BOEM Bureau of Ocean Energy Management

BOEM Gulf of Mexico Offshore Wind

Shrimp Advisory Panel
Fisheries Management Council

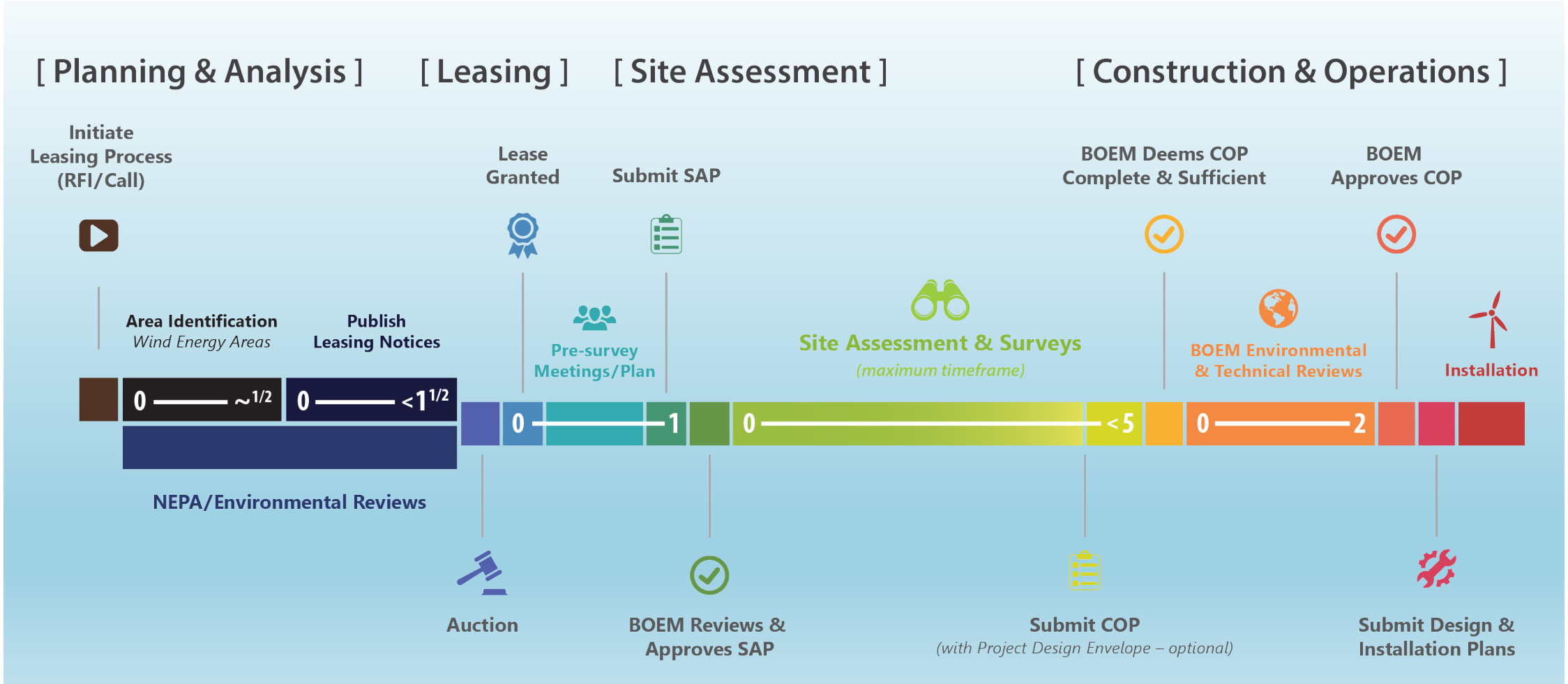
March 19, 2024

Mike Celata

Overview

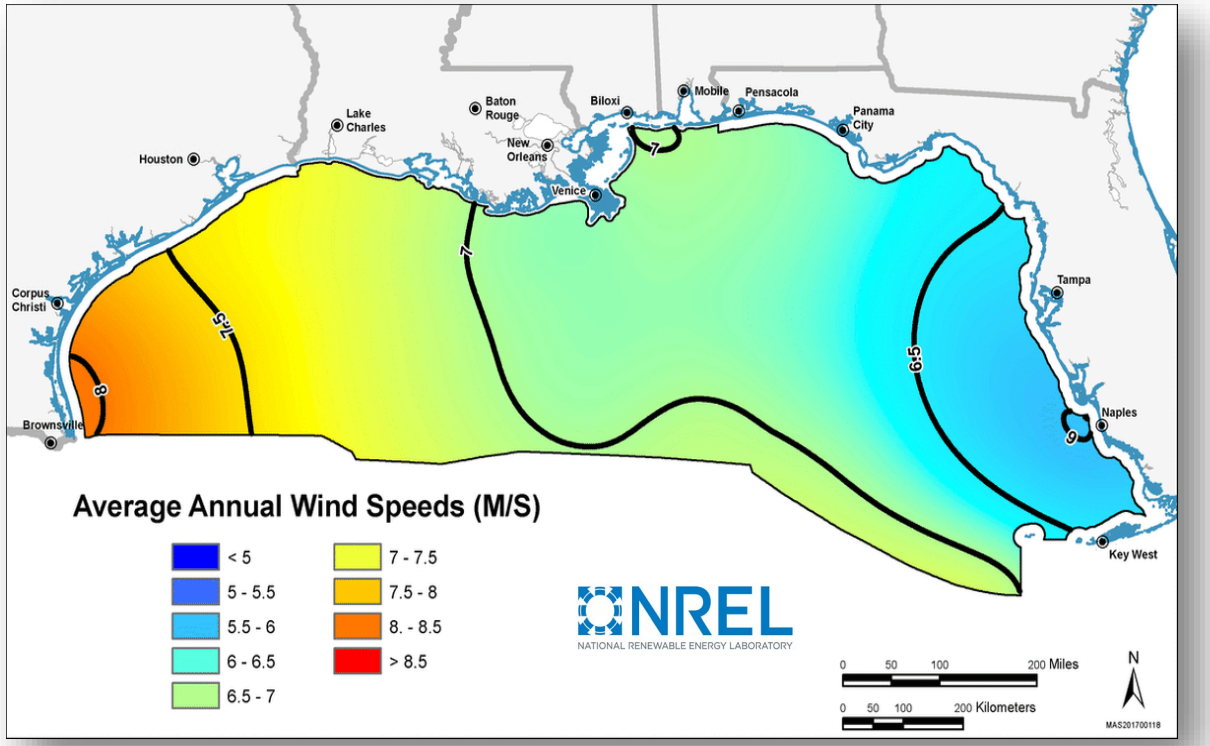
- Process Overview
- Gulf of Mexico Wind 1
- Gulf of Mexico Wind 2
- Future Discussions

Renewable Energy Process: From RFI/Call to Operation



Gulf of Mexico Wind 1

- Louisiana Governor Edwards requested a Task Force: October 26, 2020
- Regional GOM task force formalized: December 2020
- RFI: June 11, 2021
- GOM 1st Regional Task Force Meeting: June 15, 2021
- Call: Nov. 1, 2021
- Final WEAs: October 31, 2022
- PSN: Feb. 24, 2023
- NEPA ROD: May 25, 2023
- FSN: July 21, 2023
- Auction: August 29, 2023
- RWE lease effective: : November 1, 2023



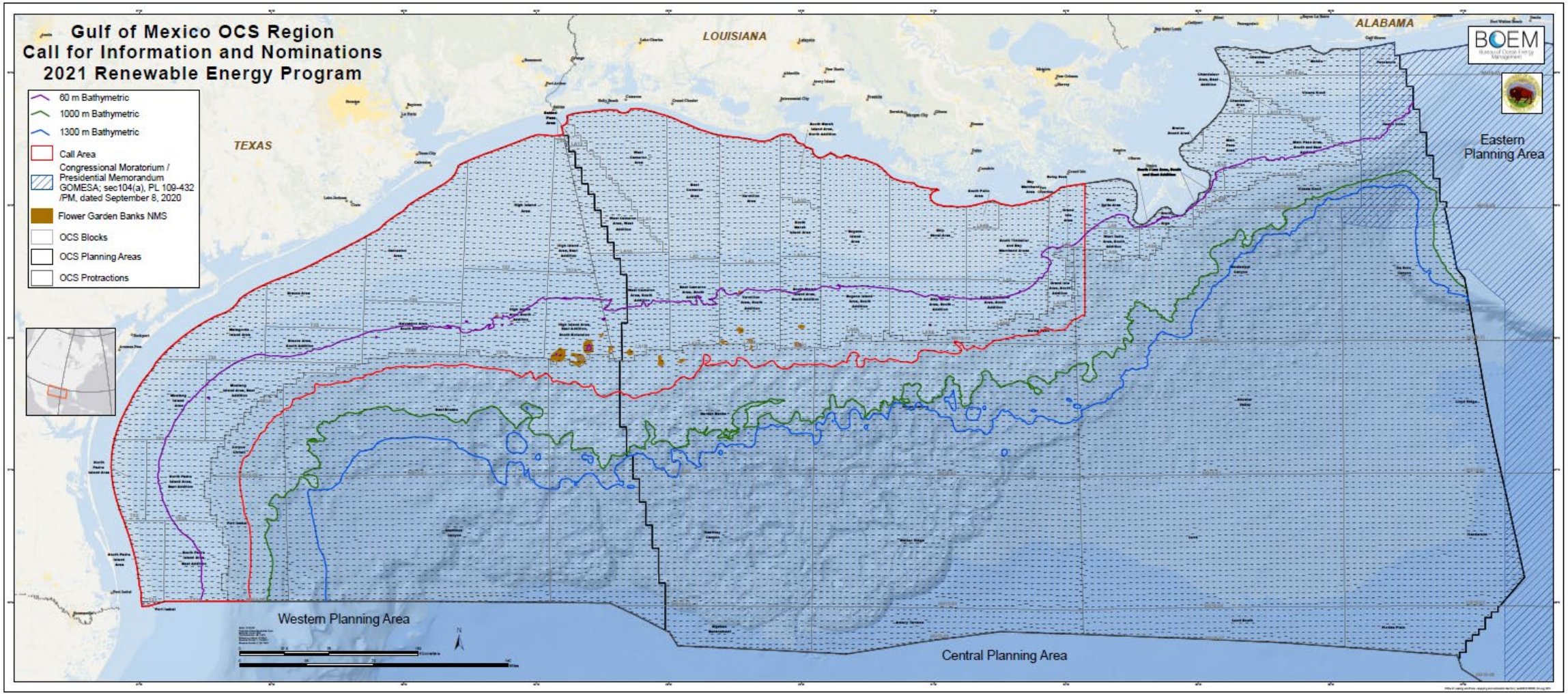
4470 total jobs during construction

150 annual jobs during operating years

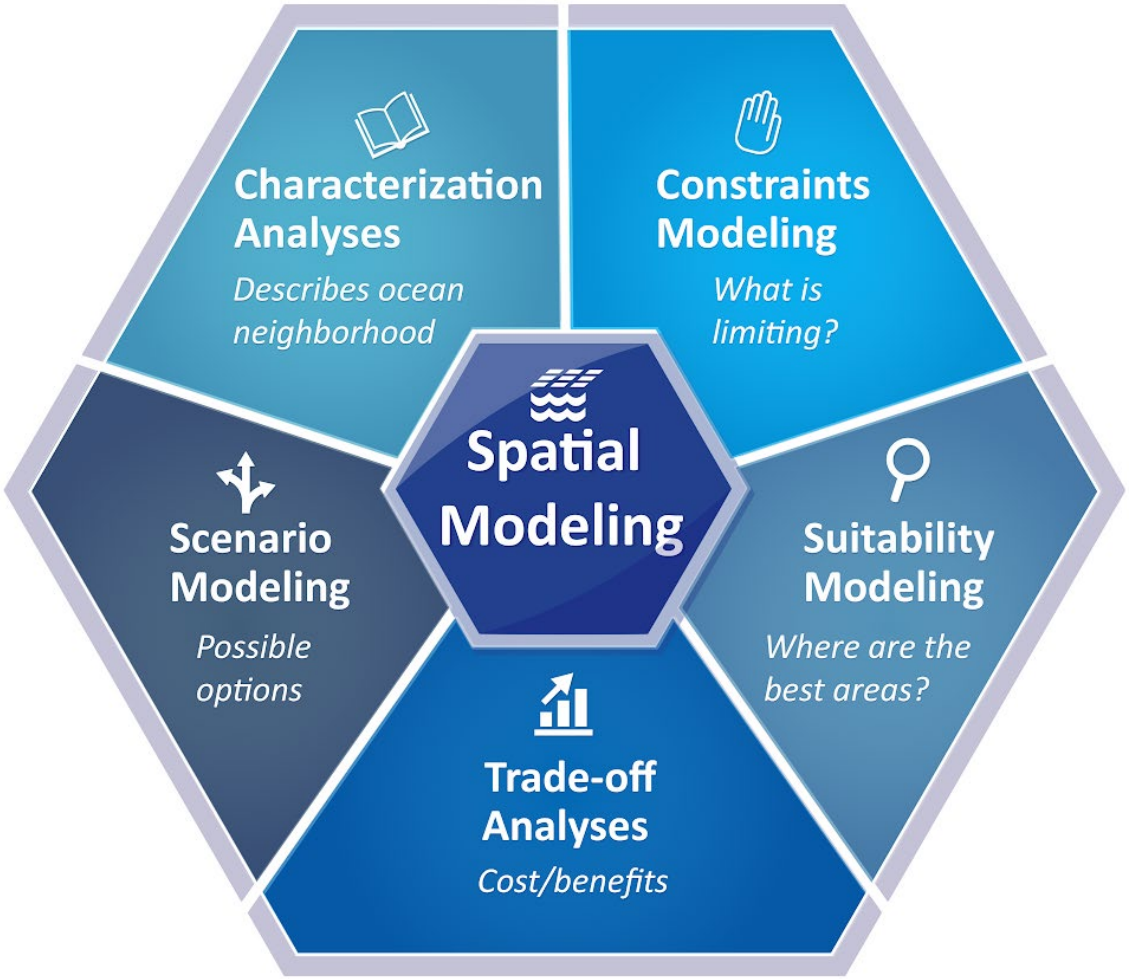
$445M GDP during construction

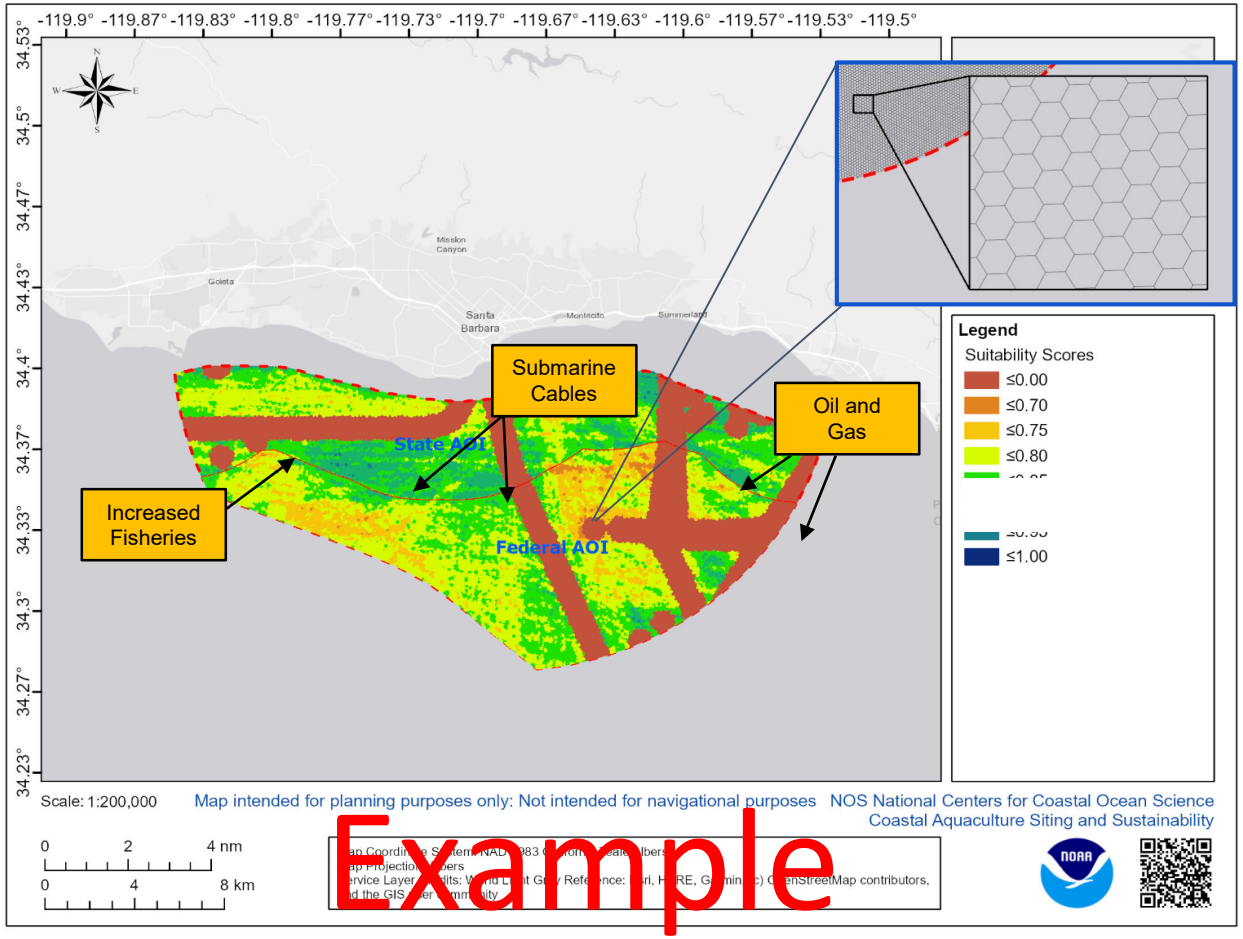
$14M GDP during operating years

Request for Information (RFI) and Call for Information Areas



Site Selection and Leasing - Spatial Modeling

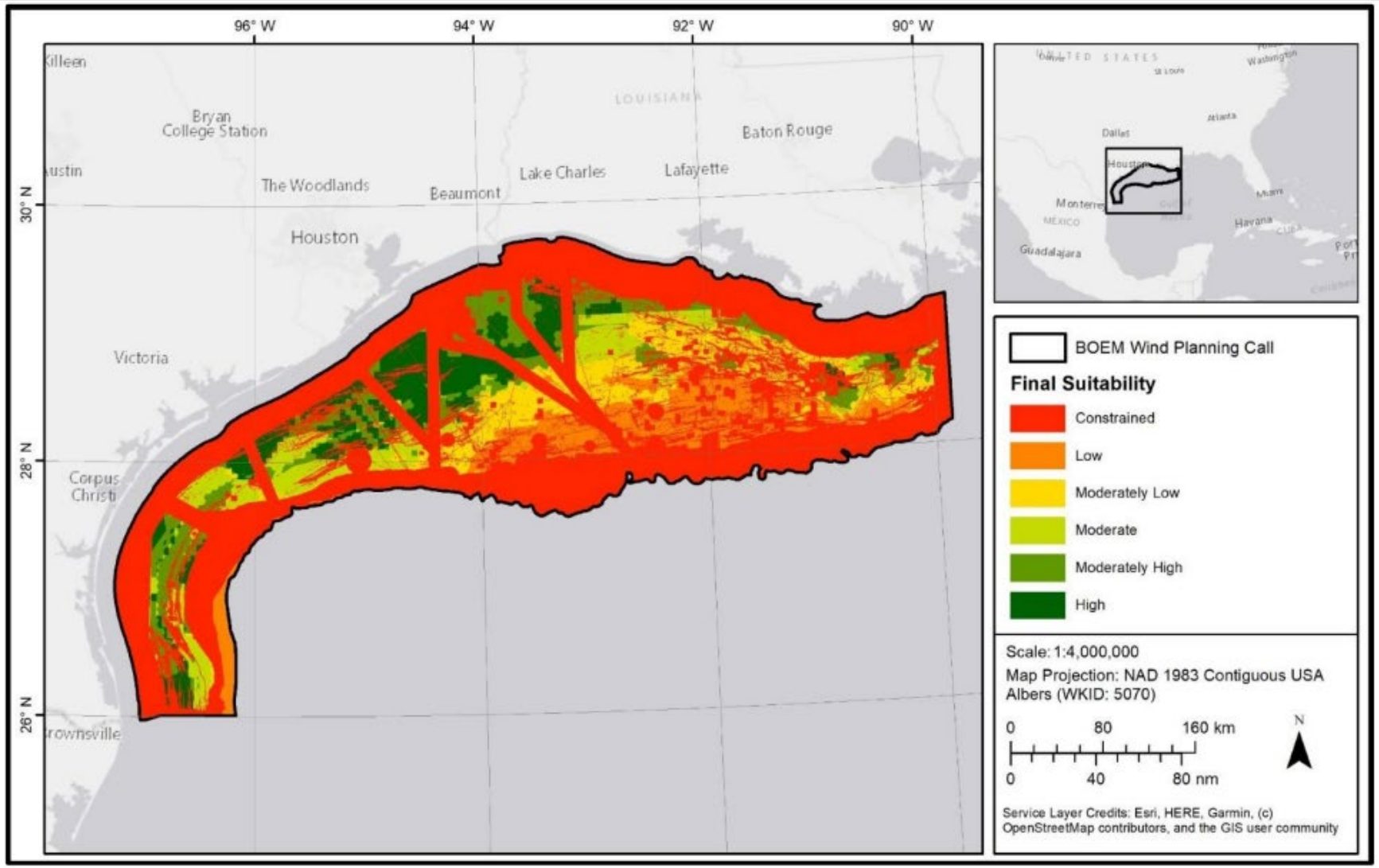




A **spatial suitability model** weights locations relative to each other based on a given criteria.

Model Layer Examples

Final suitability modeling results for the Call Area



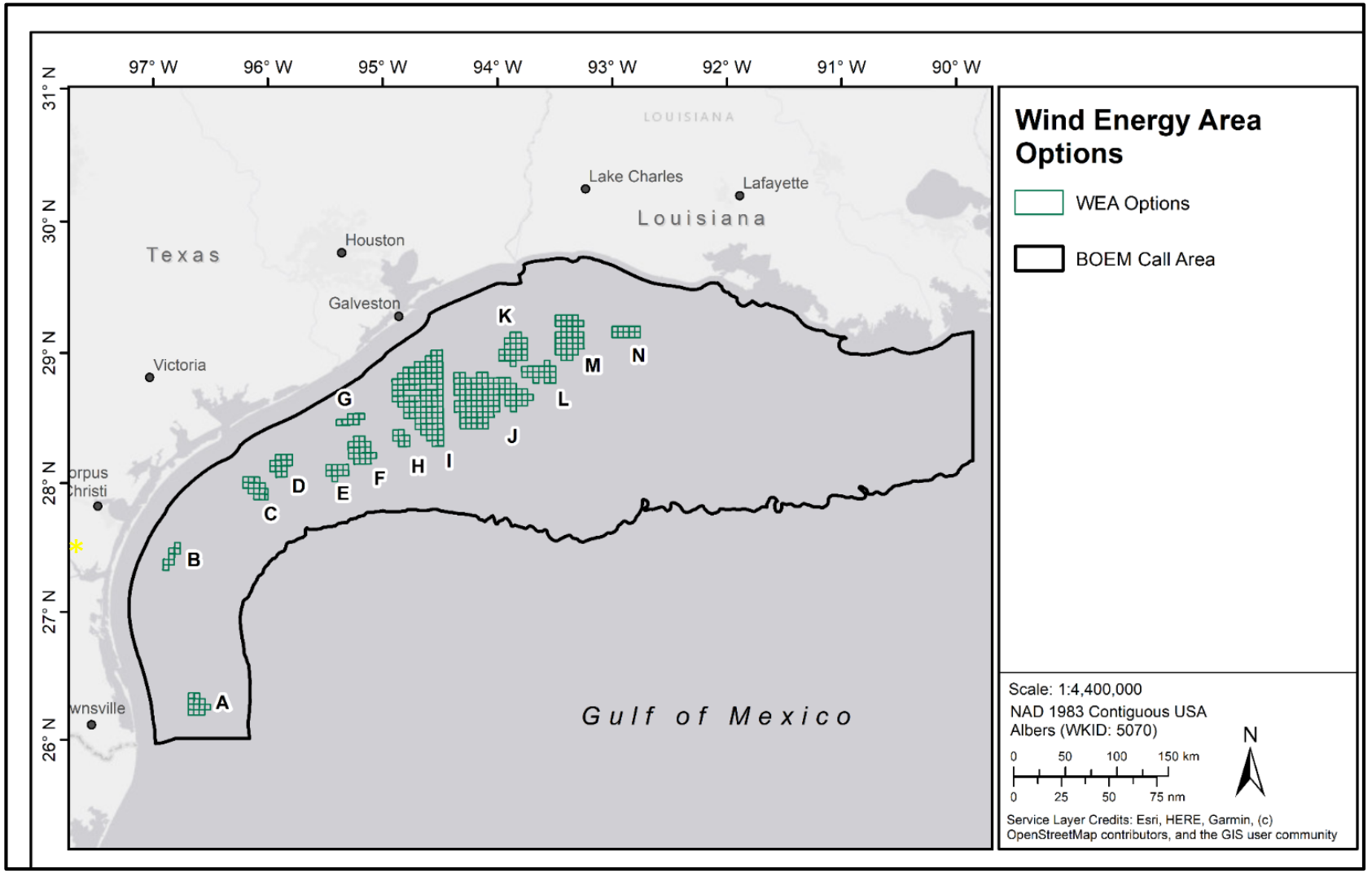
Deconflicting Process

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.



Gulf of Mexico Lease Sale August 29

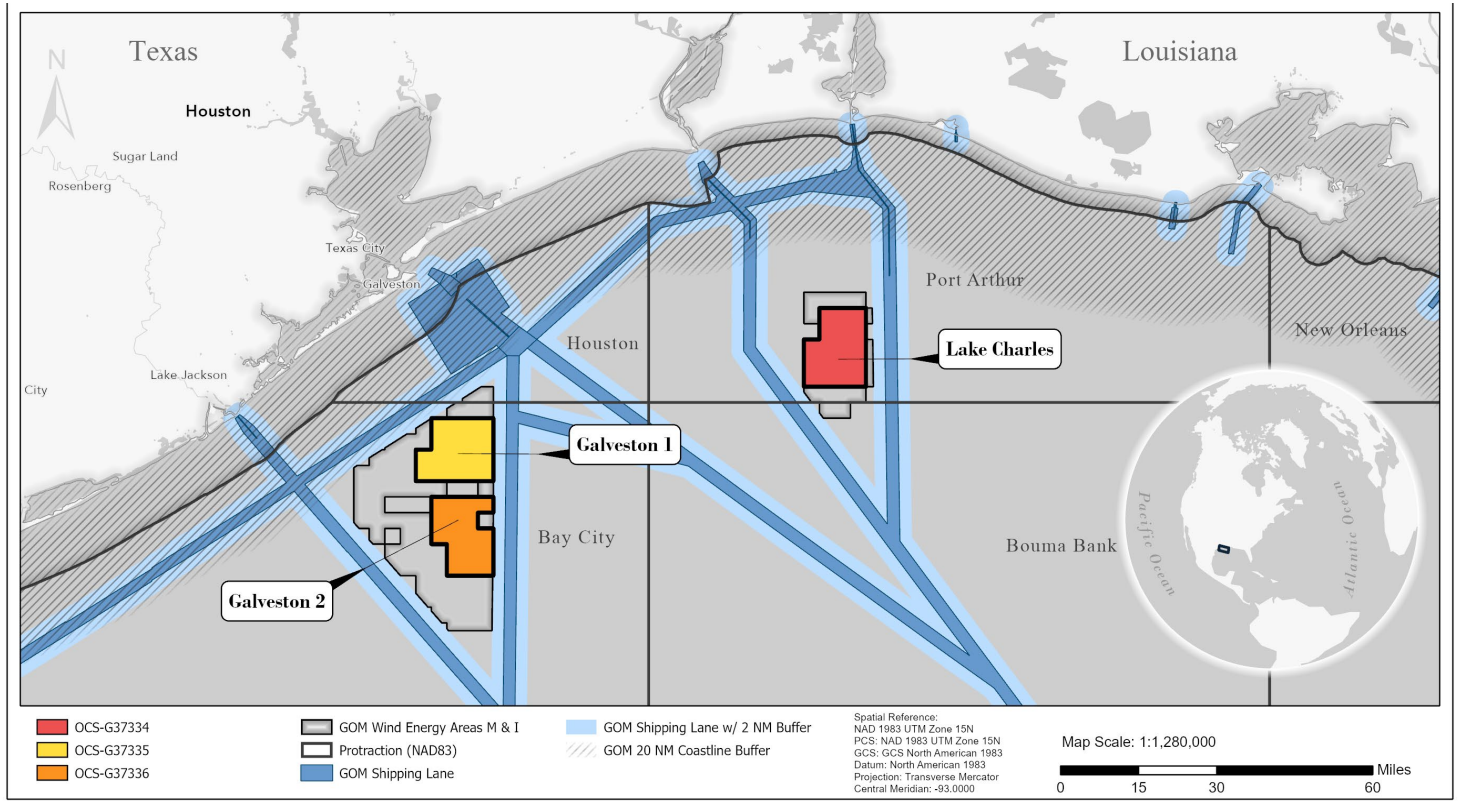
Lake Charles: 102,480 acres

Galveston I: 102,480 acres

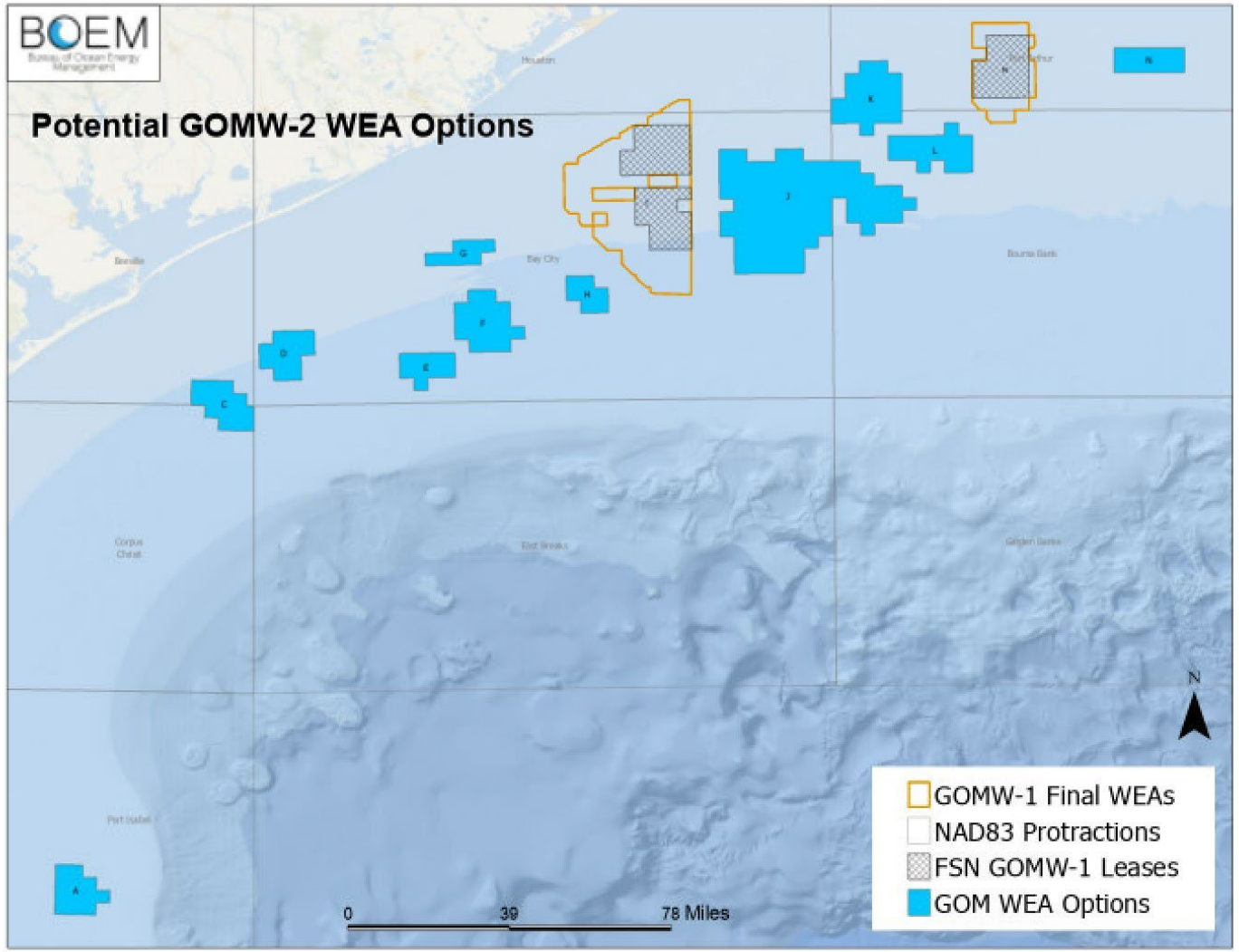
Galveston II: 96,786 acres

RWE won Lake Charles lease

- Working on possible Gulf Wind Two
- Galveston I and II could be added to next sale along with other areas

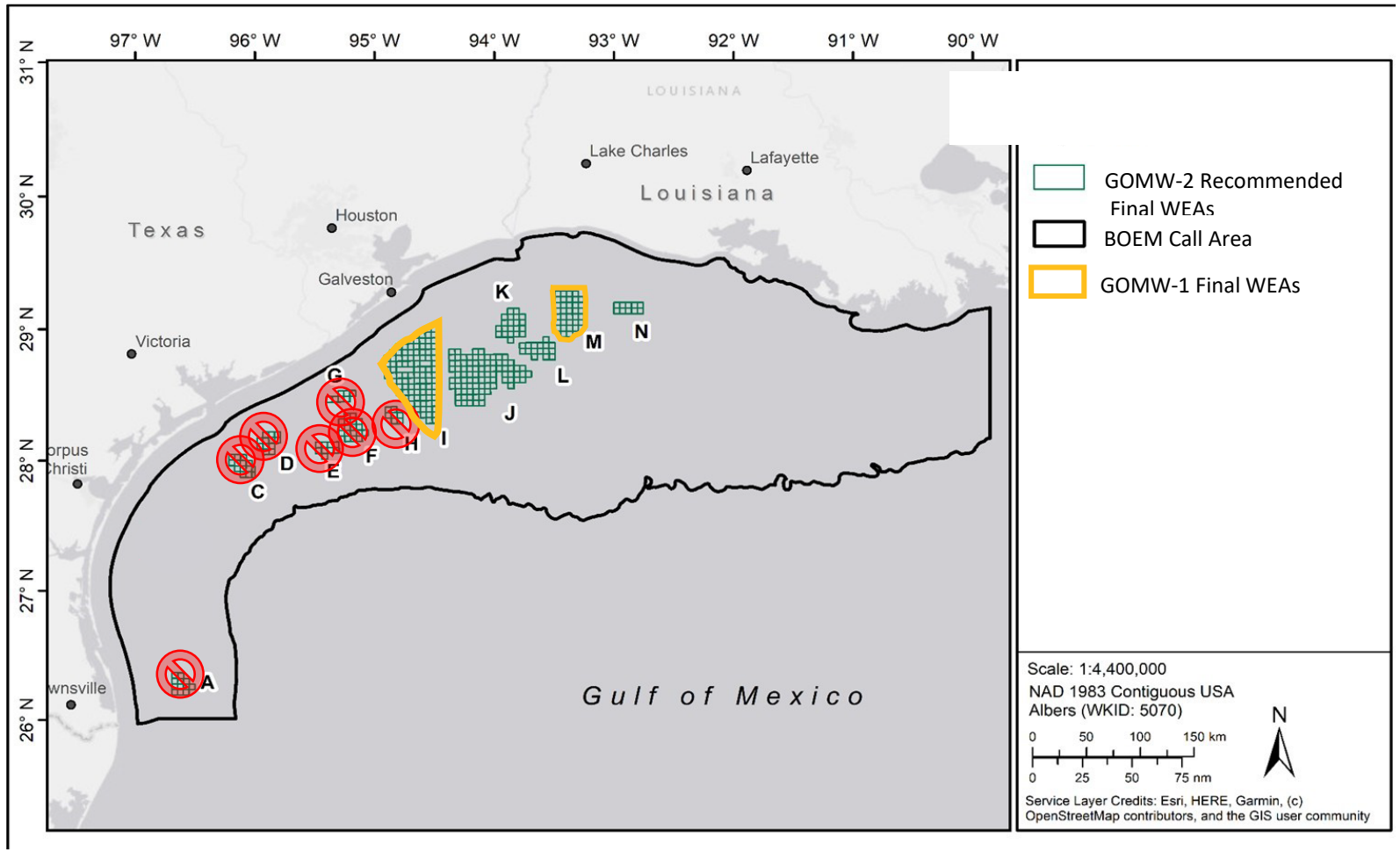


GOMW-2 Area Identification Process –Considered the 11 Remaining WEA Options



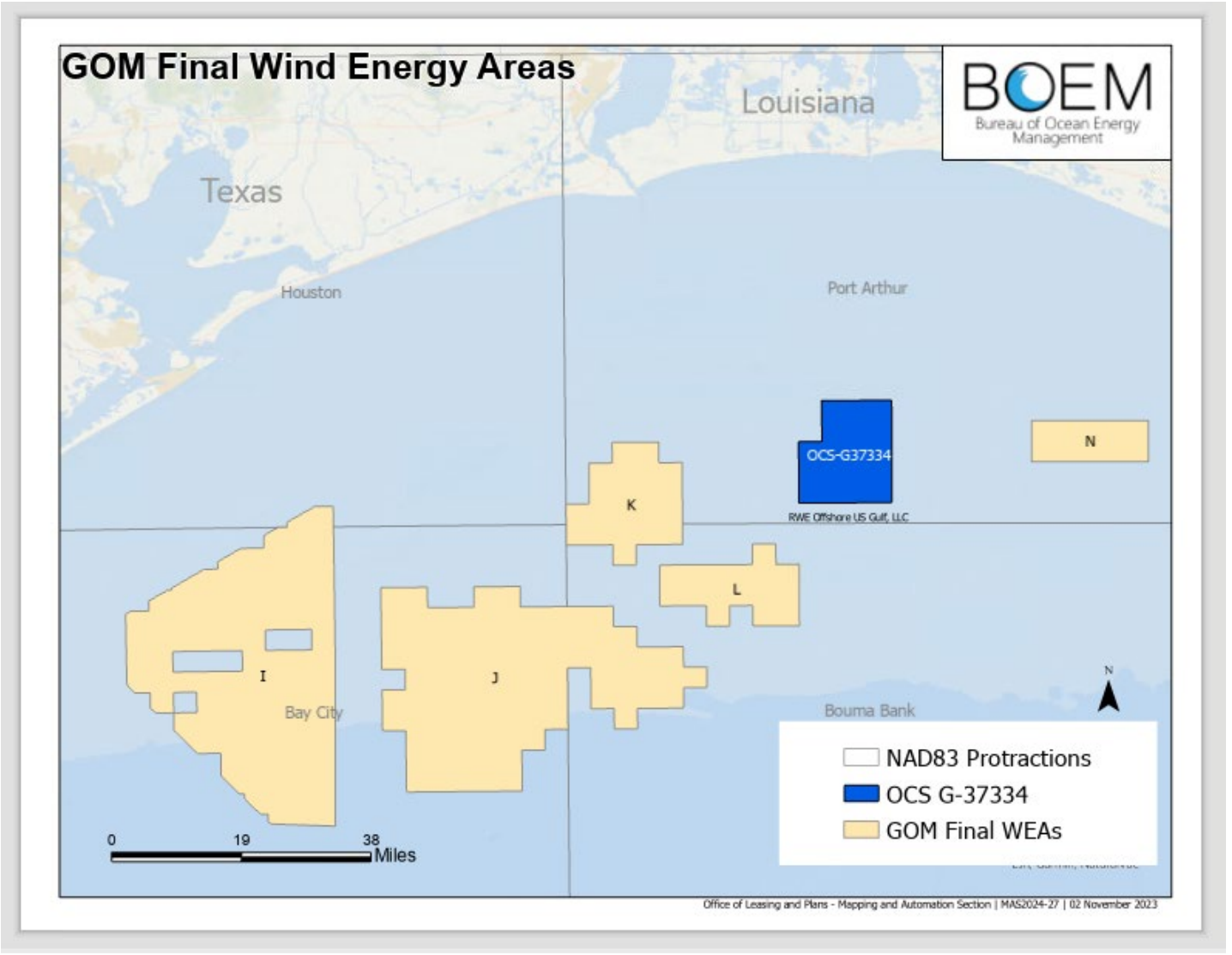
Recommended Final Wind Energy Areas – J, K, L, & N

- WEA Options A-H removed due to acreage less than 90,000.
- WEA F also removed due to SSA and DOD concerns.
- WEA I not leased in GOMW-1 remains a Final WEA and can be carried forward.
- New data was solicited & reviewed; NCCOS Model finalized May 2022 is still considered best available data for deconflicting.
- Adjustments from draft to Final WEAs include removing whole or partial blocks within 2nm of fairways (USCG).



GOM Final Wind Energy Areas

- **Final Wind Energy Areas (WEAs) – I, J, K, L & N**
  - On Oct 27, 2023, final areas where proposed lease sale areas may be identified for a future second wind lease sale were announced
- **BOEM would conduct partner and stakeholder engagement through the lease area identification process**
- **The actual lease sale acreage may be smaller than Final WEAs shown now**

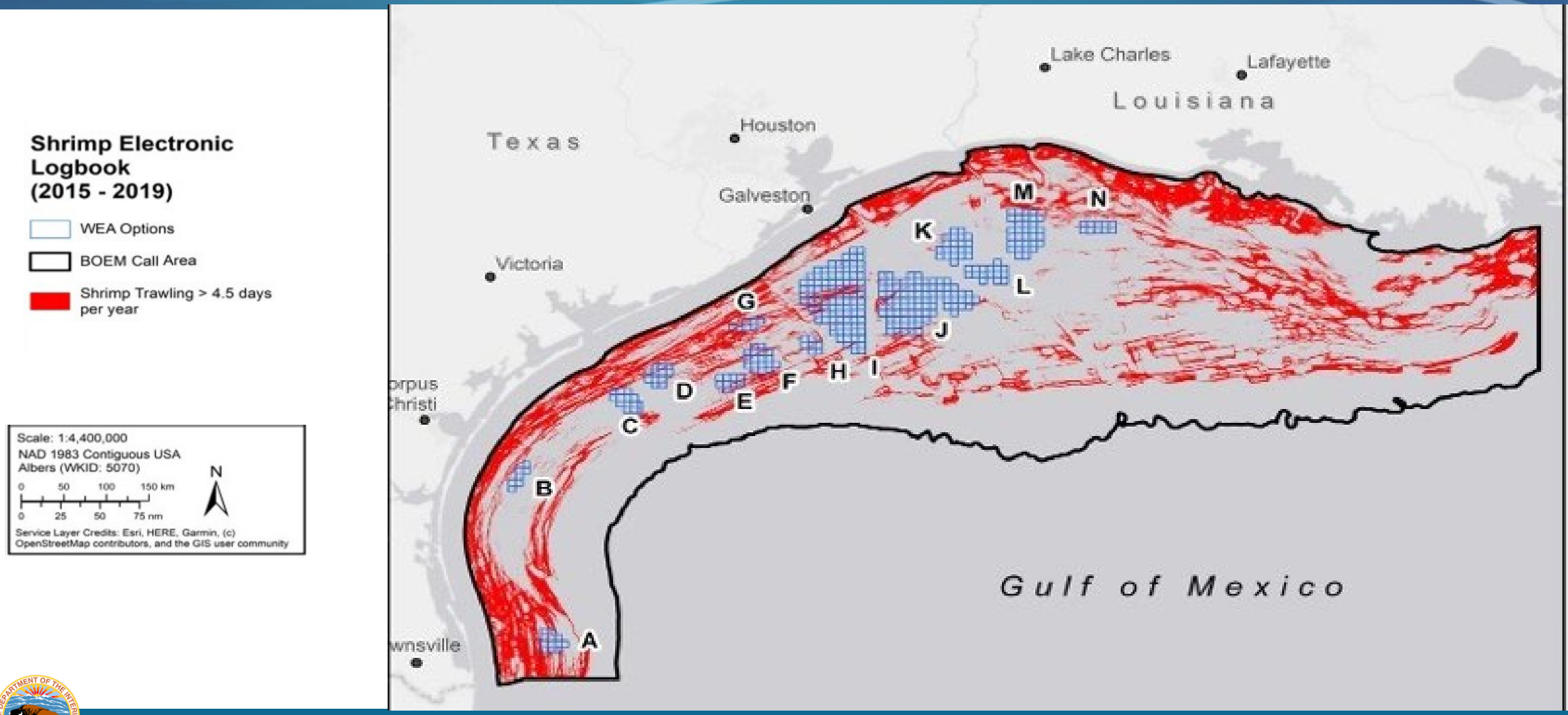


Proposed Sale Notice

- Identify potential lease sale areas within the Final WEAs
  - Use the NCCOS model to site most suitable lease areas

- Minimize potential lease site impacts
  - Use current comments and input received thus far
  - Continue stakeholder outreach and engagement
    - Conduct smaller working meetings
    - Intergovernmental Task Force meetings

Model Layer Example: Shrimp Electronic Logbook (2015 - 2019)



GOMW-2 Next Steps

- Publish Proposed Sale Notice
- Auction Seminar + 1 month from PSN
- GOM Task Force meeting + 1 month from PSN
- PSN public comment period closes +60 days from PSN
- Publish Final Sale Notice
- Lease Auction + 30 days after FSN
- Lease signing
  - By December 20, 2023

GOM Wind Future Discussions

- **GOM Wind 3**
- **Update NCCOS Model Data**
  - Resource Assessment
  - Point of Interconnection
- **Transmission Planning**
- **Hurricane Research**

Resource Assessment

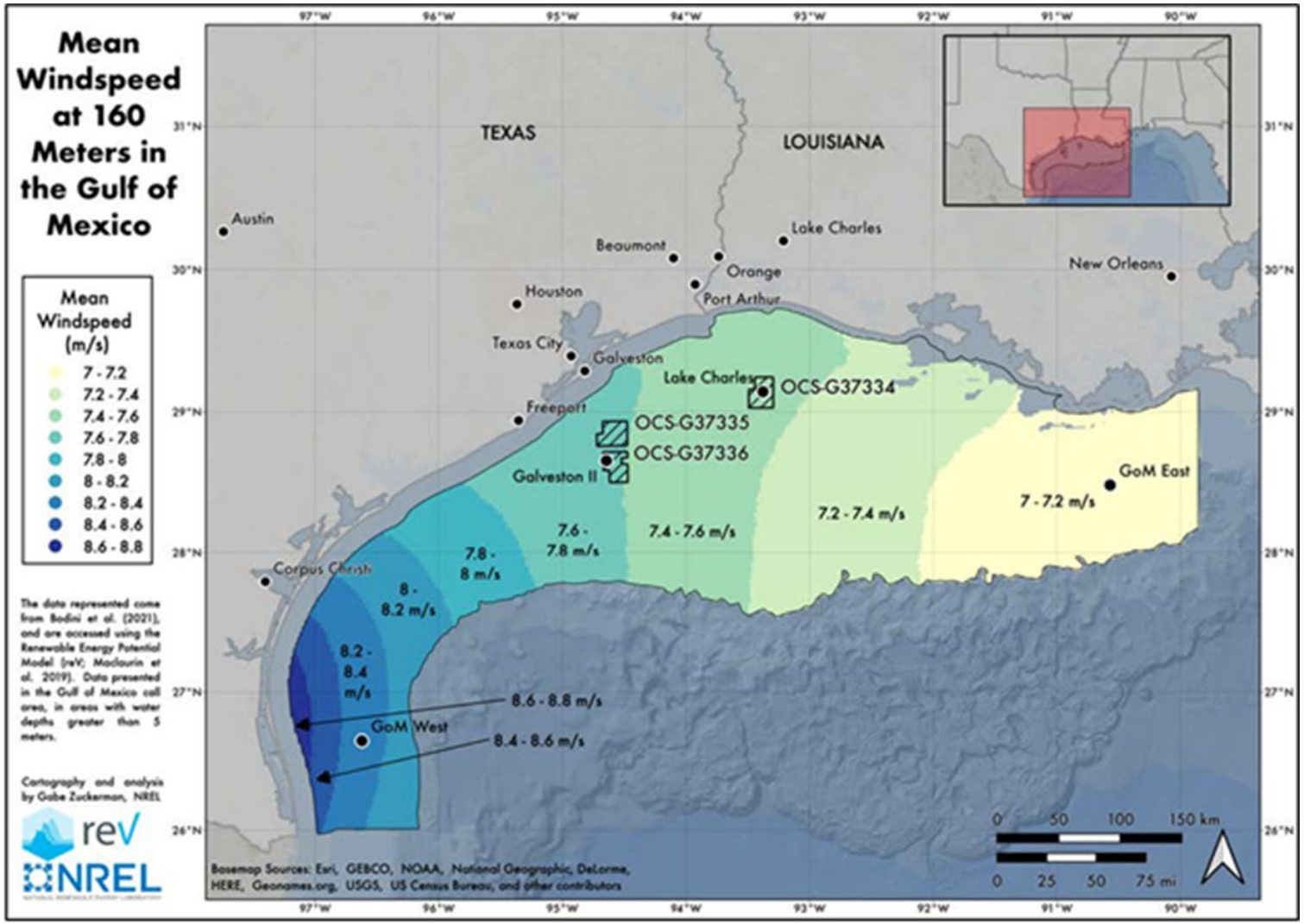
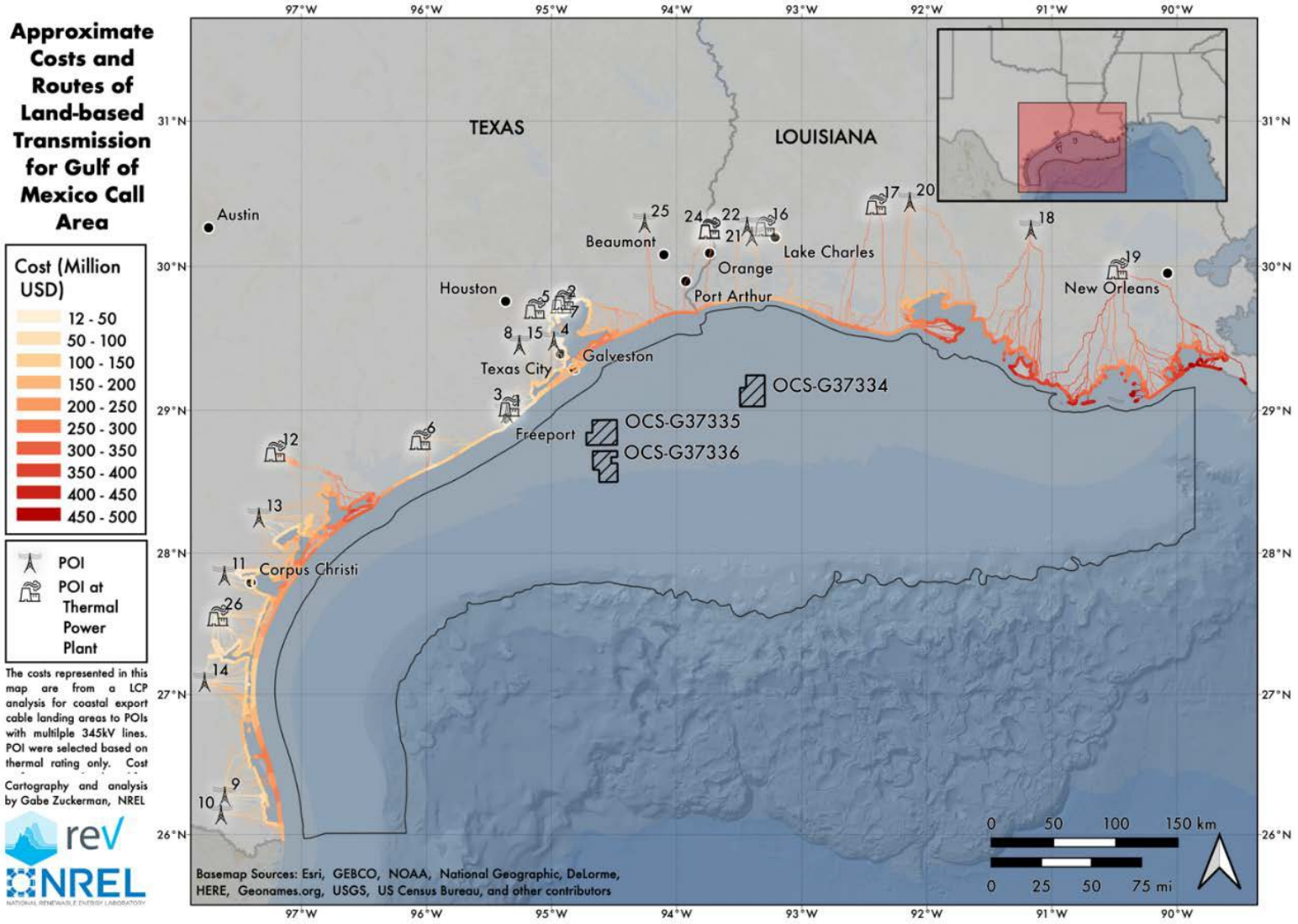


Figure ES- 2. Mean wind speeds at 160 m elevation over the period 2000-2020. Reference sites (Galveston II, Lake Charles, GoM East, and GoM West) are labeled and analyzed in Figures 9–11.

Map by Gabe Zuckerman, NREL

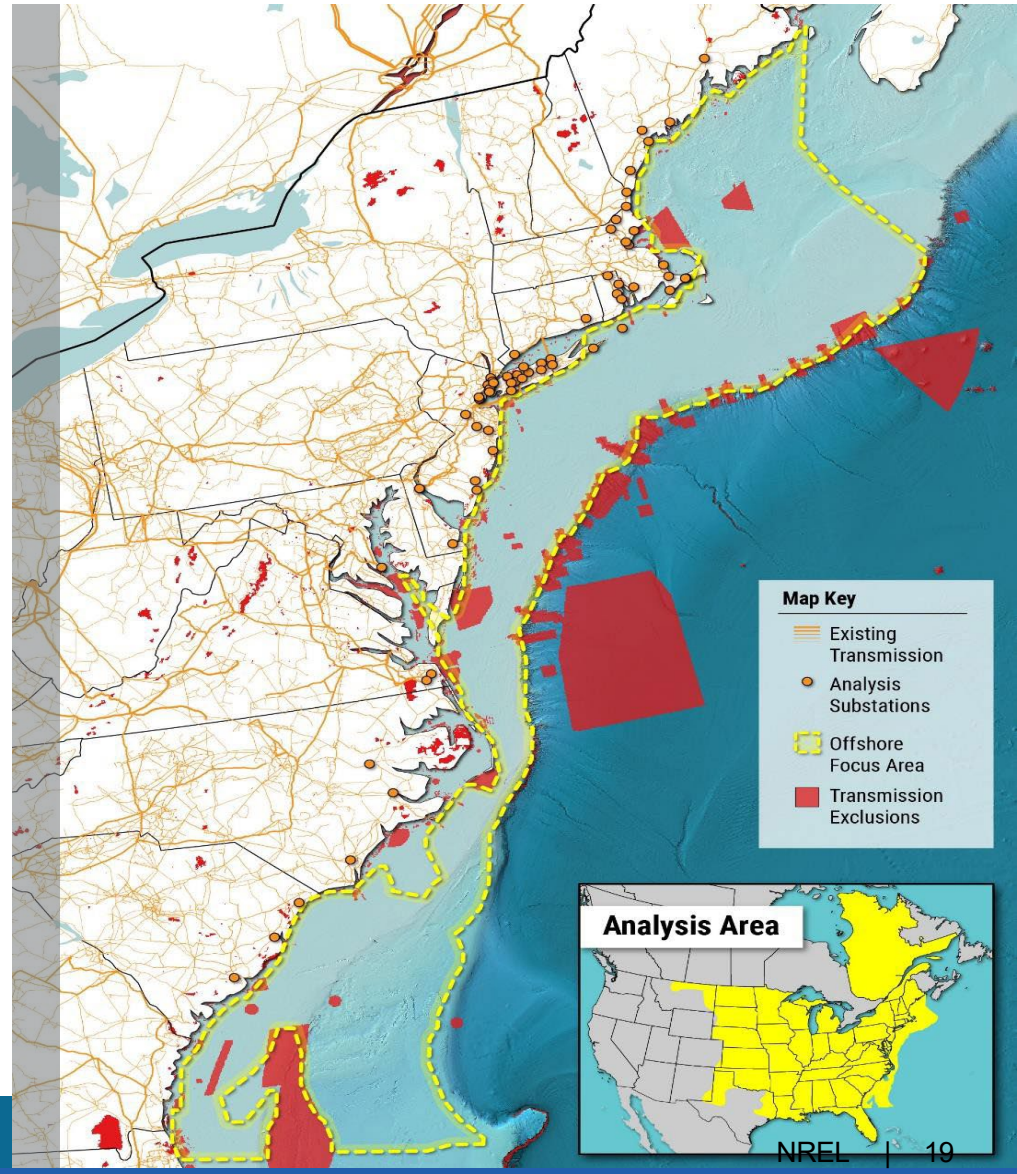
POIs in the Gulf of Mexico



- **Figure 27. Locations and approximate costs and routes for interconnecting to the 25 most plausible POIs in the Gulf of Mexico.**
- *Map by Gabe Zuckerman, NREL*

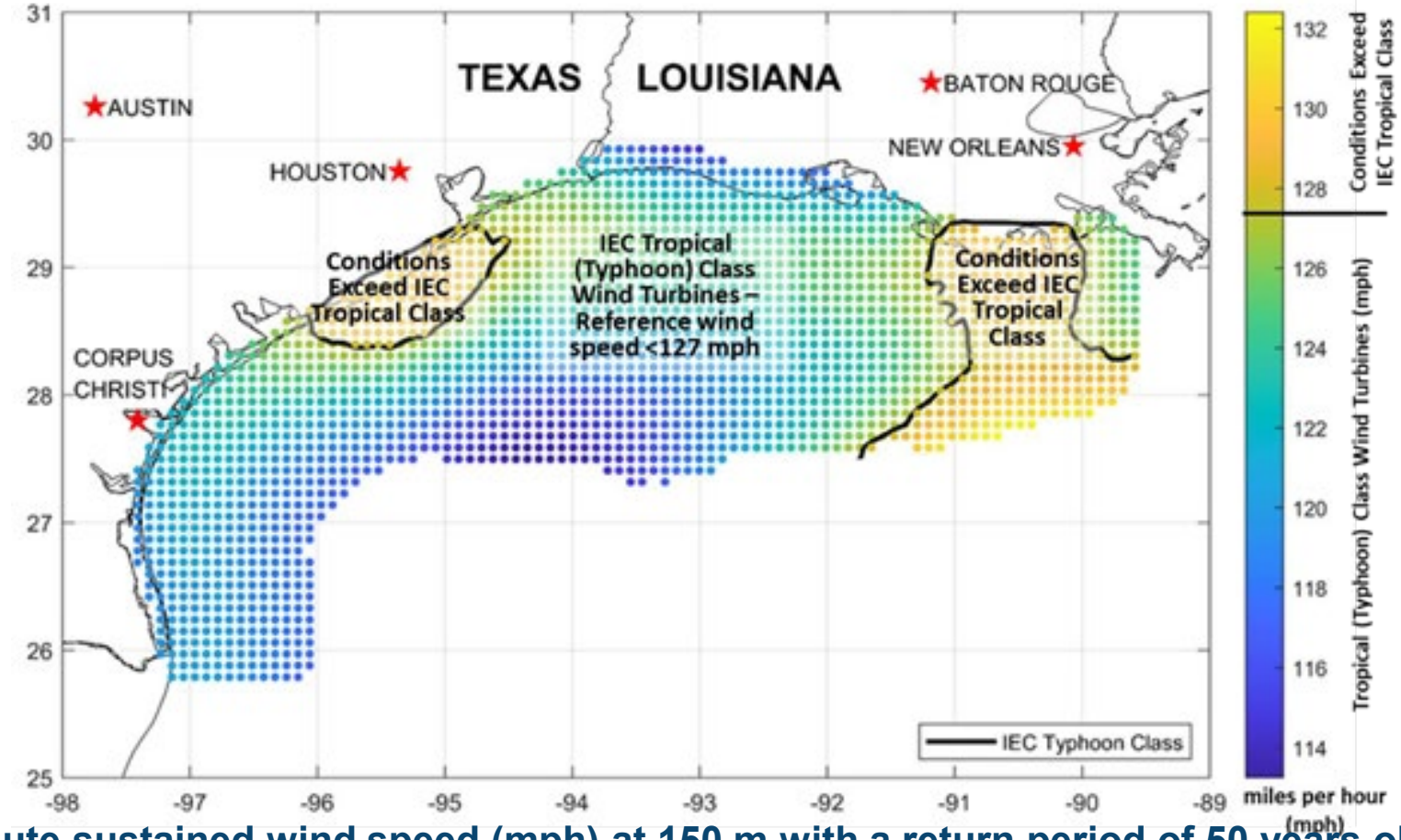
Gulf of Mexico Transmission Study Literature Search

- **Atlantic Transmission Study Overview Example**
- Studies scenarios and pathways of offshore wind (OSW) and transmission deployment
- Quantifies impacts such as economics, reliability, and resilience of multiple OSW and transmission scenarios and pathways
- Scenarios presented consider **85 GW OSW** in the Atlantic by 2050.
- Offshore wind development provides a unique opportunity to potentially add interregional transmission capacity in a lower-cost, lower-impact way.
- The team designed offshore transmission topologies to take advantage of these opportunities. These topologies are being studied in greater detail through the completion of the study later in 2023. COMPLETED? UPDATE?.
- The team will be studying four topologies:
  - **Radial**: Planned connections from offshore substations to onshore grid.
  - **Interregional**: Specifically designed to take advantage of opportunities to connect diverse regions by interlinking offshore platforms
  - **Intraregional**: Within-region connections that could complement (and come before) interregional solutions
  - **Backbone**: Larger, longer version of interregional build Atlantic



https://www.energy.gov/gdo/offshore-wind-transmission-federal-planning-support

Technology – Hurricane Typhoon Class Turbine Assessment



- **Figure 19. 10-minute sustained wind speed (mph) at 150 m with a return period of 50 years obtained from a 500,000-year hurricane simulation. Note: no isocline for the Class 1A limit state appears since all simulated values of the 50-year wind speed are greater than the Class 1A reference wind speed (111.9 mph, 50 m/s).**

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Michael.Celata@boem.gov