



Sand Resource Prioritization and Multi-use Conflicts

Kerby Dobbs, Marine Minerals Division
Office of Strategic Resources

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Overview

- **BOEM background & multi-use management**
- **Sand resource & wind energy conflicts**
- **Challenges**
- **BOEM MMP investments**
- **Summary**

BOEM's Mission Responsibilities (w/ misc timeline)

Oil & Gas



1954: 1st GOMR O&G OCS lease sale

Marine Minerals

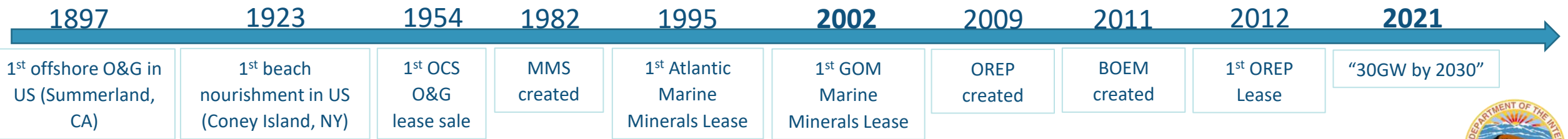


1995: 1st Atlantic MM lease (FL)
2002: 1st GOMR MM lease (LA)

Renewable Energy

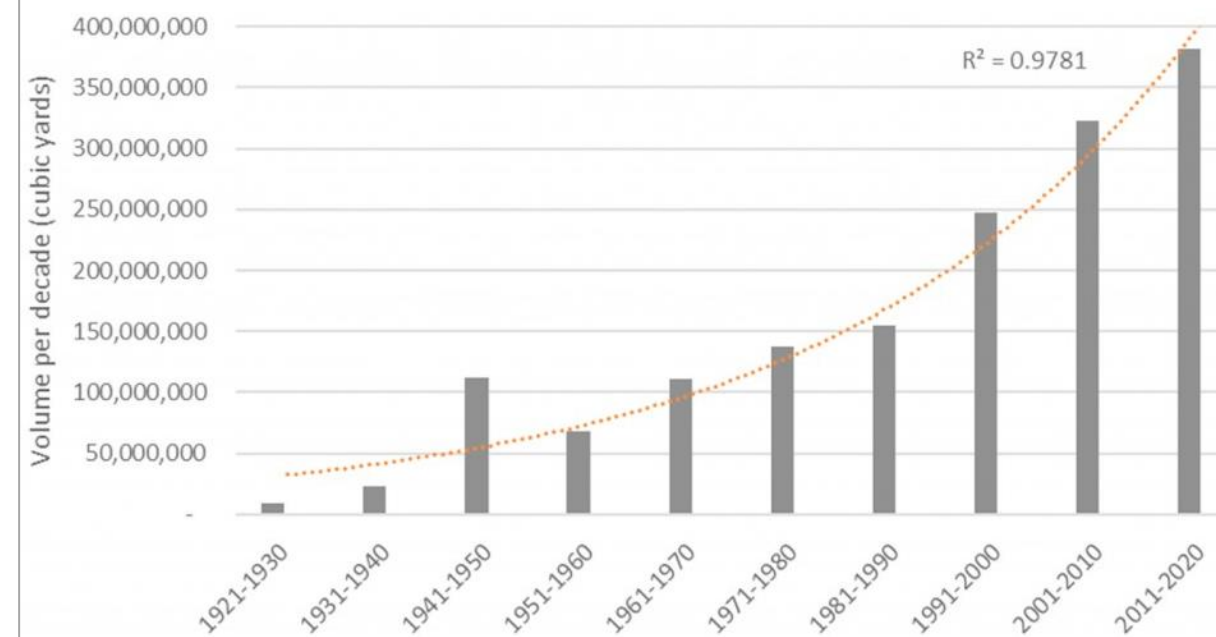


2009: BOEM OREP created
2012: 1st OREP lease



Demand for Energy and Need for Coastal Resilience

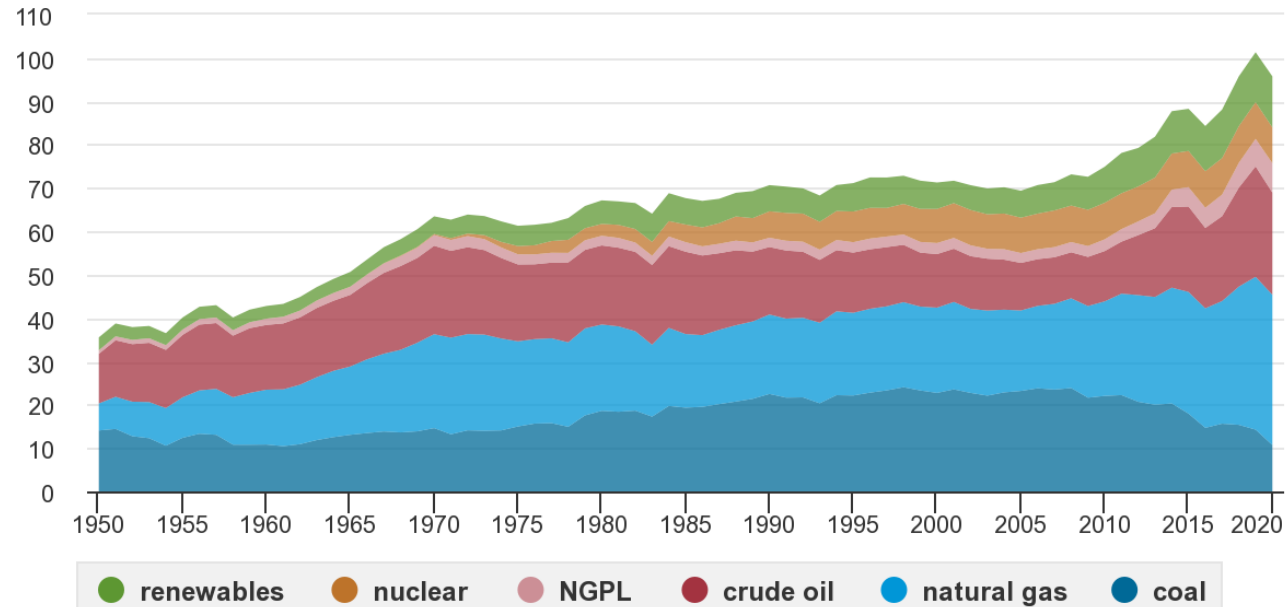
U.S. Beach Nourishment Volume by Decade: 1921-2020



Elko et al., 2021.

U.S. Primary Energy Production: 1950-2020

quadrillion British thermal units



Source: U.S. Energy Information Administration, *Monthly Energy Review*, Table 1.2, April 2021, preliminary data for 2020



Note: NGPL is natural gas plant liquids.



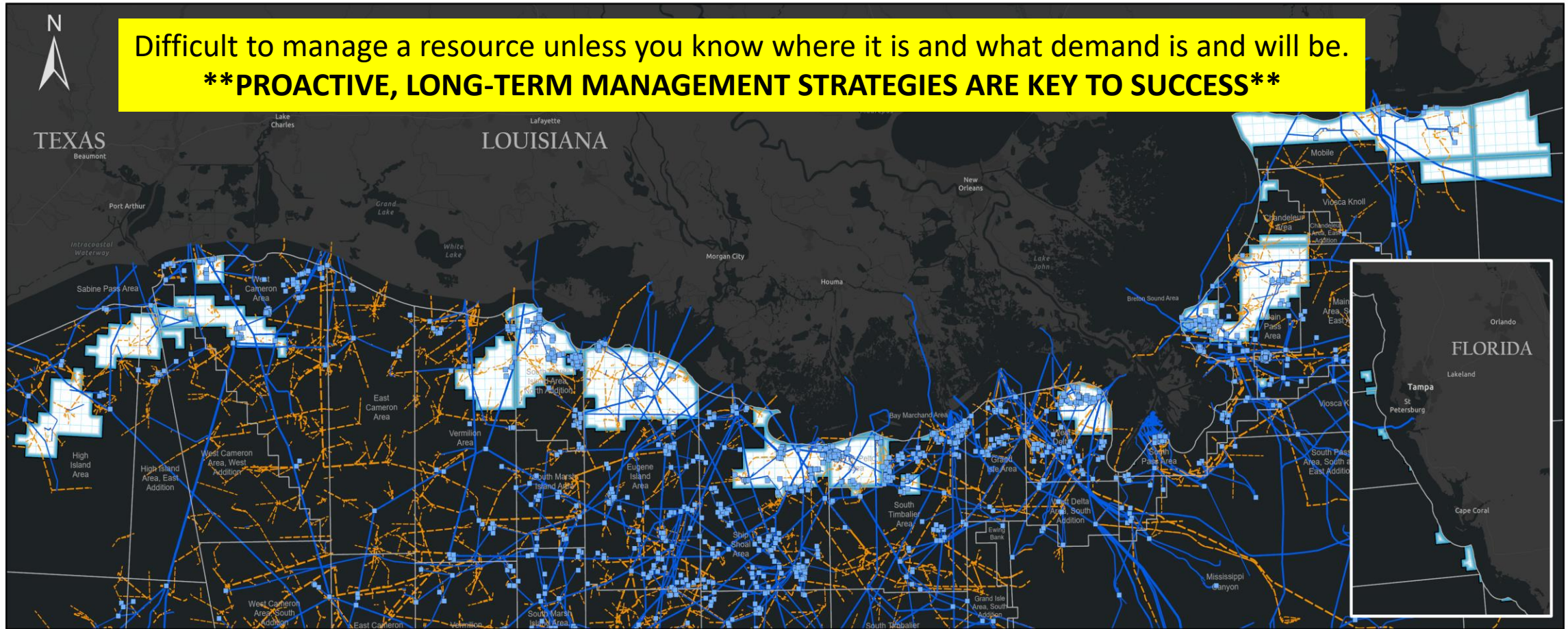
Managing Multiple Uses of the OCS

Oil and Gas Infrastructure within Significant Sediment Resource Areas (SSRAs)
U.S. Outer Continental Shelf, Gulf of Mexico Region

BOEM Bureau of
Ocean Energy Management

Difficult to manage a resource unless you know where it is and what demand is and will be.

****PROACTIVE, LONG-TERM MANAGEMENT STRATEGIES ARE KEY TO SUCCESS****



■ Platform Structure

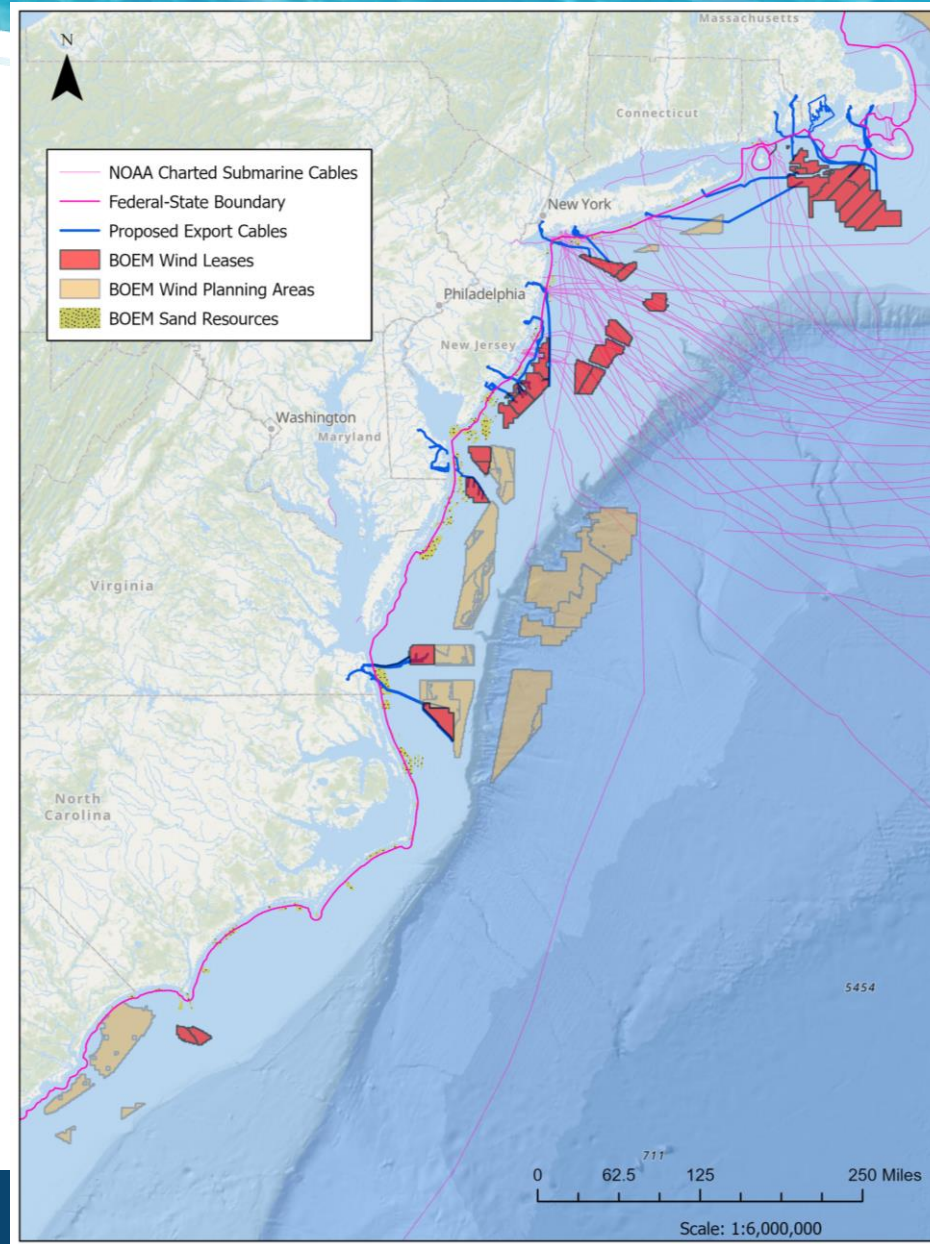
Active O&G Pipeline

Abandoned O&G Pipeline

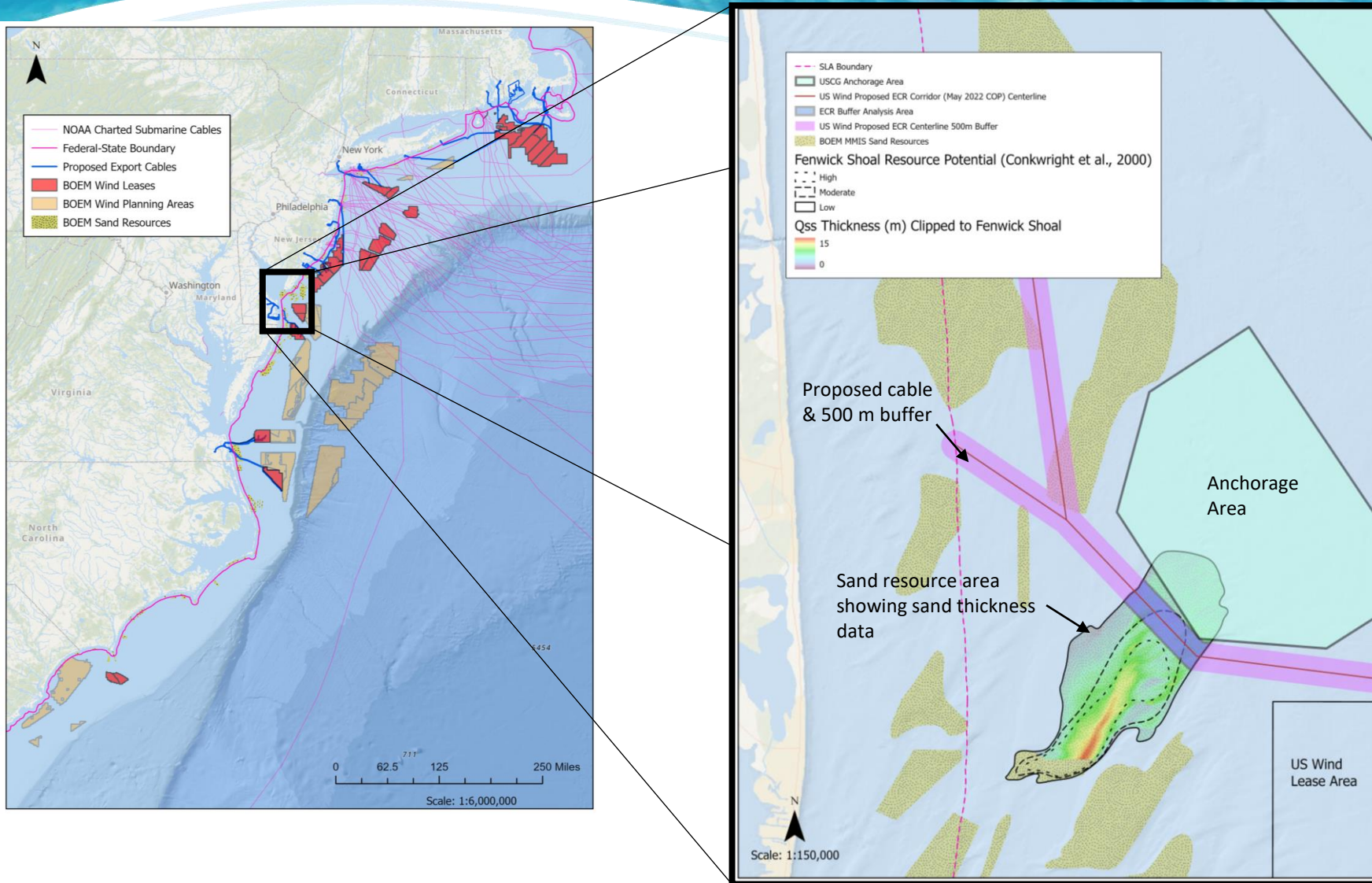
Significant Sediment Resource Area (SSRA) Block



Managing Multiple Uses of the OCS – Wind & Sand

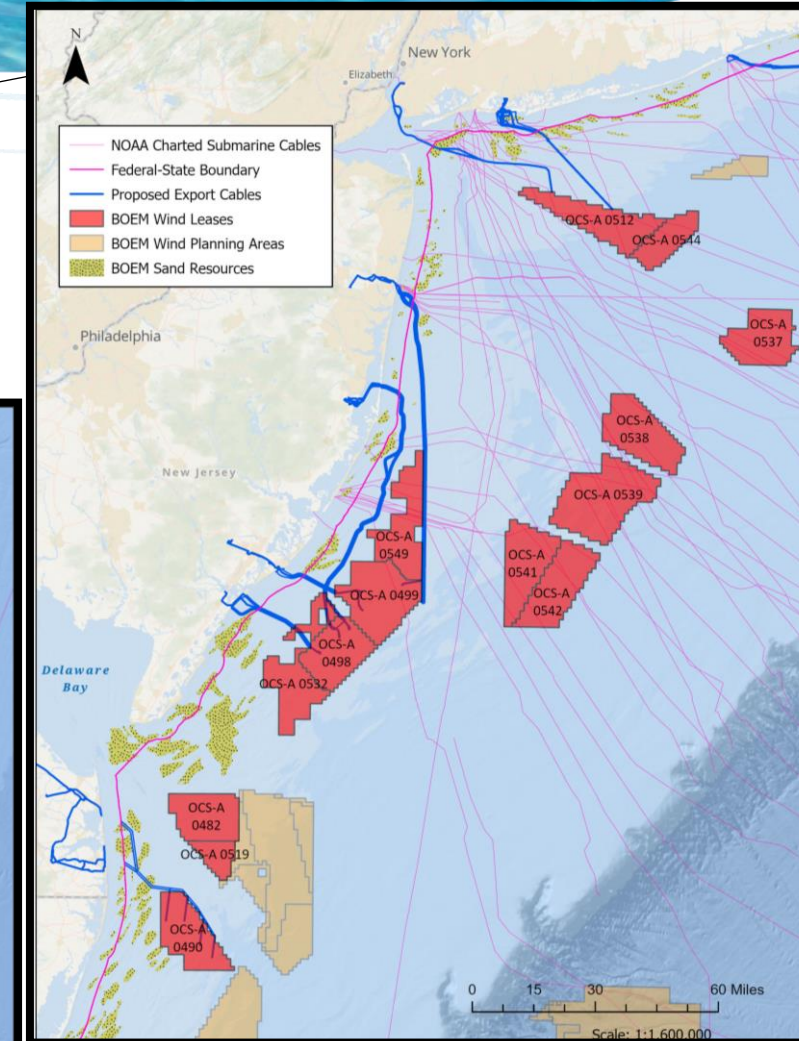
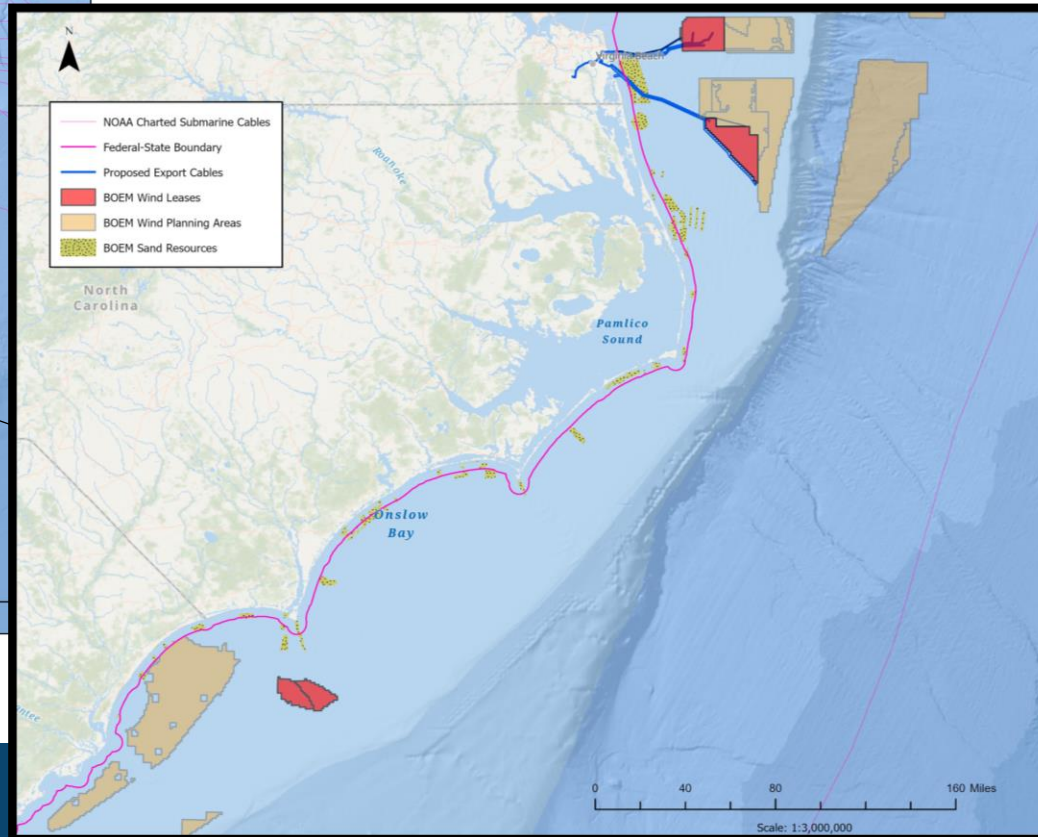
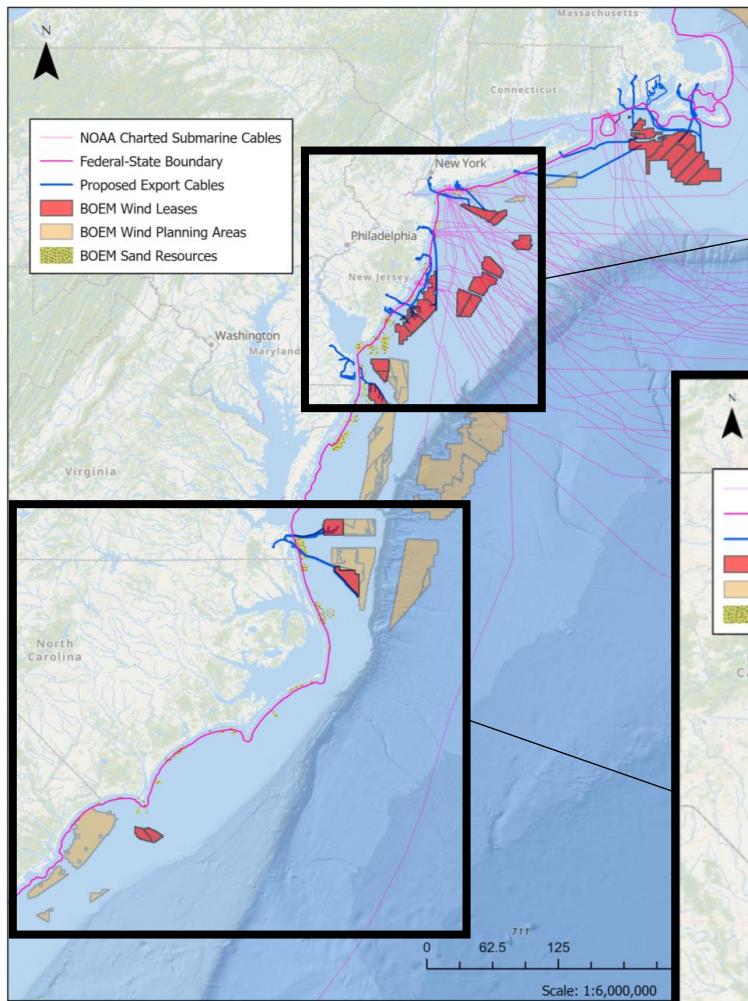


Managing Multiple Uses of the OCS – Wind & Sand



- Sand resource conflicts w/ proposed renewable energy export cables conducted on case-by-case basis via early engagement with wind lessees and sand stakeholders using existing data and most current sand supply/demand outlook

Managing Multiple Uses of the OCS – Wind & Sand



Big Challenges

- Upwards of **3,000 miles of offshore transmission cabling** could be required to land 30 GW alone (The Brattle Group 2022).
- Task forces only focus on Area ID process, **not potential export cable route (ECRs) corridors.**
- **...pathways and approaches ultimately selected, including number of export cables, cable spacing, corridor avoidance buffers, and burial depth are implicated by and in turn implicate other ocean uses**, including existing and new submarine cables, fisheries, vessel traffic, protected habitats, and offshore sand resources (Sharples 2011; TUV SUD PMSS 2014).
- Long-term resource (\$\$) allocation decisions based off **incomplete information** and **mixed policy imperatives**
- No formal assessment framework / disconnected with policy (<https://www.noordzeeloket.nl/en/policy/north-sea-programme-2022-2027/>)
- Value of sand is underappreciated in spite of global sand crisis (<https://unepgrid.ch/en/activity/sand>)
- **Unknown unknowns**

Ongoing and Future BOEM Marine Minerals Investments

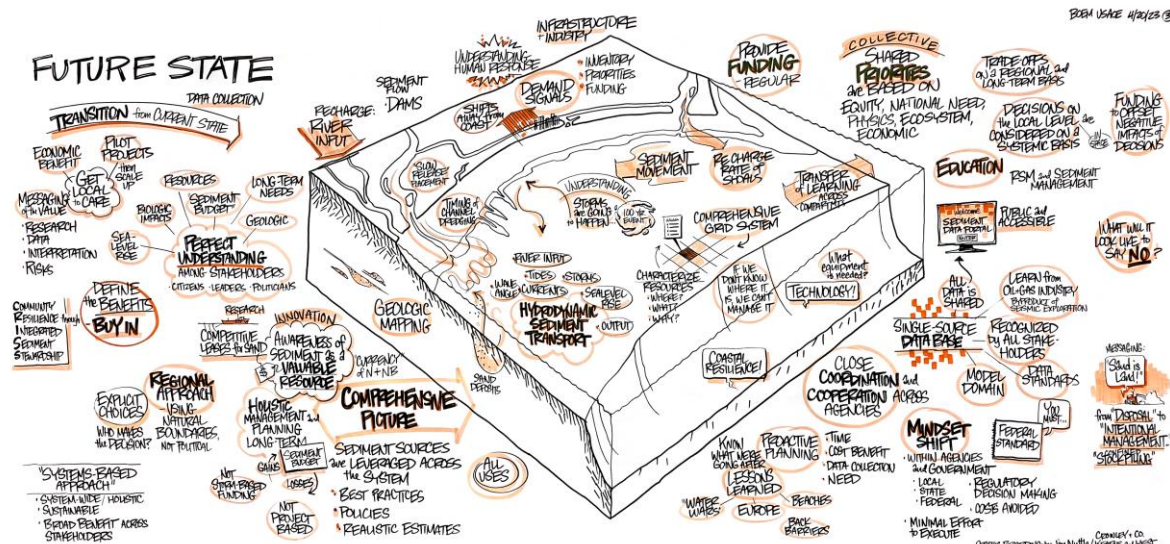


Summary

- Need larger-scale geophysical and geological mapping, interpretation, and data management of OCS sand resources
- Longer-term (50+ yrs) supply/demand, systems-based assessments
- Need policy change
- Collaborative and complimentary investments

Potential Risks of No Action

- Uncertainty with long-term availability of sand resources
- potentially jeopardize the sustainability of coastal resilience projects in communities landing offshore wind electricity
- Increased regulatory uncertainty and costs for renewable energy operators?
- Delayed policy framing and resolution of export cable decommissioning issues





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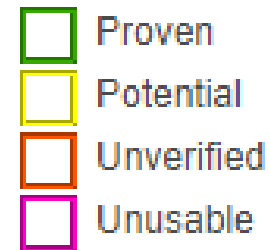
Kerby Dobbs kerby.dobbs@boem.gov

Sand Resources vs Marine Minerals Lease Areas (Borrow Areas)

MMIS MARINE MINERALS INFORMATION SYSTEM

- Sand Resource Area
- Likelihood of usable sand resource, based on previous investigations
- Categories: Evaluation stage (~confidence)
- No undiscovered sand resources
- Lease Area
- Proven portion of sand resource area
- Permitted for use.
- OCS (seaward of 3nm line) lease/MOA with BOEM to dredge

Sand Resources



Marine Minerals Lease Areas

