



BOEM Bureau of
Ocean Energy Management

BOEM Gulf of Mexico Offshore Wind

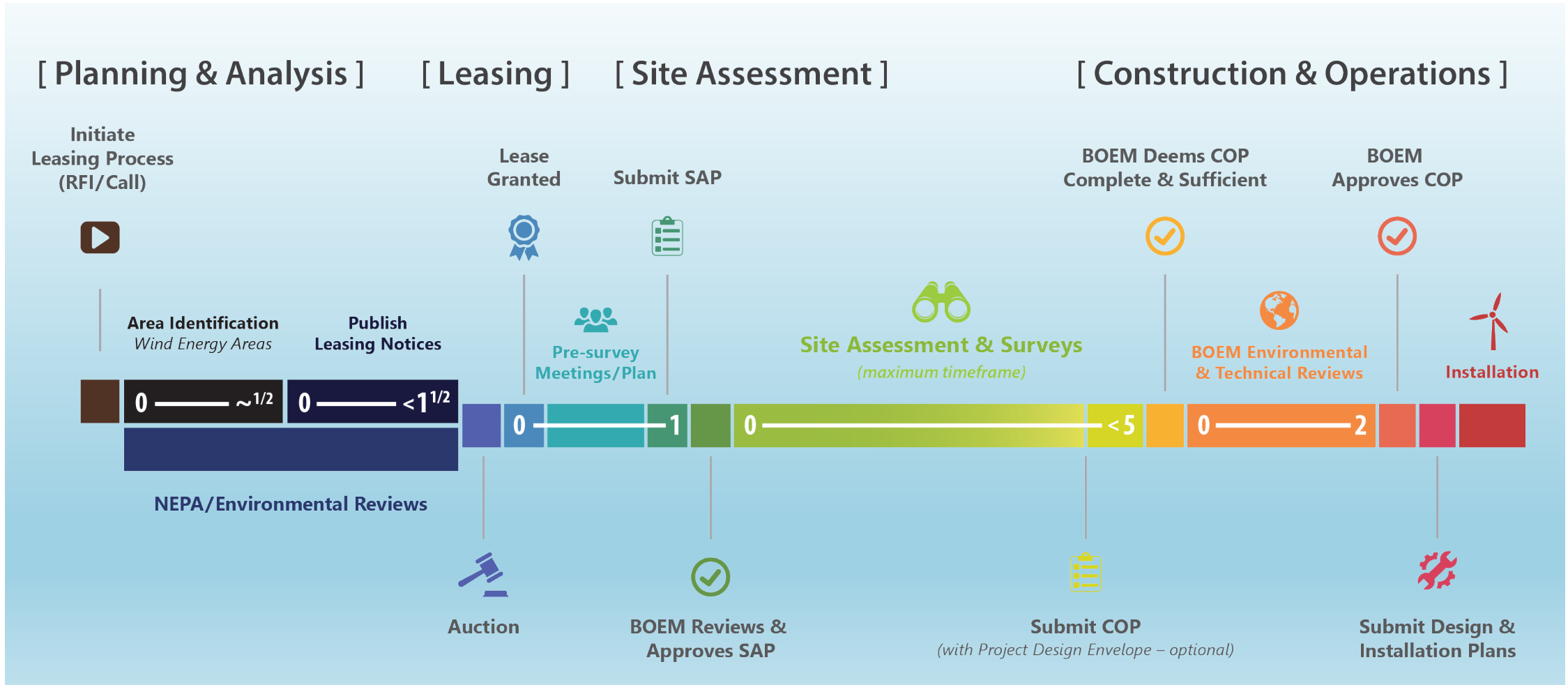
August 16, 2023

Overview

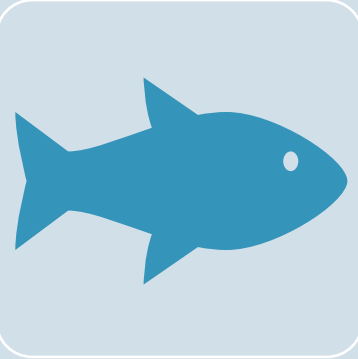
- Gulf of Mexico Wind Background
- Where We're At: Final Sale Notice
- Future Potential



Renewable Energy Process: From RFI/Call to Operation



Stakeholder Engagement Meetings



Fishery Meetings
Informational Meetings
Planned Feedback Meetings
Fisheries Summit



Industry Meetings
Held Meetings
OOC Webinar
Individual Company Meetings
OTC Conference



State Agency Meetings
Meetings
Introductory State Meetings
Monthly Meetings with LA
Four Task Force Meetings

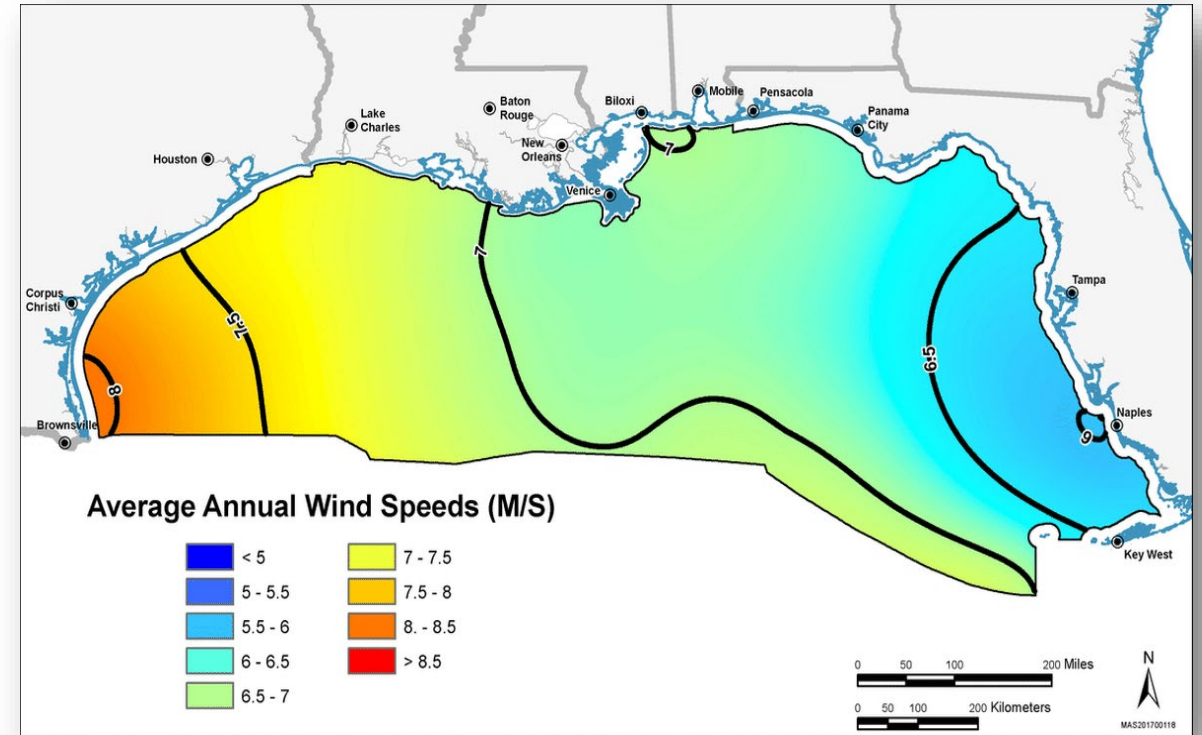


Migratory Bird
Coordination Meetings
Meetings
Formed a Collaboration Team with FWS

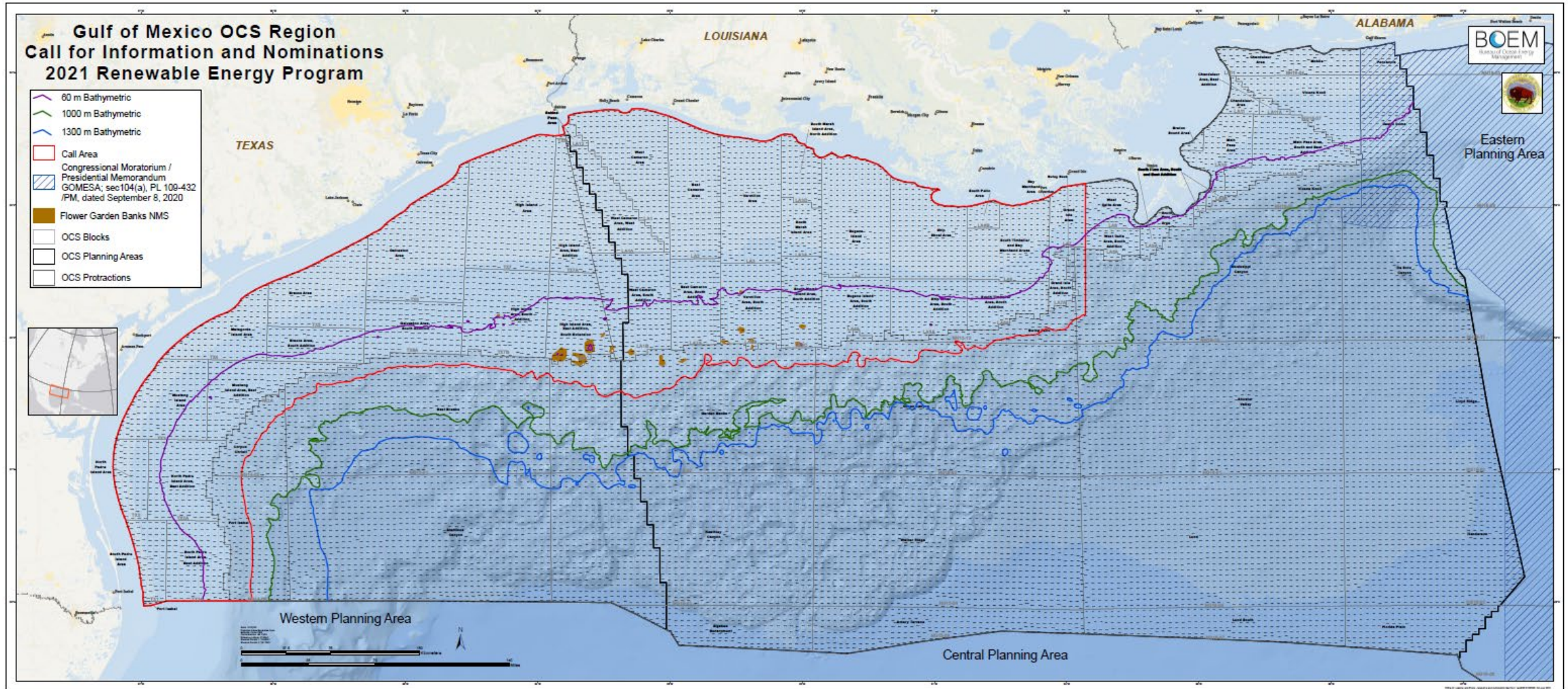


Gulf of Mexico Renewable Energy

- 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



Request for Information (RFI) and Call for Information Areas

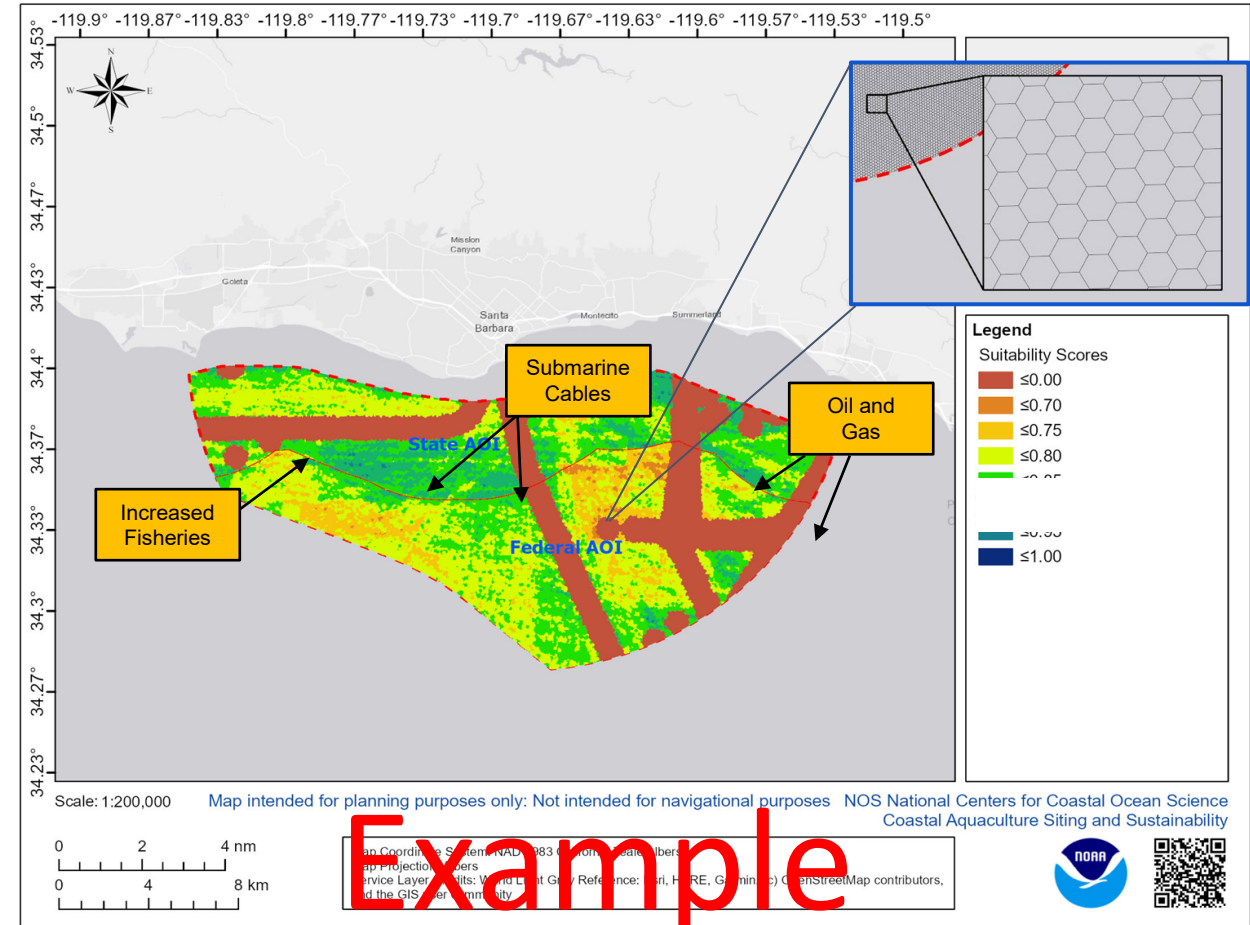
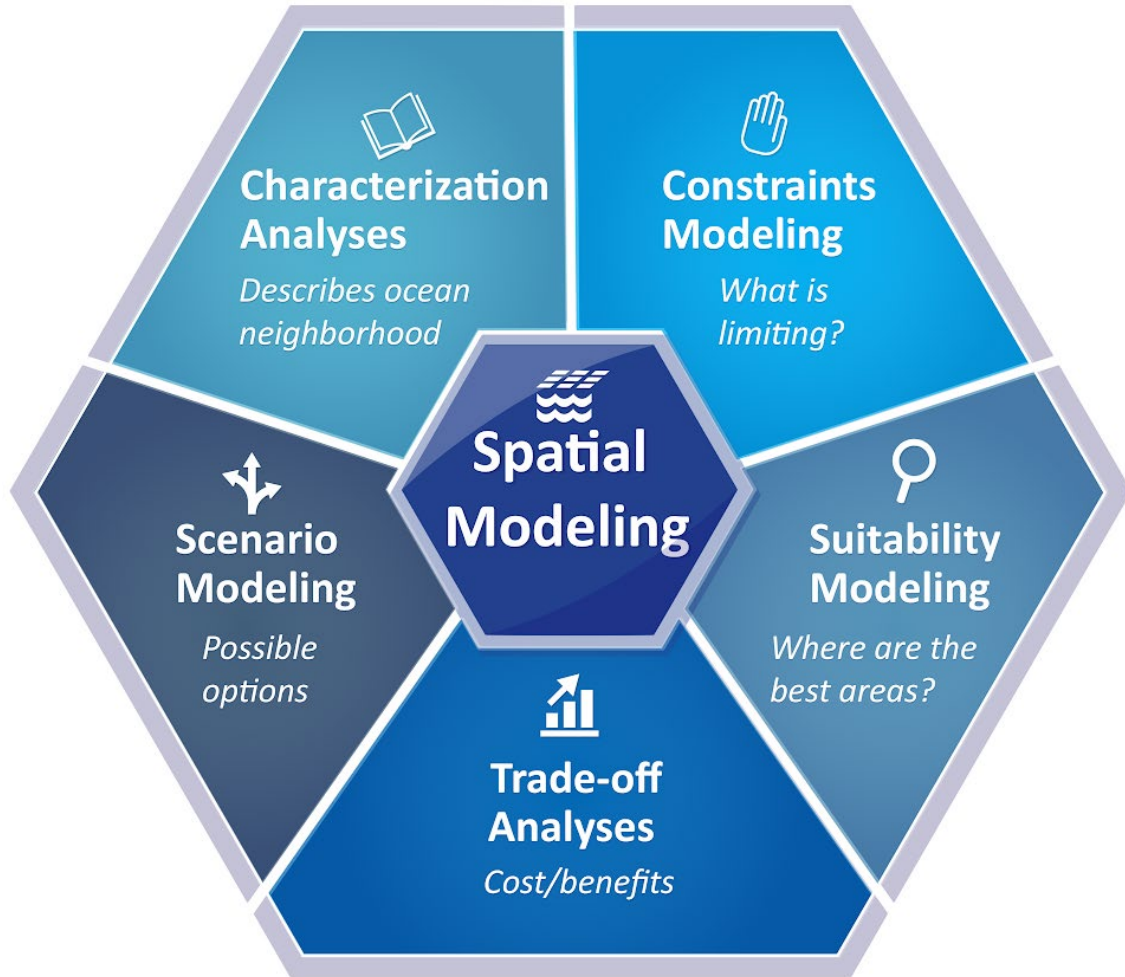


Some Major Comments Received on the Call for Information

- Request for 20 nm Coastline Buffer for Migratory Birds
- Request for 20 nm Coastline Buffer for Menhaden Fisheries for flyovers
- Protection for the Significant Sediment Resource Areas (SSRAs)
- Request for 100-400 m Buffer for Rice's Whale
- Request for exclusion of high-moderate high shrimping areas
- Request for 2 nm buffer for navigation fairways
- Removal of areas located near low-altitude training areas for DoD



Spatial Modeling



Example

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



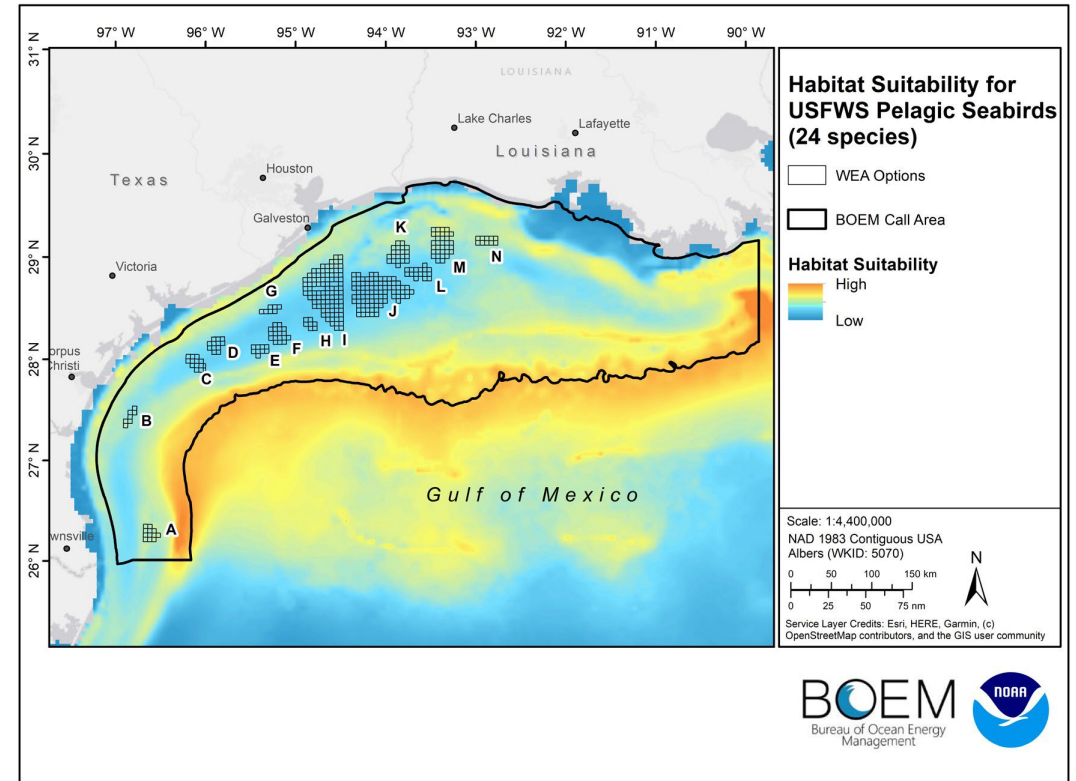
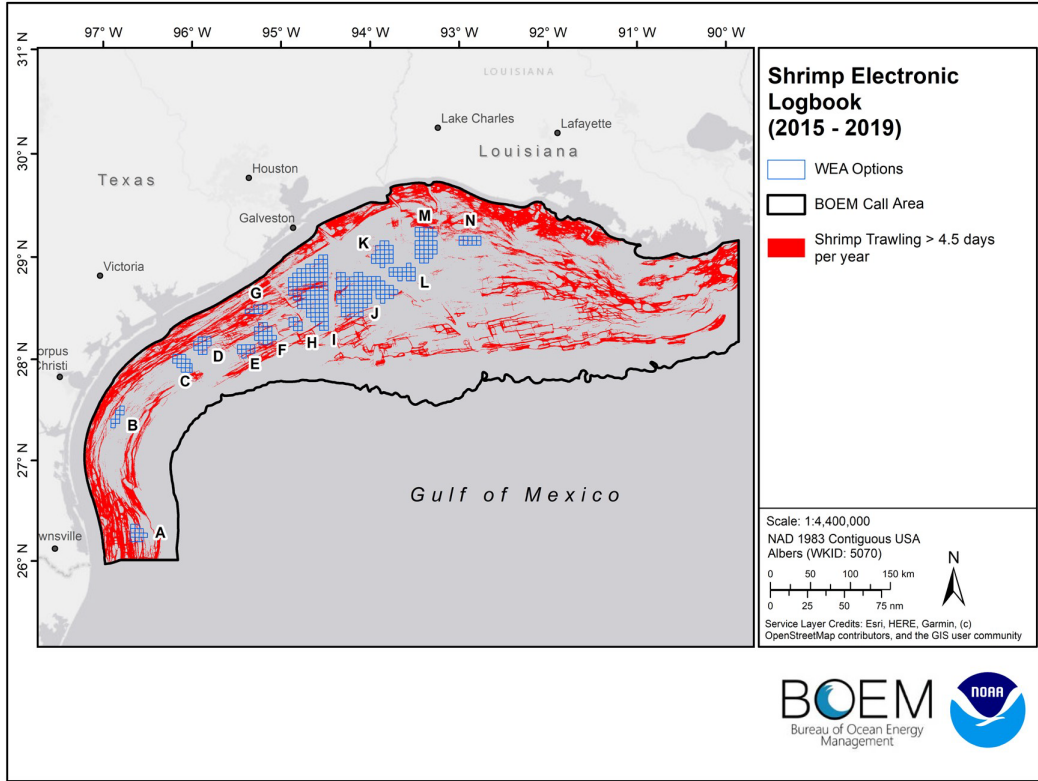
Spatial Planning - Deconflicting Model structure



Equally weighted submodels



Model Layer Examples

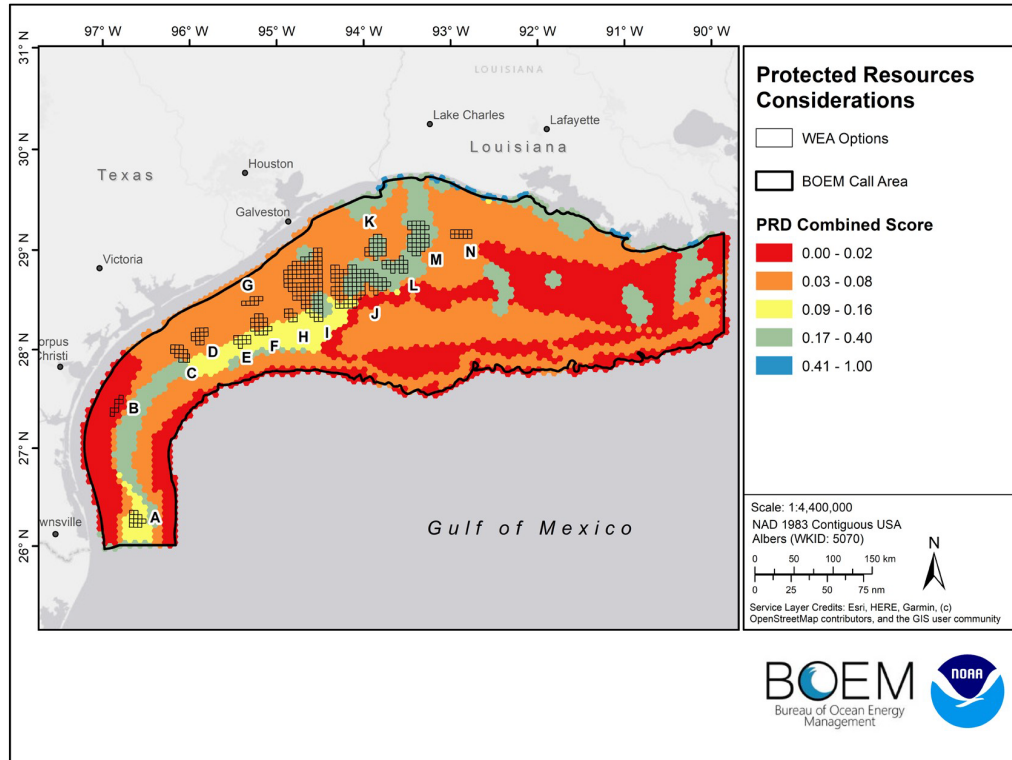


Shrimp Electronic Logbook (2015 - 2019)

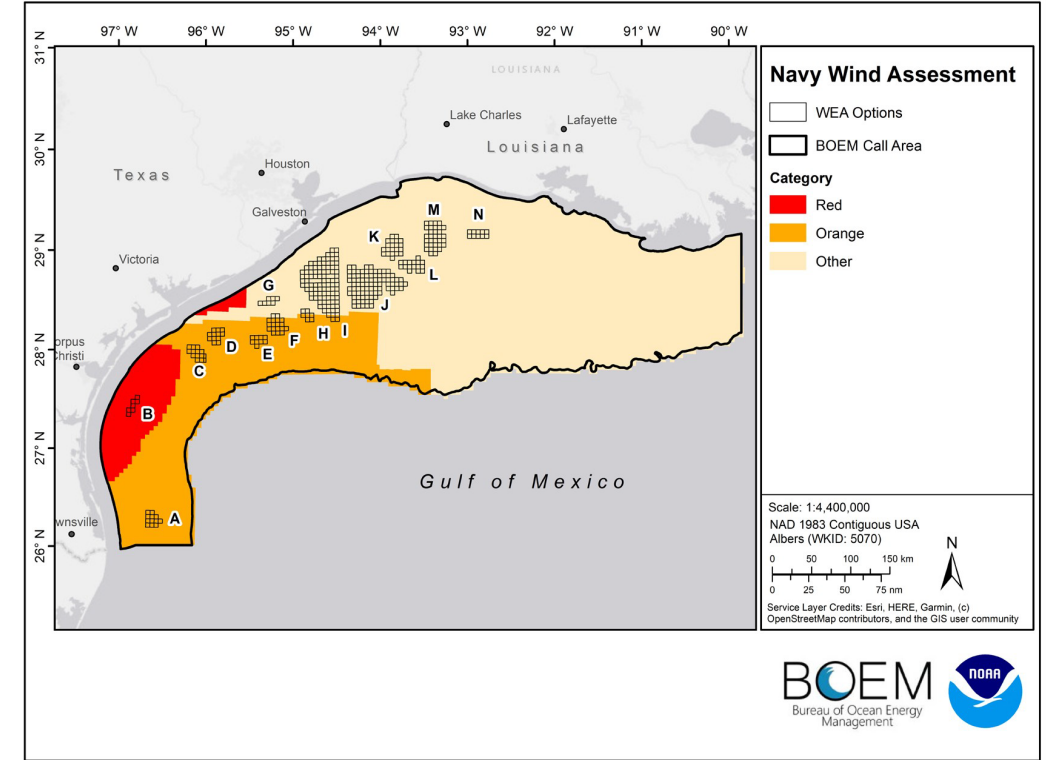
USFWS Pelagic Bird Considerations (24 species)



Model Layer Examples



National Marine Fisheries Service Protected Resources combined composite data layer implemented within the relative suitability analysis.

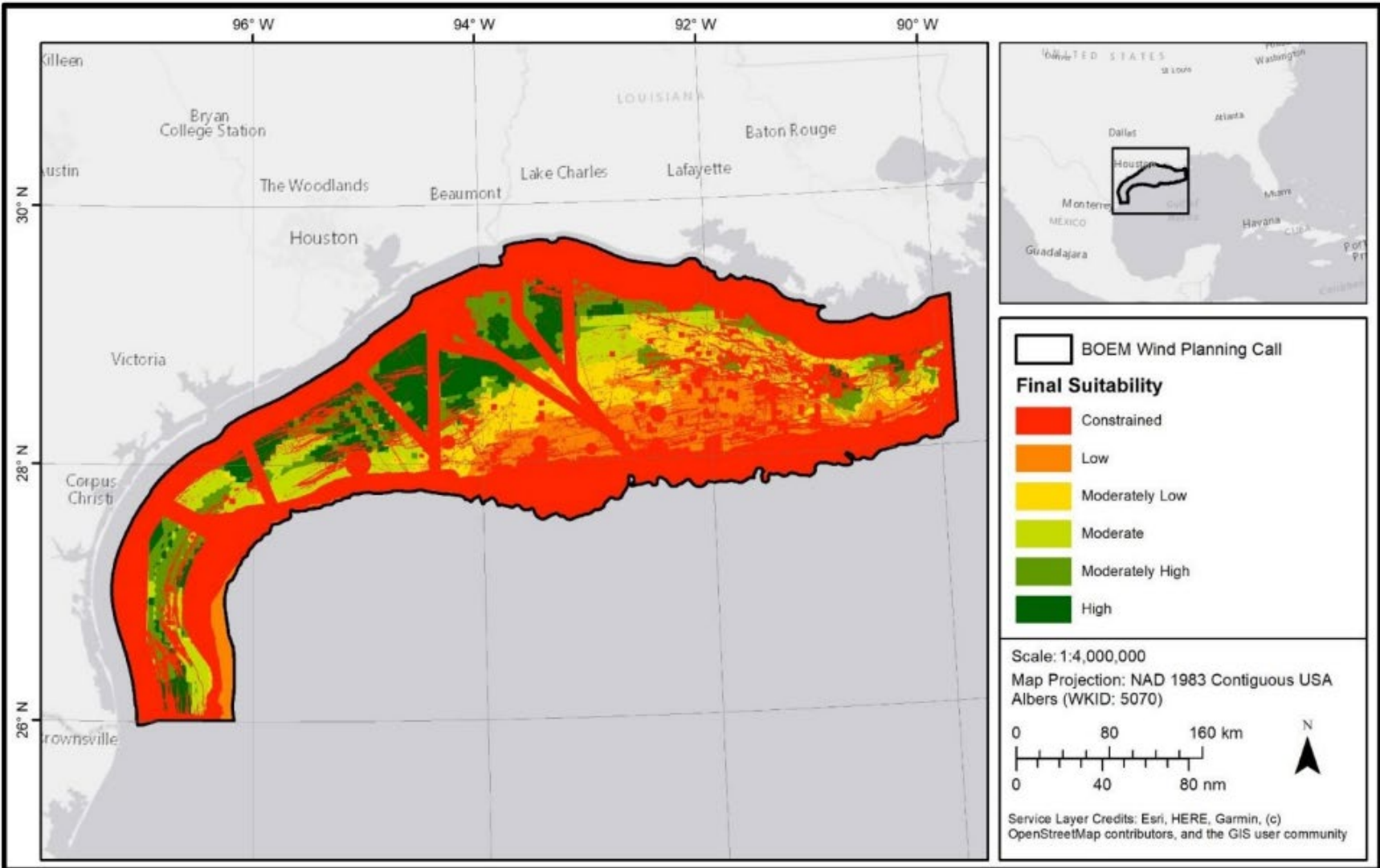


U.S. DoD Preliminary Assessment of the Call Area. The Red Areas denote Wind Exclusion Zones.



Model Layer Examples

Final suitability modeling results for the Call Area



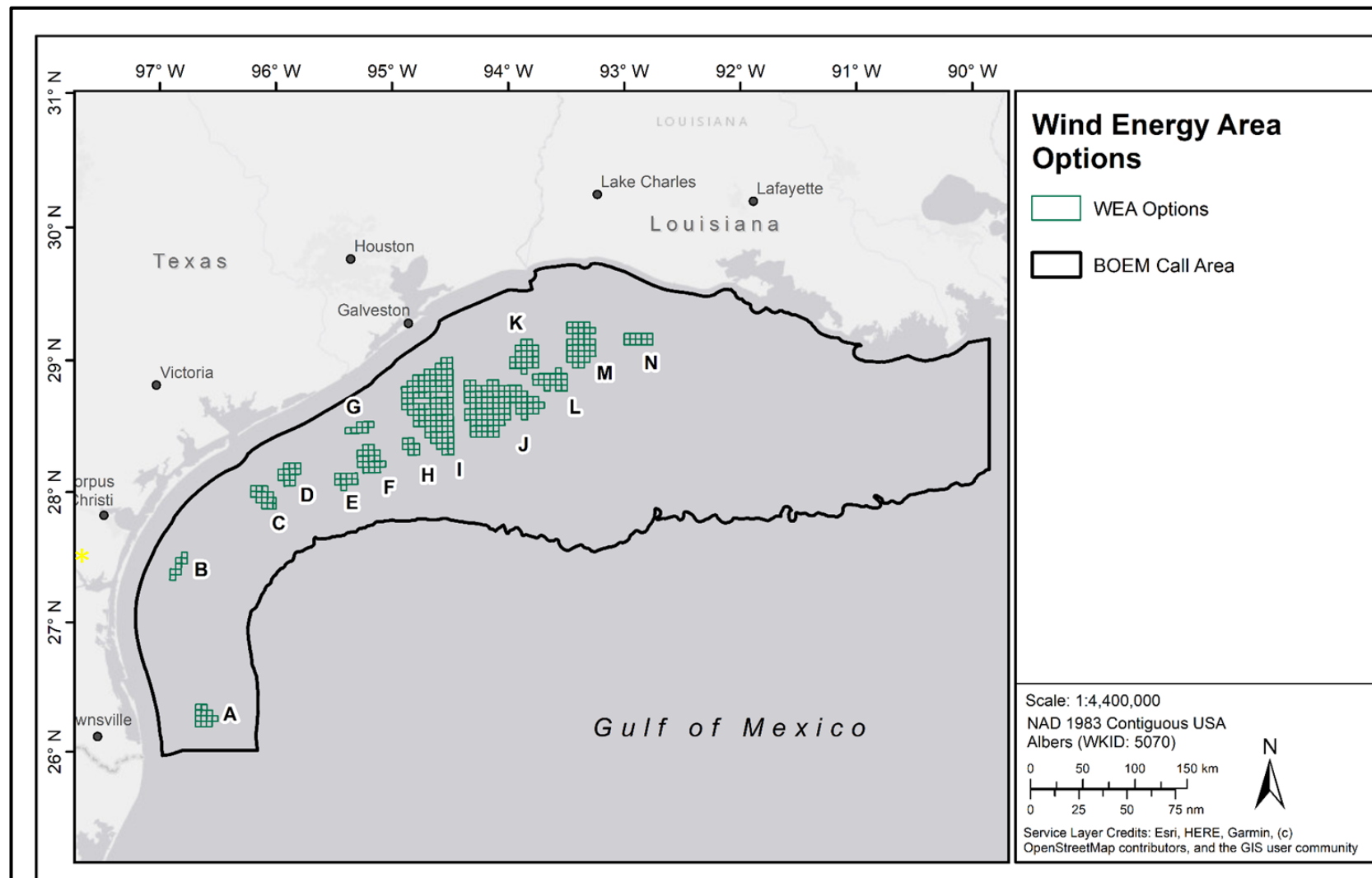
Deconflicting Process

13 deconflicted areas ranging from: 39,840 to 546,645 acres

2 million acres total

Top scoring clusters at the $p=.05$ significance level (approx. top 5%)

*Area B is no longer an option due a later DoD assessment requesting removal.

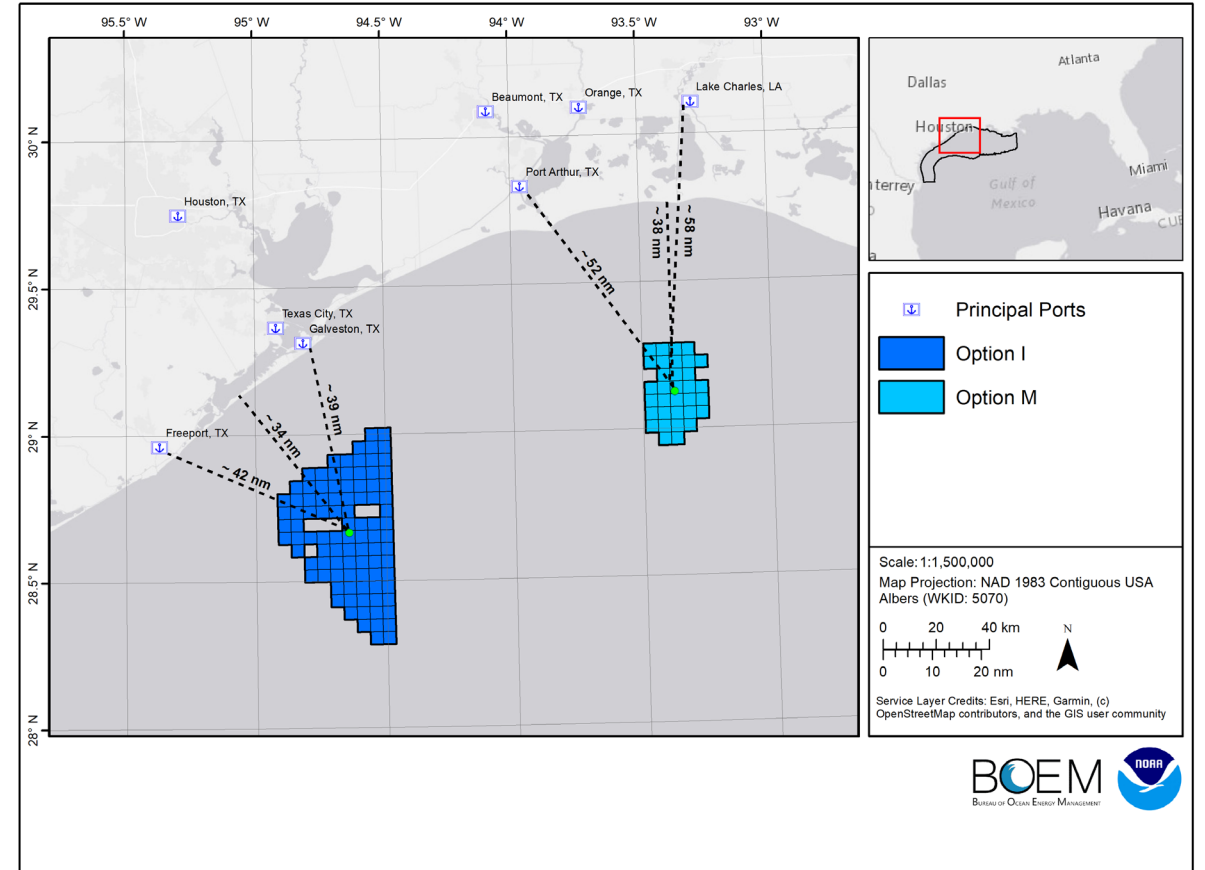


GOM Preliminary WEAs

1. Galveston (Option I) 546,645 acres
2. Lake Charles (Option M) 188,023 acres

Rationale for WEA Recommendations:

- Competitive Interest
- Less National Security Concerns
- Proximity to Points of Interconnection
- Proximity to Shore
- Less than 10% Moderate-High Shrimping
- Enough acreage to further divide into smaller lease sale areas



Some Major Comments Received on the Preliminary WEAs

- **Impacts to potential size of the WEAs**
- USCG has concerns with lightering zones in the southern portion of Option I
- Department of the Navy recommended only utilizing the northern portion of Option I

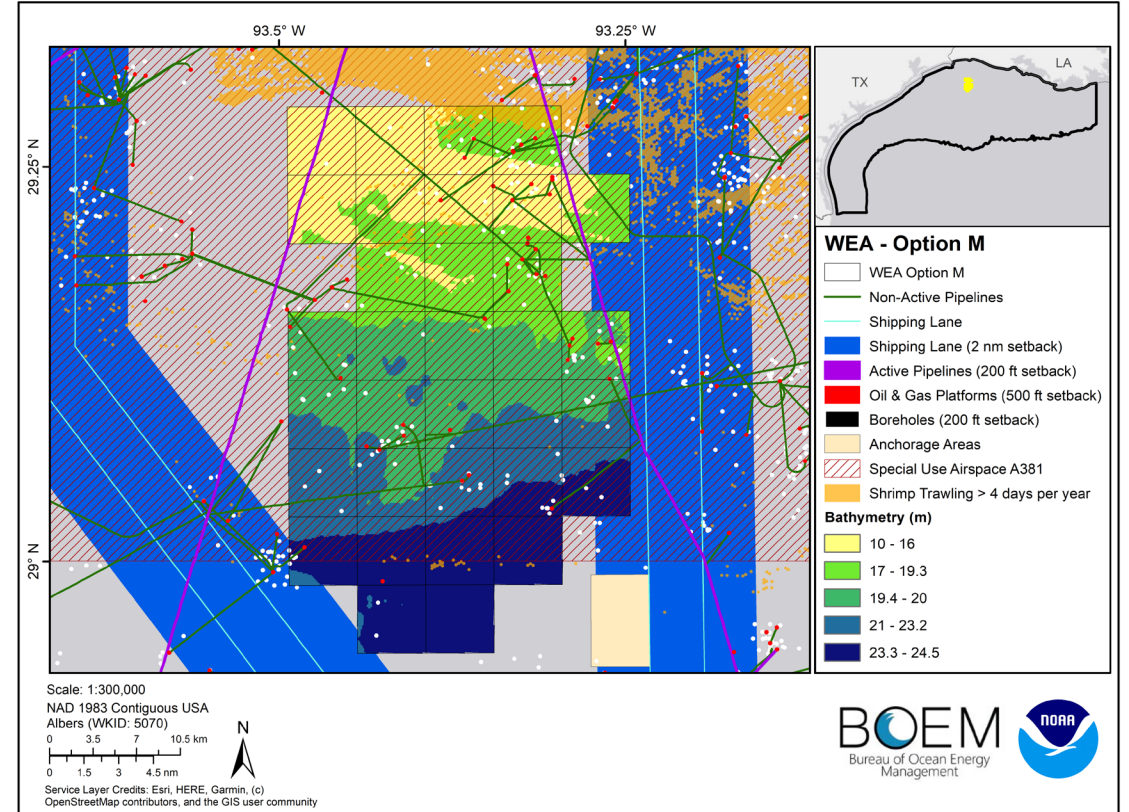
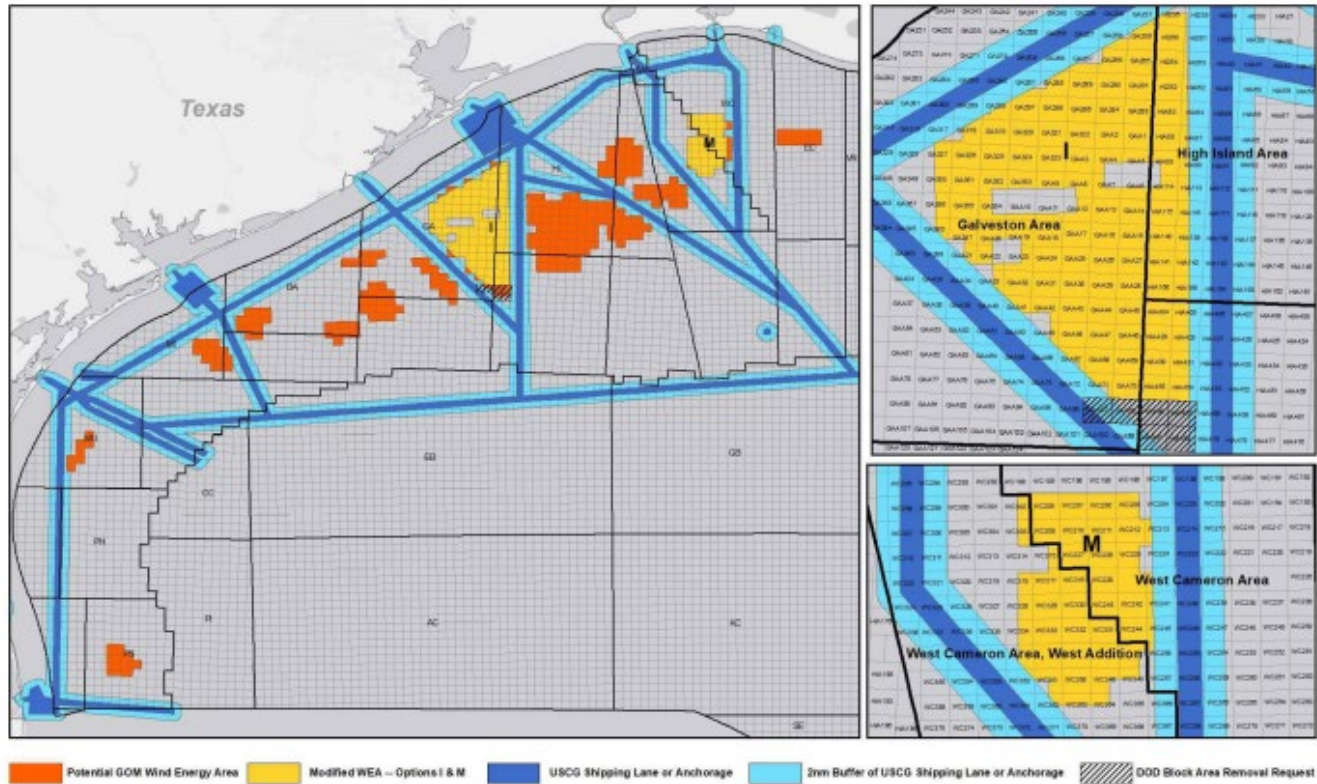
- **Environmental Concerns (Birds, Bats)**
- USFWS and NGOs commended BOEM on the 20 nm but there are still concerns for Trans-migratory birds and bats
- Texas Parks Wildlife Department would like to have 1 nm buffer artificial reefs instead of 1000 ft buffer
- NOAA plans to publish a proposed rule for the green sea turtle critical habitat in 2023. Option I and Option M may overlap with this designation

- **General Comments**
- Recommend Lease Area Size 100,000 acres
- Additional WEAs near Port Fourchon, LA
- Concern about the cable routes from the WEAs
- Positive Comments on the CBA used for California PSN



Changes from Preliminary WEAs to Final WEAs

GOM Wind Energy Area (Options I and M) w/ DOD Recommendation



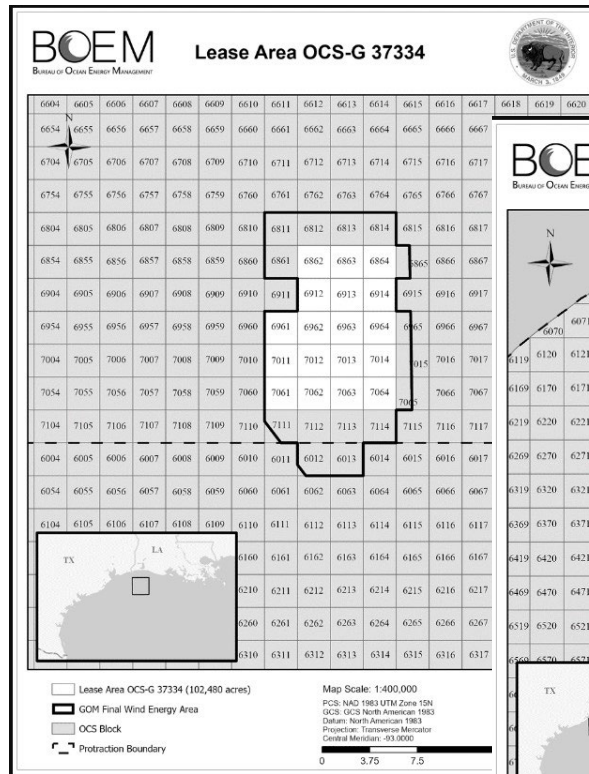
WEAs with 2 NM buffer



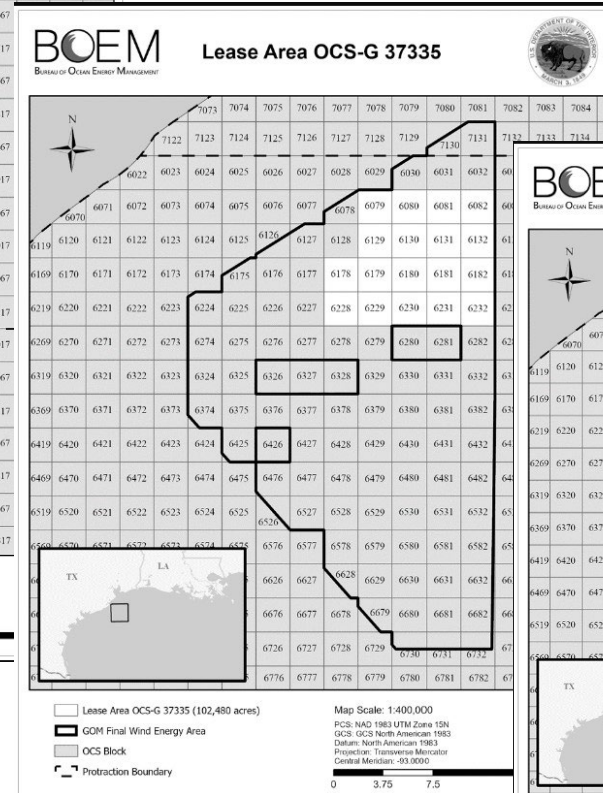
GOMW-1 Final Sale Notice

Final Sale Notice Overview: Number, Size, and Orientation

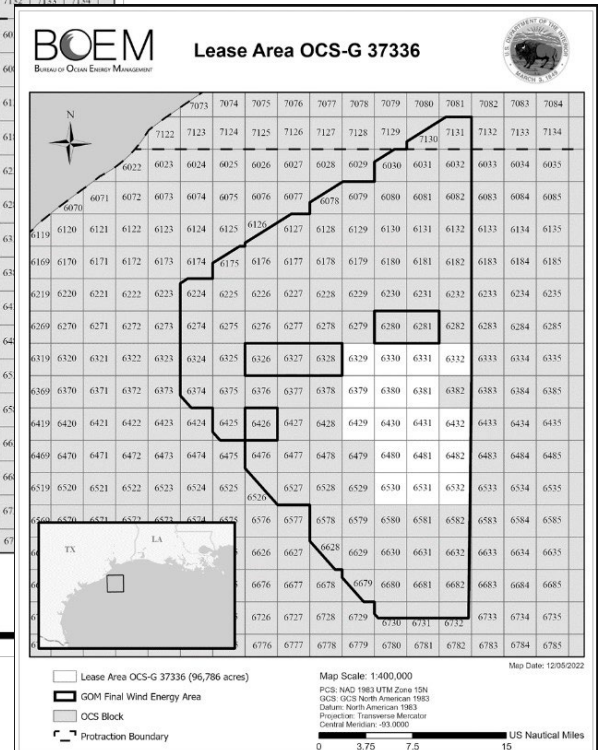
- Three lease areas will be offered in GOMW-1:
 - Lake Charles (OCS-G37334)
 - Galveston I (OCS-G 37335)
 - Galveston II (OCS-G 37336)



Lake Charles
102,480 acres



Galveston I
102,480 acres



Galveston II
96,786 acres



Final Sale Notice Overview: Number, Size, and Orientation

	OCS-G37334 Lake Charles	OCS-G37335 Galveston I	OCS-G37336 Galveston II	TOTAL
Acres	102,480	102,480	96,786	301,746
Installation Capacity (MW)	1,244	1,244	1,175	3,663
Homes Powered	435,400	435,400	411,250	1,282,050
Power Production (MWh/y)	4,358,976	4,358,976	4,117,200	12,835,152
Max Depth (meters)	25	36	36	
Min Depth (meters)	10	16	16	
Closest Distance to TX (nm)	79	28	39	
Closest Distance to LA (nm)	38			



○ **Workforce Training and Supply Chain Development**

- 20% of the Cash Bid with the Contribution due by the lease's first Facility Design Report (FDR)
- Lessee retains flexibility consistent with its Conceptual Strategy to direct funds to most worthwhile training and supply chain efforts
- Enhance, through training, the offshore wind workforce or to stand-up the domestic supply chain for offshore wind technology, manufacturing, assembly, or services
 - OCSLA nexus: operations must be conducted in a safe manner by well-trained personnel
 - OCSLA nexus: expeditious and orderly development, and protection of national security interests



Lease-Specific Terms, Conditions and Stipulations: GOMW-1 Bidding Credits

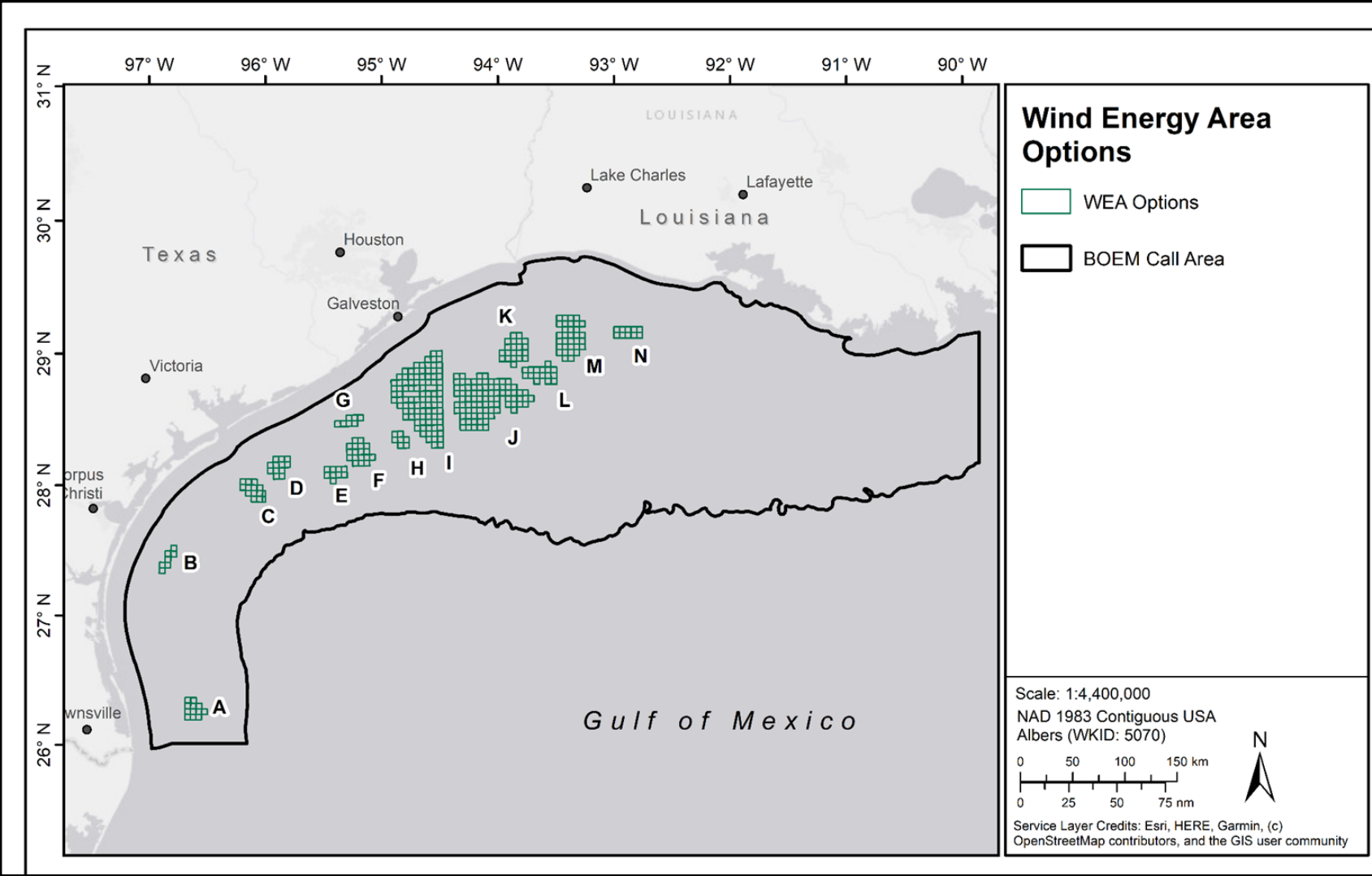
○ Fisheries Compensatory Mitigation Fund

- 10% bidding credit in exchange for an equivalent cash commitment to a GOM Fisheries Compensatory Mitigation Fund
 - OCSLA Nexus: 8(p) requires BOEM to consider other uses of the sea including fisheries
- Credit Design Features
 - Fund's first priority is for gear loss or damage or income loss, but if excess funds are actuarially determined, funds can be used for engagement and select gear upgrades
 - GOMW-1 lease areas are likely to have minimal fishery impacts
 - The fund provides certainty to fisheries stakeholders and can be used as a perpetual fund to mitigate impacts from future GOM leases
 - Fund must include fiduciary governance, strong internal controls, and annual reporting

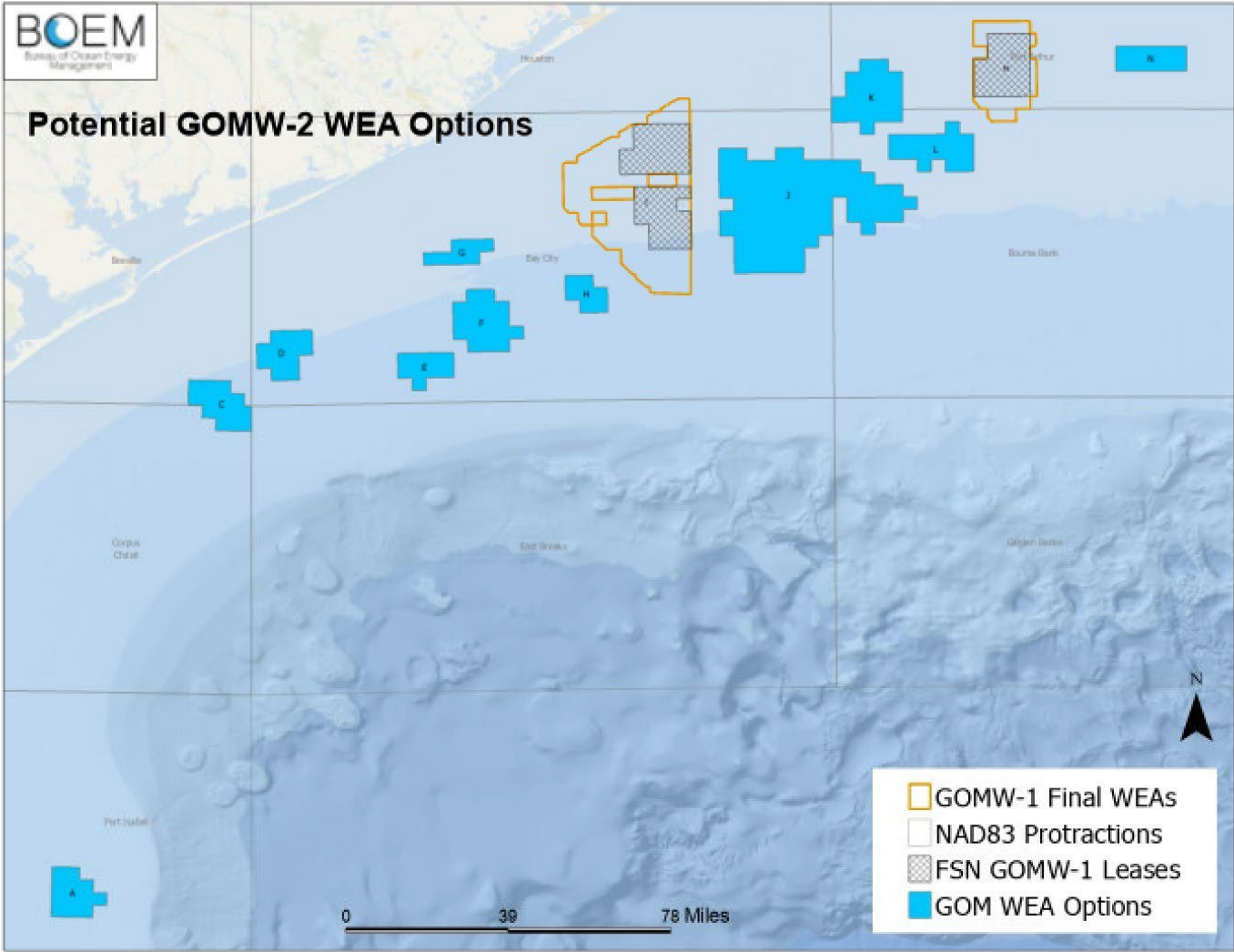


Future Potential for GOM Wind

13 Deconflicted Wind Energy Options from the NCCOS Model



GOMW-2 Area Identification Process – Considering the 11 Remaining WEA Options



Office of Leasing and Plans - Mapping and Automation Section | MAP2022-115 | 26 July 2023



BOEM is Seeking Your Input

1. Are there space use/ocean planning/managed resource conflicts in the 11 remaining areas?
2. Which areas have interest and would be the most economically viable to include in a second GOM wind lease sale? Which of the 11 areas offer best access to transmission points and points of onshore access? Are there opportunities for synergies by including any of the remaining 11 areas in a second offshore wind lease sale?
3. What is the minimum acreage needed in a WEA to be economically viable? Does that acreage requirement change with adjacent acreage being offered? Would it be possible to use adjacent WEAs of smaller size next to the other lease sale areas (I and M)?



How to Provide Comments to BOEM on the WEAs

- Today in the meeting
- After the meeting
 - Email comments & feedback to renewableenergygomr@boem.gov
- Copy of the presentation has been uploaded to BOEM's website



We need your input on Final WEAs

- New data/information to consider
- Space use conflicts to minimize
- Engagement will continue. There is another time to comment during the PSN comment period as well.
- Not all Final WEAs have to become lease sale areas in the PSN.



BOEM

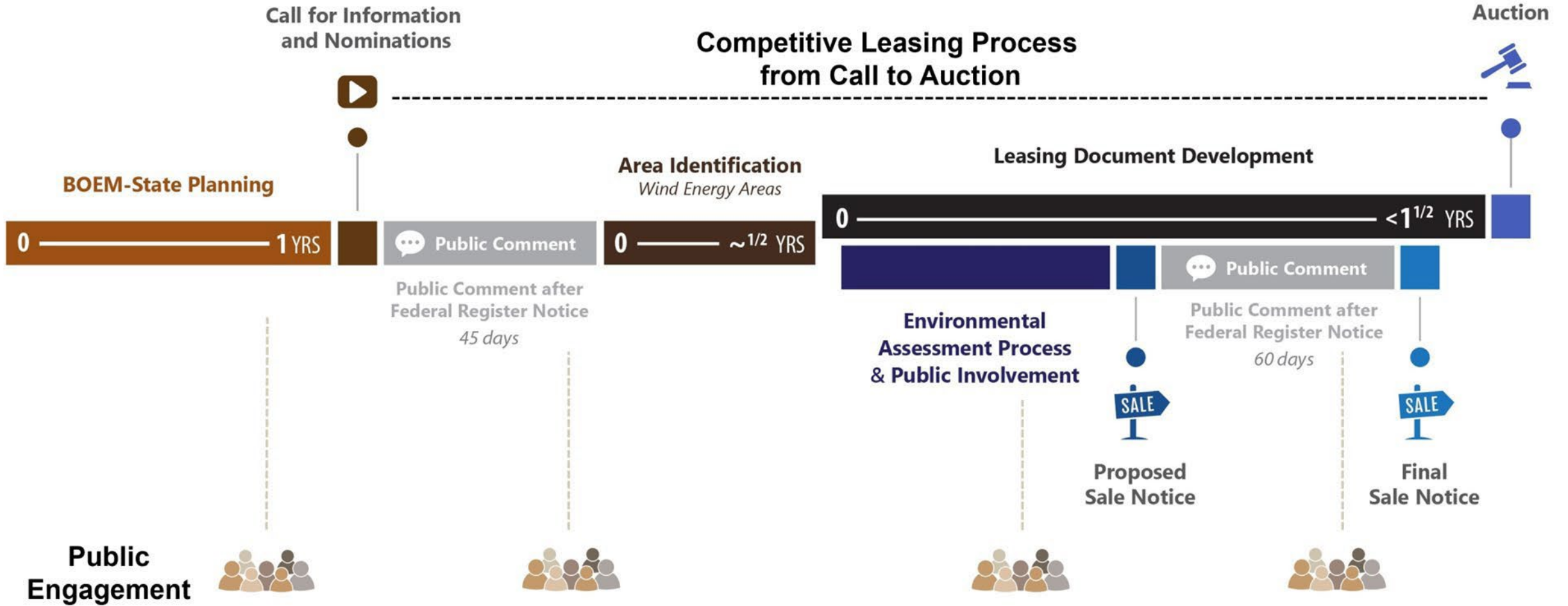
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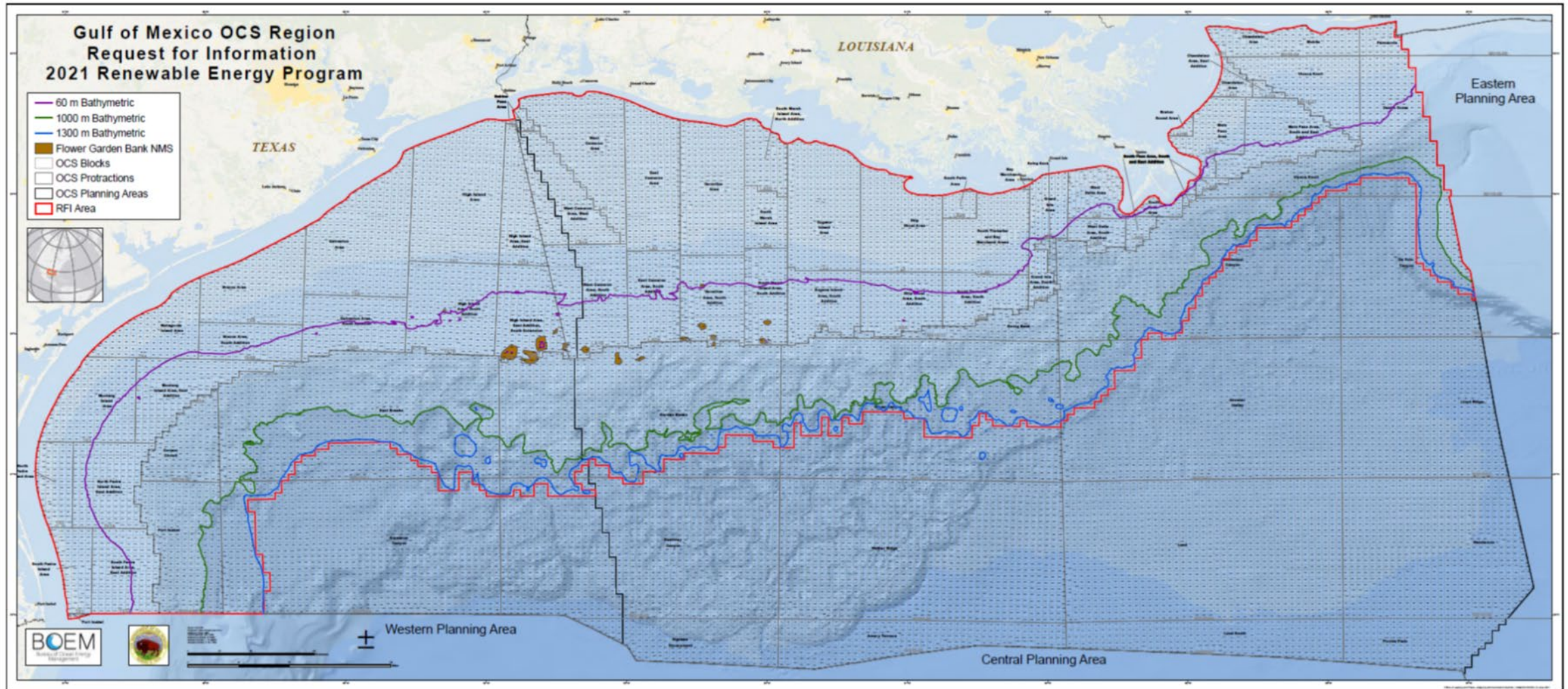


michael.celata@boem.gov

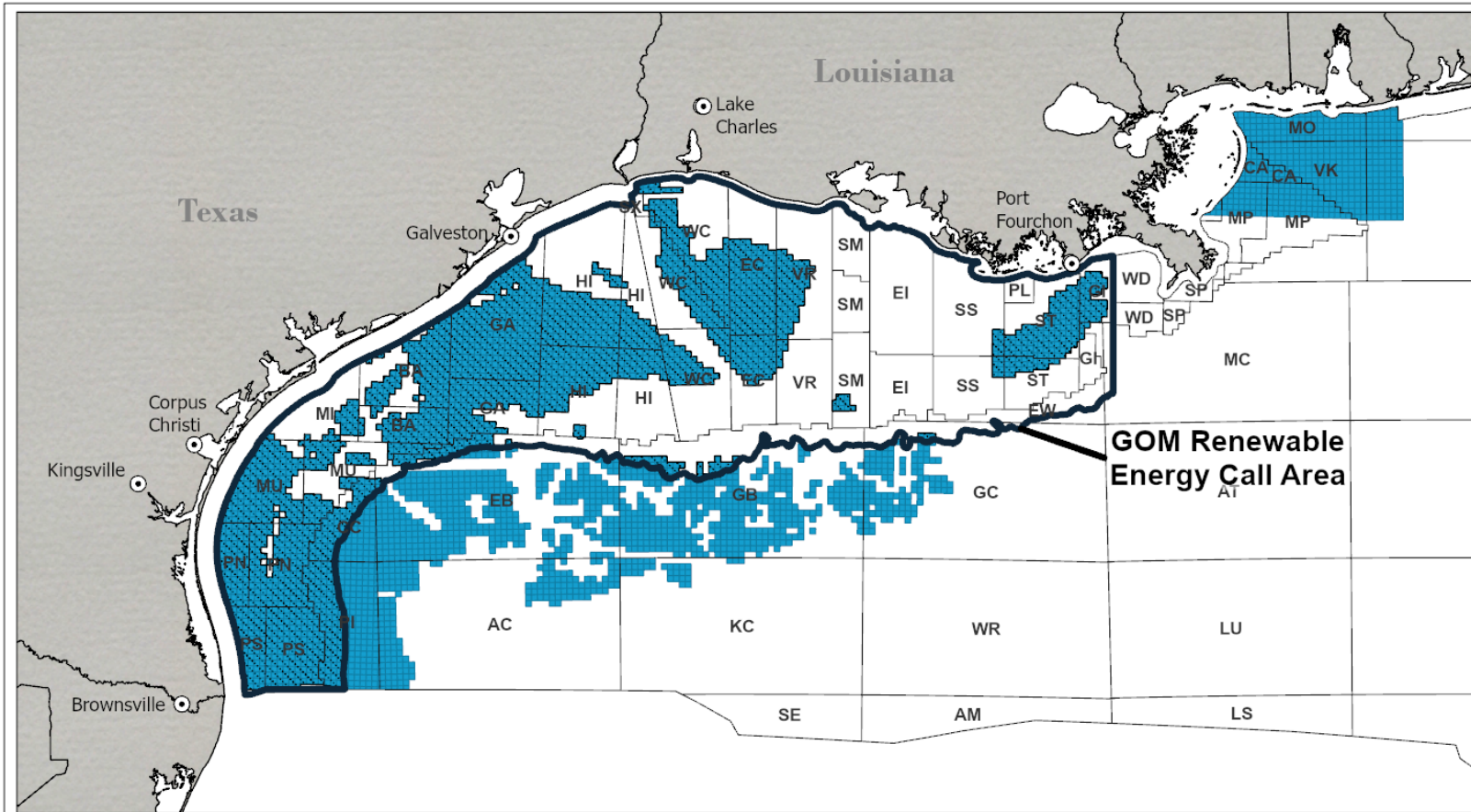
GOM Offshore Wind Energy Planning and Leasing Process





Request for Interest (RFI) Area



Companies' Areas of Interest

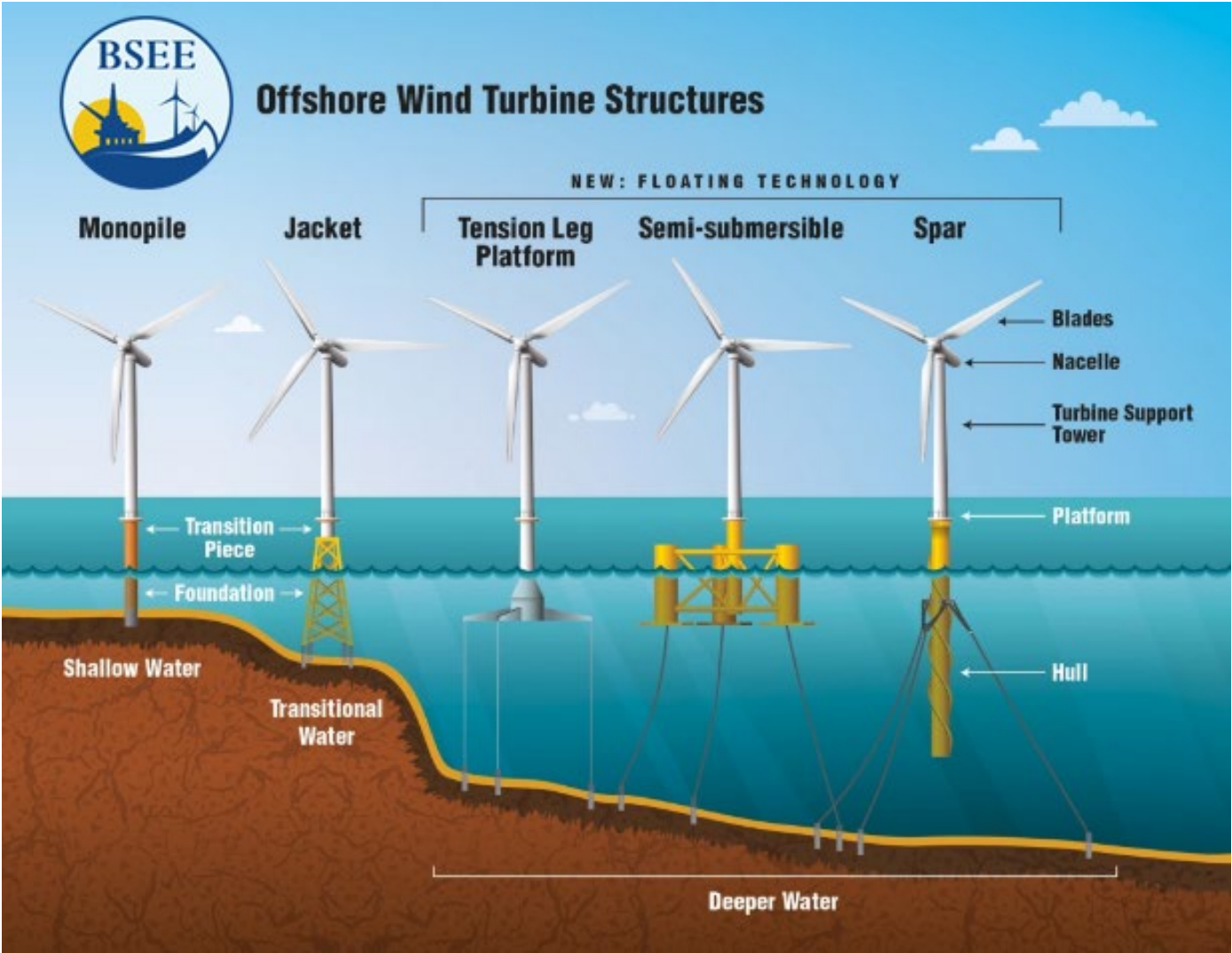


**GOM Renewable Energy Call Area
w/ Areas of Interest**

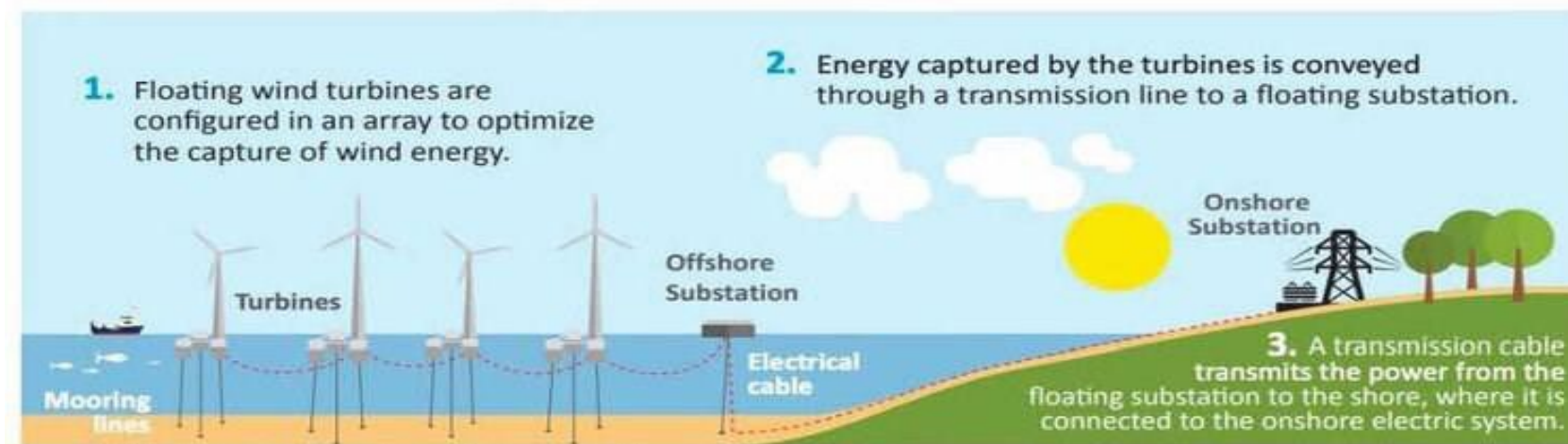
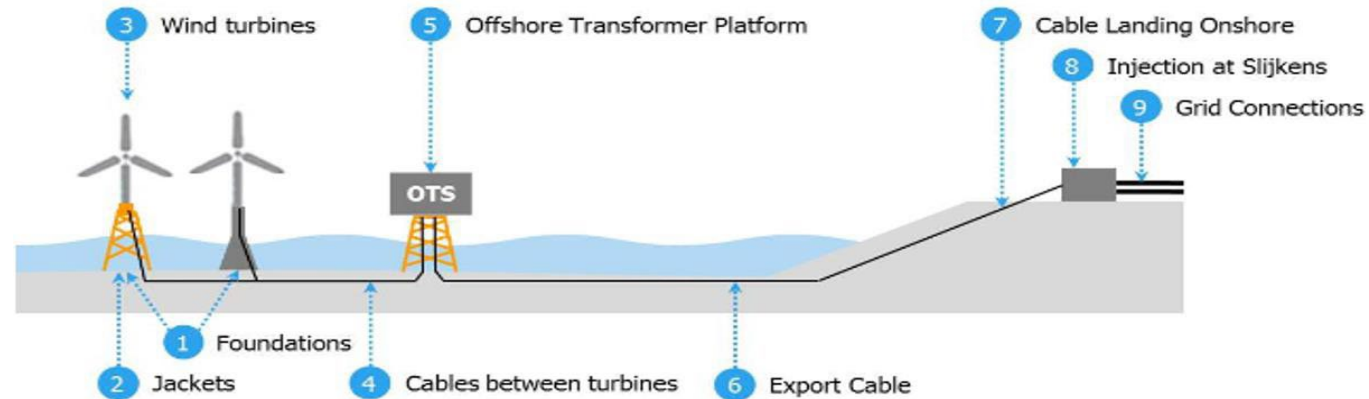
-  **Company Interest inside Call Area**
Total Area ≈ 19,617,400 Acres
-  **Company Areas of Interest**
Total Area ≈ 29,826,370 Acres



Offshore Wind Turbine Structures



Typical Windfarm Layout

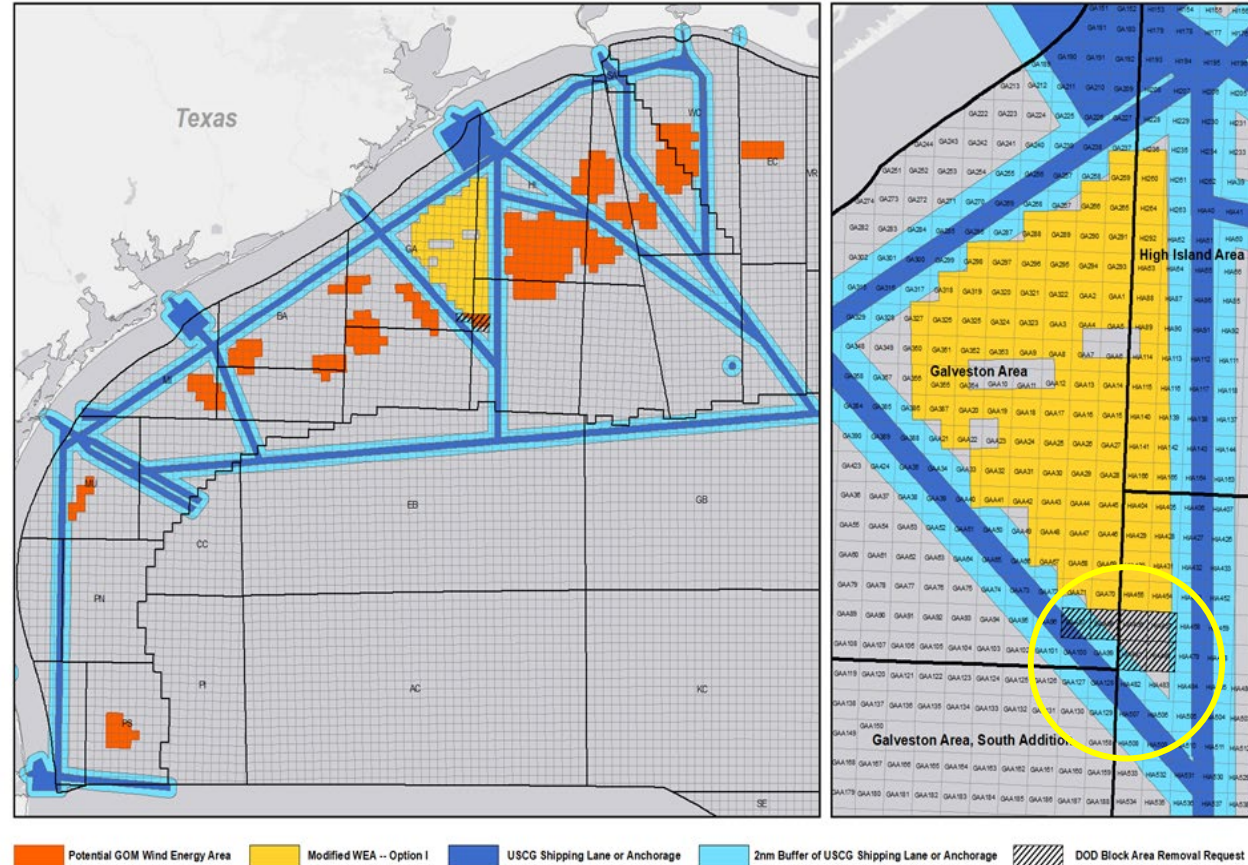


Source: BOEM, California Offshore Renewable Energy Fact Sheet, February 22, 2017.



Changes from Preliminary WEAs to Final WEAs

GOM Wind Energy Area (Option I) w/ DOD Recommendation



Considerations:

- Remove the southern portion of Galveston WEA due USCG Lightering Zones and Department of the Navy concerns (removes 18,946 acres)
- Review BOEM's new Significant Sediment Resource Areas in Galveston WEA

Map of Galveston WEA (Option I) with removal of blocks due DoD Recommendation



Final Sale Notice

- Specifies final sale areas, auction format and rules
 - Including due dates for submitting bidding financial forms and addendums
- Incorporates changes based on feedback from comments received
- Lists qualified companies
- Sets sale date



Final Sale Notice Overview: Auction Format

- The GOMW-1 auction format will include:
 - Single auction format
 - No distinction between Texas or Louisiana regions
 - One-per-customer rule
- There are 15 companies qualified to bid in GOMW-1:

547 Energy LLC	Gulf Coast Offshore Wind LLC	Invenergy GOM Offshore Wind LLC
Avangrid Renewables, LLC	Gulf Wind Offshore LLC	RWE Offshore US Gulf, LLC
Coastal Offshore Renewable Energy LLC	Hanwha Offshore North America LLC	Shell New Energies US LLC
energyRe Offshore Wind Holdings, LLC	Hanwha Q CELLS USA Corp.	TotalEnergies Renewables USA, LLC
Equinor Wind US LLC	Hecate Energy LLC	US Mainstream Renewable Power, Inc.



NEPA and CZMA

○ NEPA

- Prepared a Programmatic Environmental Assessment (EA) for site assessment and characterization activities in the Call Area for up to 18 Wind Energy Leases to streamline multiple sales and noncompetitive leases in the Call Area.
- Final EA and Finding of No Significant Impacts (FONSI) are completed and were published on May 30, 2023.

○ Coastal Zone Management Act Review

- Consistency determinations (CDs) GOMW-1 were prepared for Louisiana and Texas.
- The CDs were sent to Louisiana and Texas on February 22, 2023, and the states provided letters of concurrence on April 13, 2023, and April 21, 2023, respectively.



Consultations

- **Completed Consultations**

- Endangered Species Act (ESA) consultations with NMFS and USFWS
- Magnuson-Stevens Act (MSA) Essential Fish Habitat consultation
- National Historic Preservation Act (NHPA) Section 106
 - Finding of No Historic Properties Affected
- Tribal Government-to-Government consultation
 - Choctaw Nation of Oklahoma requested to be a consulting party throughout the NHPA Section 106 review process

