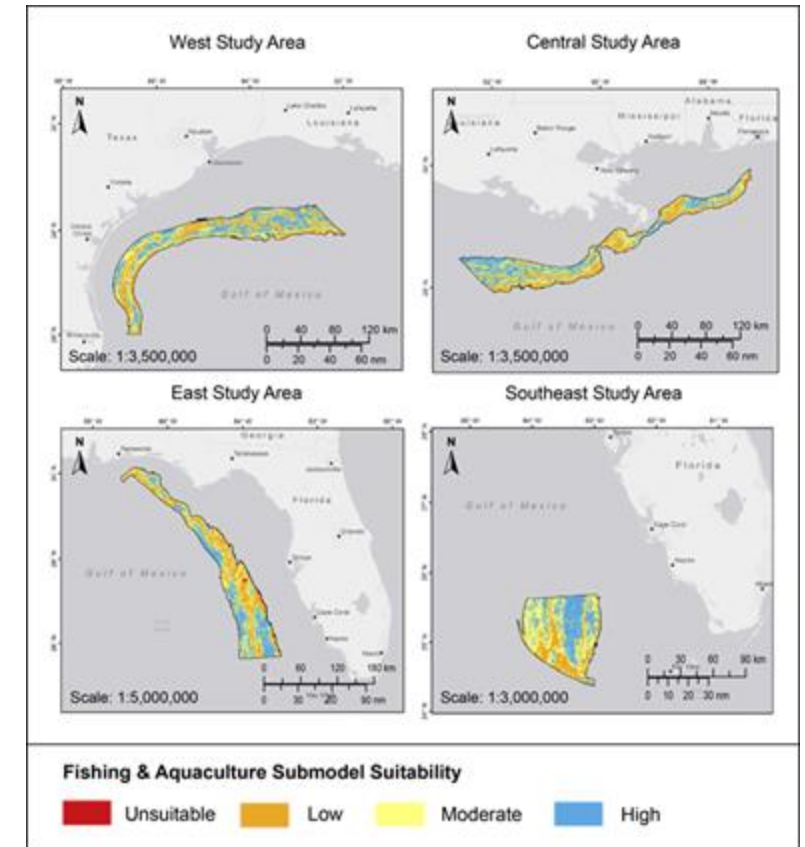
The Honorable Richard W. Spinrad  
 Administrator  
 National Oceanic and Atmospheric Administration  
 1401 Constitution Avenue, NW  
 Washington, D.C. 20230

Dear Administrator Spinrad,

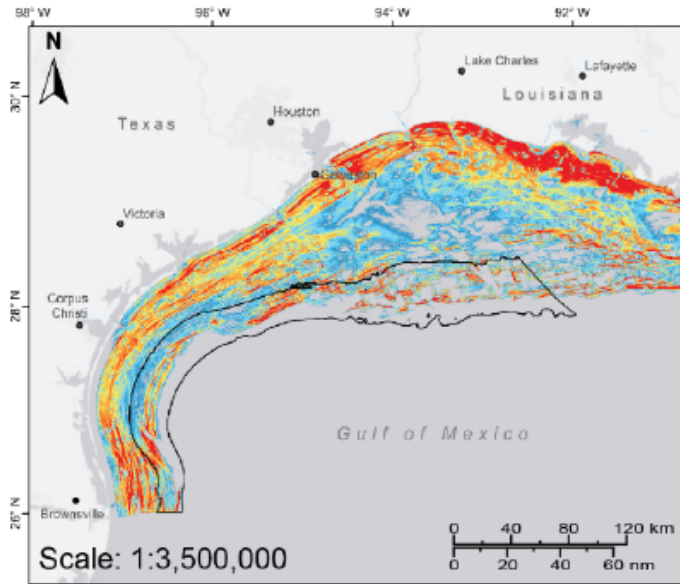
The Southern Shrimp Alliance (SSA) would like to draw your attention to what we believe is the critical role the National Oceanic and Atmospheric Administration (NOAA) must play in the development of offshore wind energy in the Gulf of Mexico (GOM) as part of the Biden Administration's commitment to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



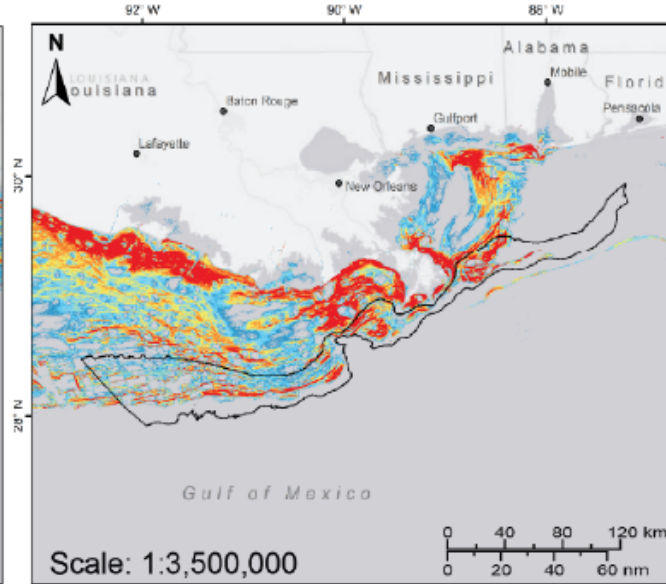
*..we found that the analytical approach to spatial planning applied by the National Ocean Service (NOS) in that AOA initiative to be the most useful tool for supporting this critical decision-making. - SSA*



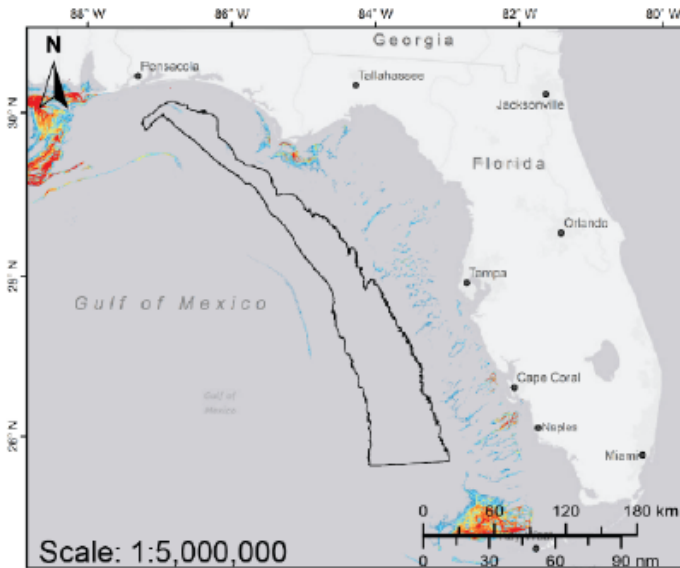
### West Study Area



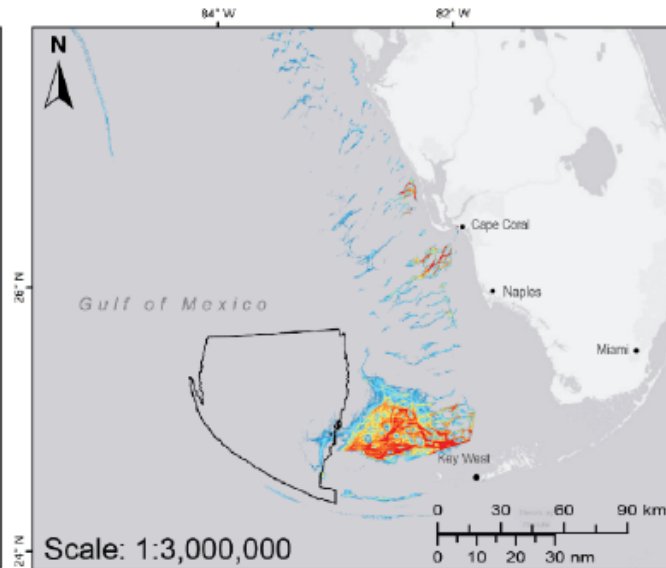
### Central Study Area



### East Study Area

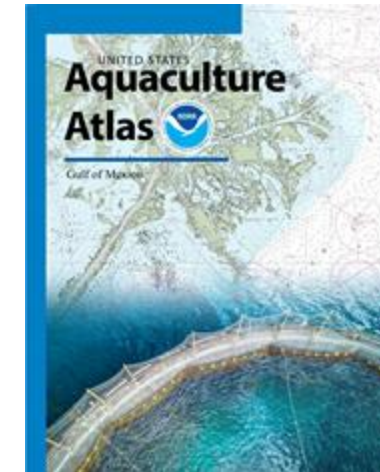
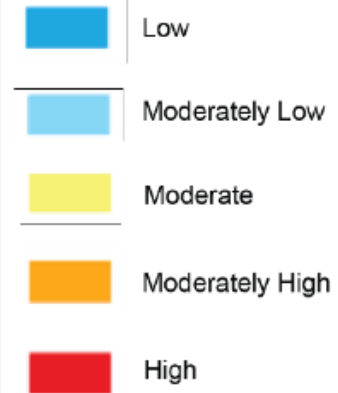


### Southeast Study Area



### Fishing & Aquaculture

Shrimp Electronic Log  
Sum of Trawls (2004 - 2019)



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



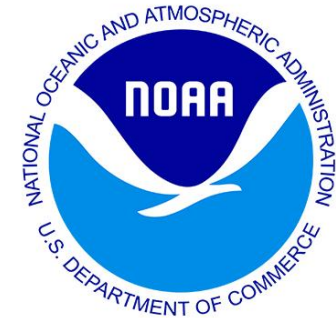
# Next steps

## Wind Energy Area identification

- Screening level spatial data development
- Data harvest from Aquaculture Atlas
- New data development focus on fishing data including socio-economics data
- Screening level spatial modeling

## Leasing process support (going forward)

- BOEM/NOAA Interagency Agreement is underway
- Partnership building underway
- Digital atlas development
- Comprehensive spatial data
- Spatial modeling
- Dynamically updated
- Relevant to each stage in leasing



# Break

For information regarding offshore wind projects, scan the QR Code.





# Environmental Review Process





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Ocean Energy Management

# Gulf of Mexico Renewable Energy Project Environmental Assessment

January 19 & 20, 2022

Michelle Nannen, Environmental Assessment Section

# What is NEPA?

- **National Environmental Policy Act (NEPA)**
  - Provides the framework for protecting the environment by disclosing decision consequences
  - Requires Federal Agencies to consider environmental impacts of their activities
  - Requires decisionmakers to incorporate environmental values into Federal programs
  - Requires coordination with other agencies and governments with resource responsibilities
- **BOEM is conducting an environmental assessment (EA) to disclose the potential impacts of issuing renewable energy leases on the Outer Continental Shelf**
- **BOEM is asking for input for this EA**



# Environmental Assessment

- **Analysis will ONLY be for issuing leases and the site assessment and characterization activities**
  - Meteorological (met) buoys or towers
  - Vessel trips
  - Geological and biological surveys
- **Analysis will NOT include**
  - Specific project layouts
  - Cable routes for specific projects
  - Visual impacts of a project
- **Analysis of *SPECIFIC* projects**
  - Covered later in the process
  - After a lease is obtained and project plan submitted
  - Additional opportunities for engagement and consultation



Example of a meteorological (met) buoy

Source: National Data Buoy Center, 2012





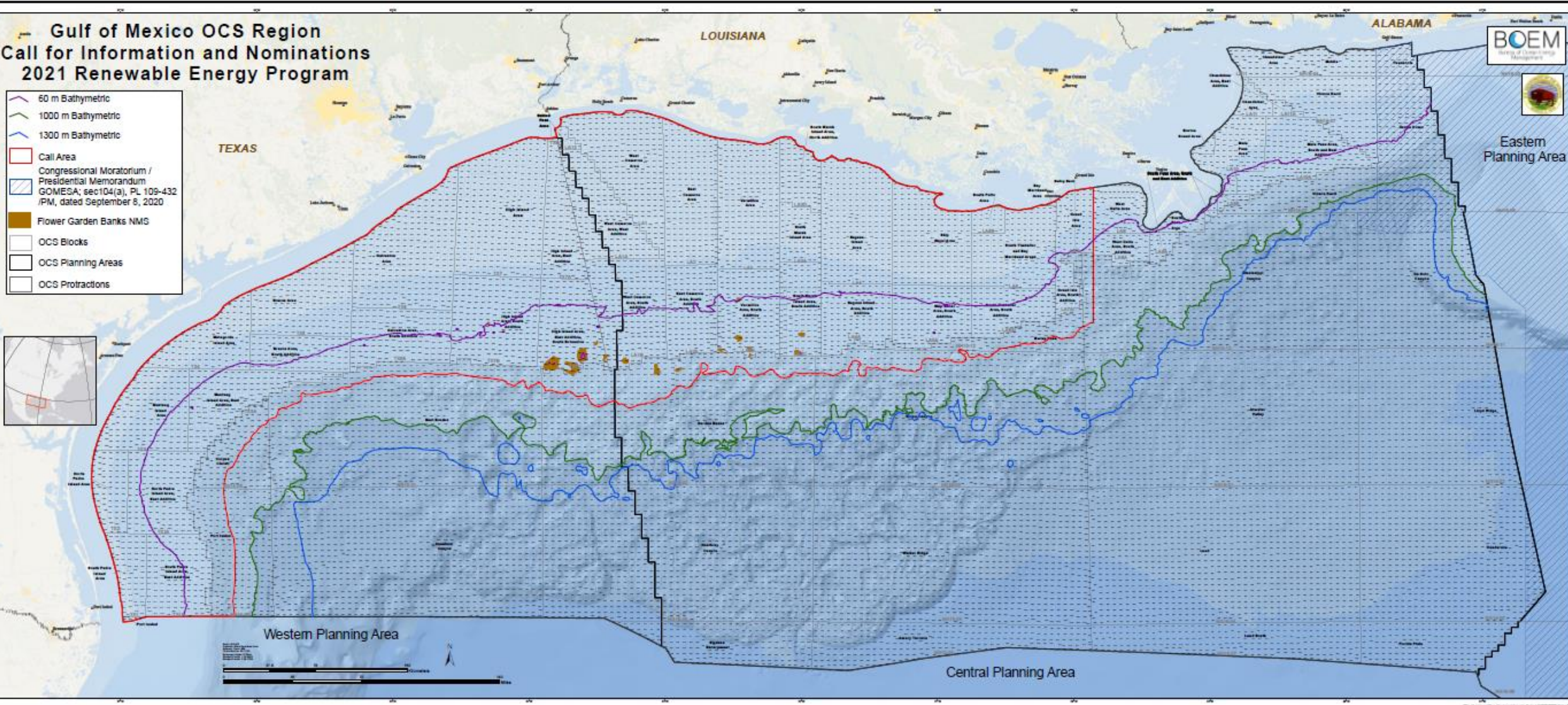
**Reson 8101**

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# Call Area

## Gulf of Mexico OCS Region Call for Information and Nominations 2021 Renewable Energy Program

- 60 m Bathymetric
- 1000 m Bathymetric
- 1300 m Bathymetric
- Call Area
- Congressional Moratorium / Presidential Memorandum GOMESA; sec104(a), PL 109-432 /PM, dated September 8, 2020
- Flower Garden Banks NMS
- OCS Blocks
- OCS Planning Areas
- OCS Protractions



# Schedule

Milestone	Dates
Publish Press Release for EA	1/11/2022
Scoping Period	1/11 – 2/9/22
Draft EA Published	Summer 2022
Draft EA Comment Period	30 days following publication of Draft EA



# Comments and Participation

- Input may be provided through the NEPA Process and through the Intergovernmental Task Force
  - Submit scoping comments and comments on the EA through Regulations.gov for NEPA
  - Provide input to the Intergovernmental Task Force
- There will also be additional opportunities to consult on *specific projects* later in the process as well





# Scoping Input

- **The public is invited to provide scoping input for the EA**
  - Identify exclusion areas or areas of sensitivity
  - Identify resources to be analyzed in the EA
  - Provide data on the affected environment
  - Other issues of concern or interest
- **Provide scoping comments**
  - Regulations.gov (Docket # BOEM-2021-0092)
- **For more information visit**
  - <https://www.boem.gov/renewable-energy/state-activities/gulf-mexico-activities>



# Contacts

- Intergovernmental Task Force
  - Tershara Matthews – [tershara.matthews@boem.gov](mailto:tershara.matthews@boem.gov)
  - Idrissa Boubé – [idrissa.boube@boem.gov](mailto:idrissa.boube@boem.gov)
- NEPA
  - Michelle Nannen – [michelle.nannen@boem.gov](mailto:michelle.nannen@boem.gov)
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# Fisheries Frequently Asked Questions





**BOEM** Bureau of  
Ocean Energy Management

# Fisheries Resources Frequently Asked Questions

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Mariana Steen  
Marine Biologist/Fisheries Lead  
Gulf of Mexico Regional Office

Gulf of Mexico Offshore Wind Fisheries Summit  
January 19-20, 2022

## Agenda

- Offshore wind development
  - stakeholder engagement
  - siting
  - navigation
  - design
  - access
- Fisheries impacts
- 5 minutes for questions





## How is BOEM engaging with the fishing community?

- Direct communication through public comments (i.e., NEPA process)
- Indirectly through regional fisheries management councils and commissions, Federal agencies, fishermen's associations, and State-sponsored task forces
- BOEM will continue our ongoing engagement with fisheries stakeholders in the Gulf of Mexico to better understand and address concerns



## How will BOEM consider others' ocean uses?

- Balancing impacts to other users of the Gulf of Mexico
- Including fisheries and military activities, vessel traffic, and other energy developments
- Partnering with the National Oceanic and Atmospheric Administration to adapt Aquaculture Opportunity Areas Atlas marine spatial planning tool





## Are there siting and design concerns that address navigation and safety?

- Facilities will comply with U.S. Coast Guard requirements
- Navigational and Safety Risk Assessment
- BOEM can impose restrictions on development or require mitigation measures
- BOEM will evaluate and consider facility design alternatives





## What is the average height above sea surface and distance between turbines?

- Turbine height and spacing varies by project
- 65-100 ft above the surface based on current technology
- 200 ft above the surface as taller turbines are installed
- Wind projects offshore RI/MA have adopted a standard 1x1 nautical mile spacing





## Will vessel traffic and fishing activity be excluded around and within offshore wind farms?

- BOEM does not have the authority to restrict vessel traffic or fishing activities
- U.S. Coast Guard implements safety zones and buffers on a case-by-case basis



- Will electrical cables be buried beneath the seafloor?

- Standard commercial practice is to bury cables 3-10 ft in waters shallower than 6,562 ft
- Although, burial depths may vary by project depending upon multiple factors
- Alternatives to burial include adding protective coverings, such as concrete mattresses





## Will the wind farm facilities be removed after the expiration of a lease?

- A typical offshore wind lease is valid for ~ 30 years
- Financial assurance must be provided to cover decommissioning
- All infrastructure must be removed within 2 years of lease cancellation, expiration, or other termination
- An exception may be rights-of-way facilities



## How does BOEM assess impacts to fisheries?

- Impacts are assessed through the NEPA review process, which also includes
  - Public comments
  - Coordination with stakeholders, industry, and regional fisheries management entities
- BOEM uses the best available science
- BOEM funds research to fill information gaps related to offshore wind impacts





## Will there be a Fisheries Contingency Fund?

- Currently there is no Federal compensation fund available for renewable energy projects.
- Mitigation measures are evaluated during the NEPA review process and may be required as a condition of approval of a wind lessee's COP.
- Some U.S. Atlantic offshore wind developers have established fisher compensation funds.



- What are the effects of electromagnetic fields (EMF)?

- EMF decays quickly with distance from the cable
- Many studies have been performed on the impacts of EMF on marine species.
  - EMFs not observed to act as barriers to movement
  - Impacts to populations are not expected
  - Some species respond to EMF (e.g., sharks, skates, and lobsters)





- What are the impacts of underwater noise from offshore wind development?
- Most sound sources used during high-resolution geophysical surveys are out of the hearing range of fish and invertebrates.
- Pile-driving sounds from construction-related activities have produce acoustic energy that is within the hearing range of fish and invertebrates.
- Continuous noise generated from the operation of wind turbines is unlikely to significantly affect marine life.





## What are the potential hydrodynamic impacts of offshore wind farms?

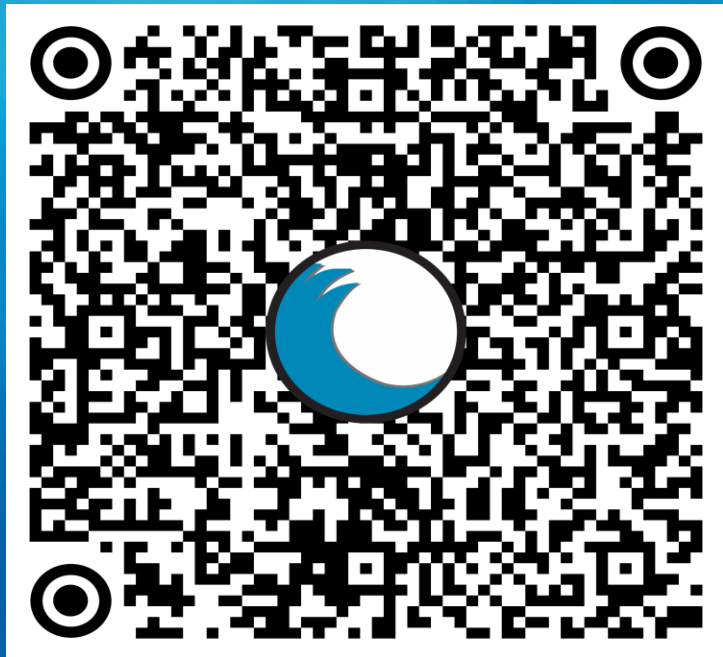
- Changes to local or regional hydrodynamics
- Magnitude of effects depends on type and size of turbine foundation
- Limited studies have generally concluded that impacts cannot be distinguished outside of natural variability





- How does BOEM consider cumulative impacts such as climate change?
- NEPA review process
- Utilizing the best available science
- Coordinates with other Federal agencies and fisheries management entities





# BOEM

Bureau of Ocean Energy  
Management



QR Code: GOM  
Activities Page

BOEM.gov



Mariana Steen ([mariana.steen@boem.gov](mailto:mariana.steen@boem.gov))

# Break

For information regarding offshore wind projects, scan the QR Code.



# Discussion-Questions & Answers





# Closing Remarks

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Michael Celata, GOM Regional Director

