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Marine Minerals Program

Building A National Sand Resource Inventory For The US Continental Shelf



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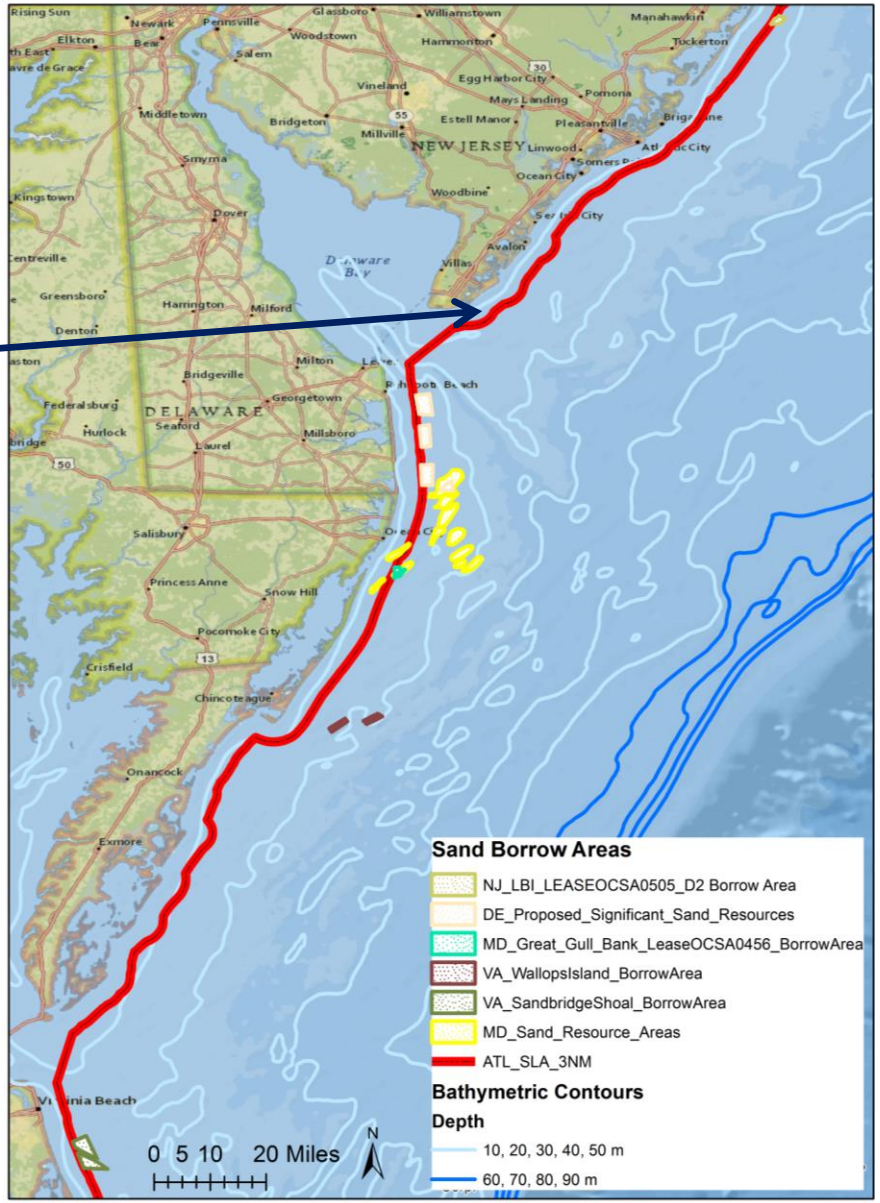
BOEM Jurisdiction and Authority

Outer Continental Shelf (OCS) or Federal jurisdiction begins seaward of the Submerged Lands Act (SLA) boundary.

Generally 3 nautical miles (nm) from shore (but 3 leagues or 9 nm offshore Texas and west coast of Florida) and extends 200 nm.

BOEM's Authority = OCS Lands Act (43 U.S.C. § 1331, et. seq.)

Regulations = 30 CFR Parts 580, 581, 582, and 583



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Stewardship Role

- **BOEM is responsible for managing development of Outer Continental Shelf (OCS) non-energy marine mineral resources.**

- **As the nation's steward for these resources, BOEM must ensure that the removal of any mineral resource is done in a safe and environmentally sound manner.**

- **As a responsible steward and resource manager, BOEM needs to know where and how much resource may be available in order to make informed decisions on its use.**

- **DOI and BOEM play a critical role in shoreline protection projects - without sand/material projects cannot be constructed.**

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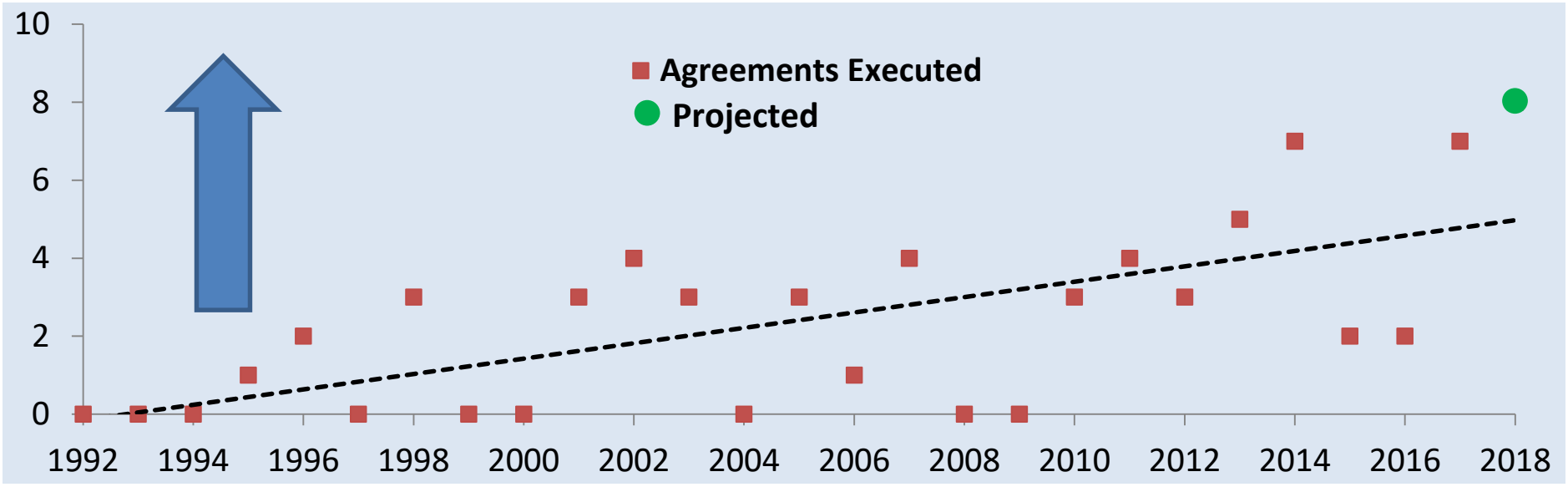
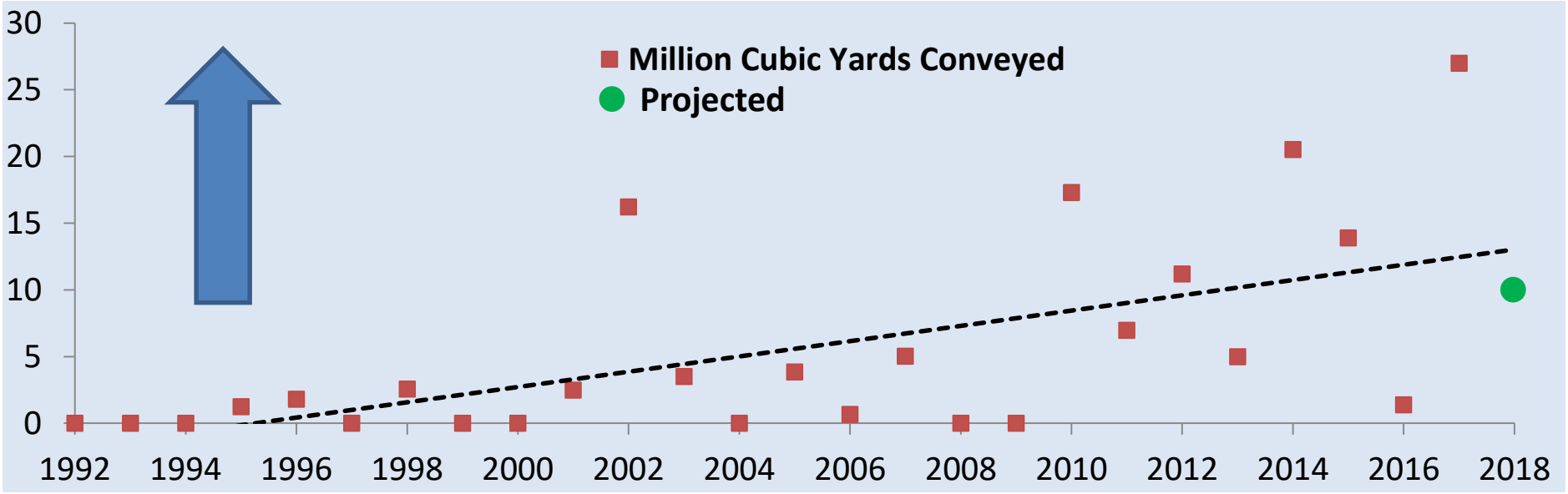
Increasing Demand for OCS Sand





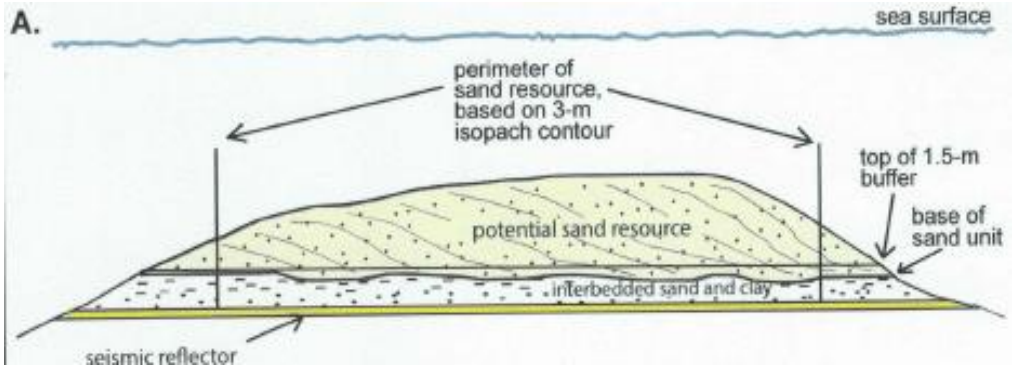
What is Driving OCS Demand ?

- **Diminishing Resources in State Waters**
- **Environmental Concerns w/ Dredging in State Waters**
- **Larger & Higher Quality Resources in Federal Waters**
- **Increased Recent Storm Activity ?**
- **More States Interested in OCS Sand (8 total)**
  - Recent: NJ (2014) and MS (2016)
  - Future: DE, MD, NY and others (?)
  - **Northeast Region**?

"Bad news…we've run out of unlimited resources"

Resource Availability on OCS

- **Several factors determine the availability and feasibility of dredging OCS sand:**
  - Compatibility
  - Water depth
  - Sediment thickness
  - Resource area shape
  - Transport distances
  - Environmental impacts
  - Conflicting uses



State and BOEM Collaboration

- **History of BOEM/state cooperative agreements**
  - **Since early 1990s**
  - **Have worked w/ 18 states (Atlantic, GOM, Pacific)**
  - **Currently have 15 active agreements**
  - **Invested tens of $$ millions**
  - **Reports on website (https://www.boem.gov/Marine-Mineral-Resource-Evaluatior**

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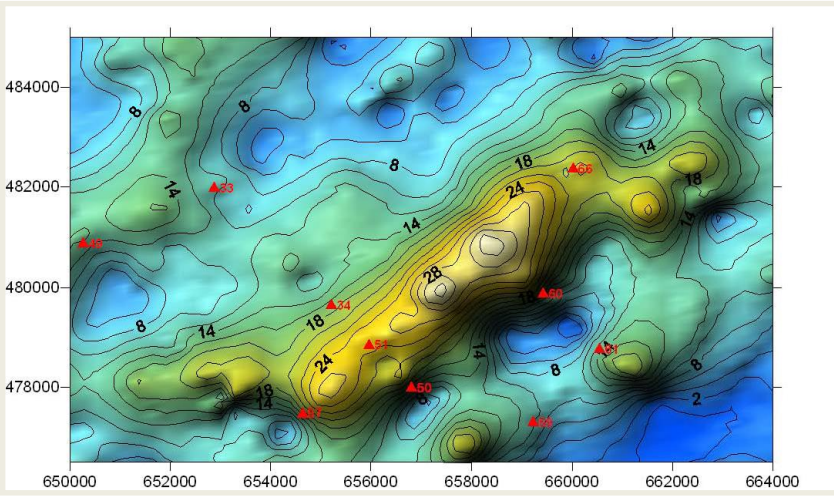
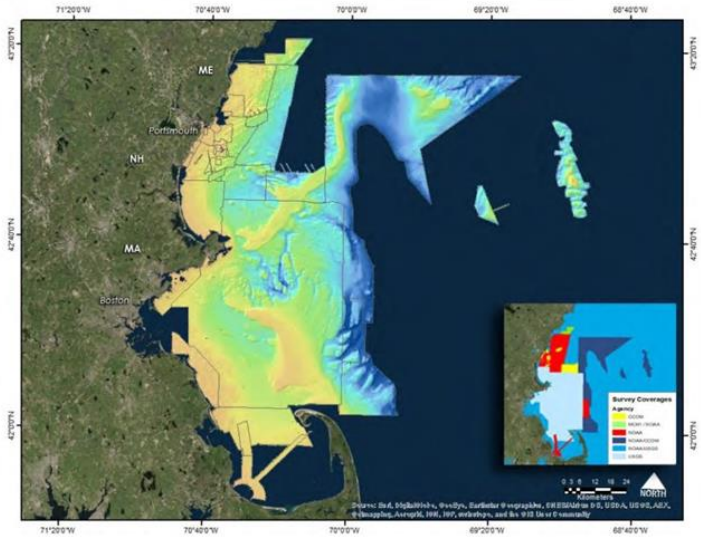
State Cooperative Agreement - Objectives

Thematic Elements of State Cooperative Agreements

1. Develop a database of existing geologic and geophysical data
2. Determine states' need for sand based on:
   a. Communities at Exposure
   b. Infrastructure
   c. Critical Habitat
3. Compile and analyze existing sand resources data
4. Identify data gap areas where future information needs to be collected





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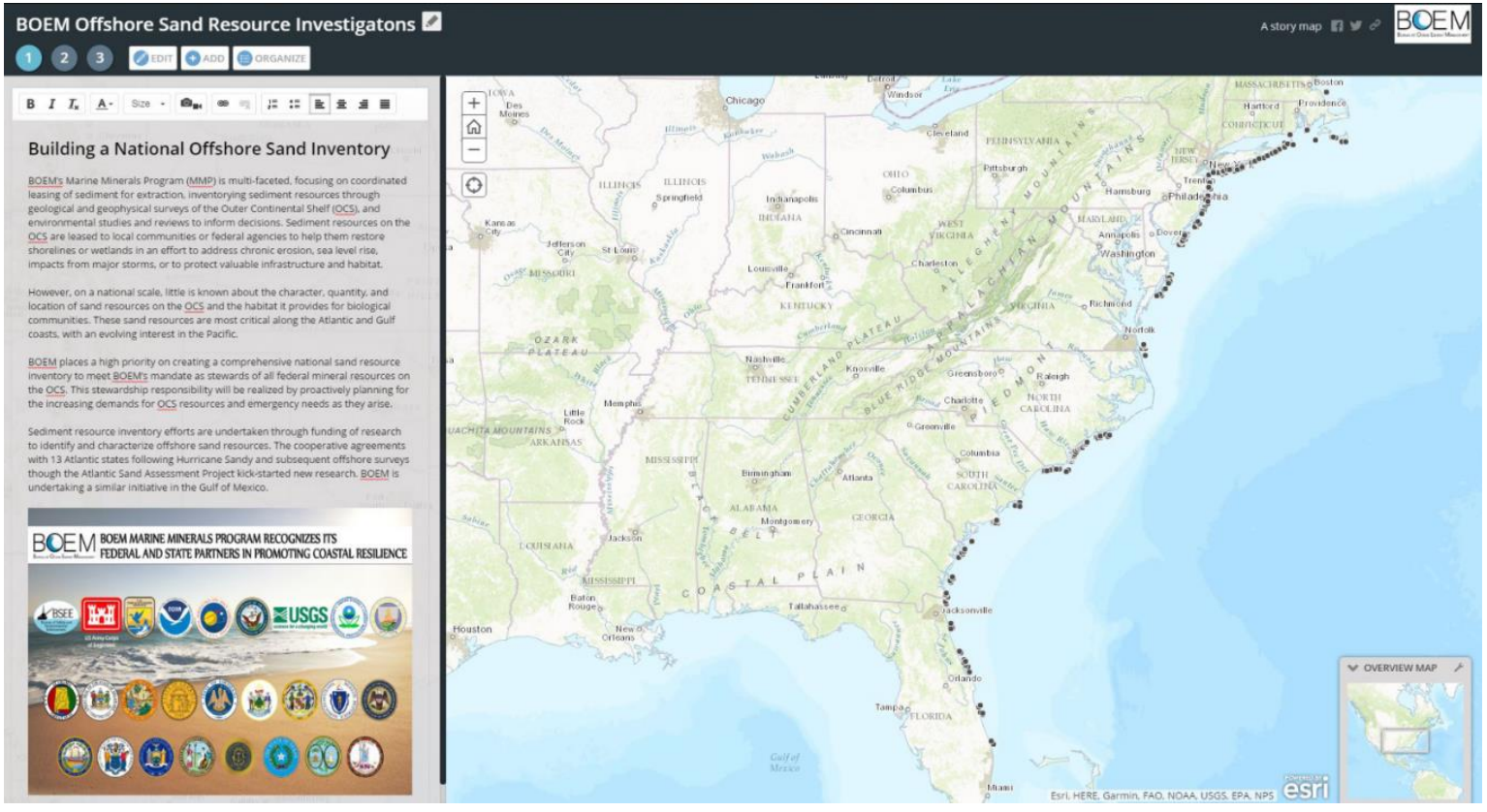
Building a National Offshore Sand Inventory

1. Proactively plan for the increasing demands for OCS resources
2. Help communities meet longer-term needs, while maximizing the lifecycle of these resources.
3. Initiate and direct early and ongoing engagement.
4. Identify environmental studies for maximum benefit and understanding
5. Coordinate with state and federal agencies



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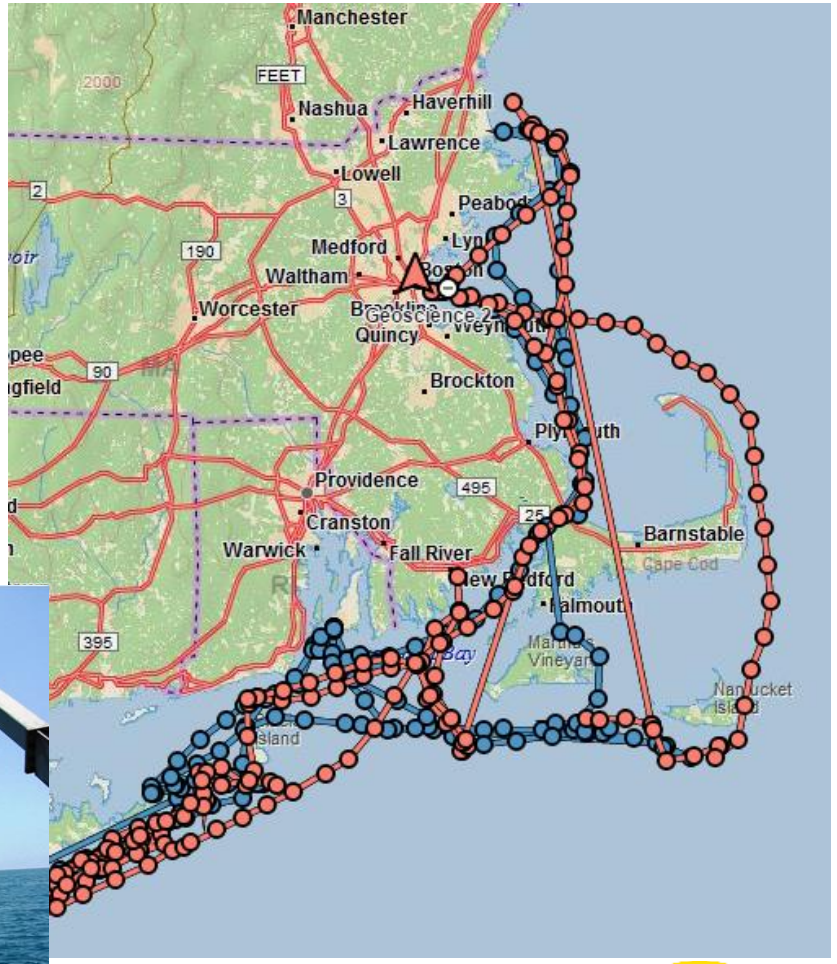
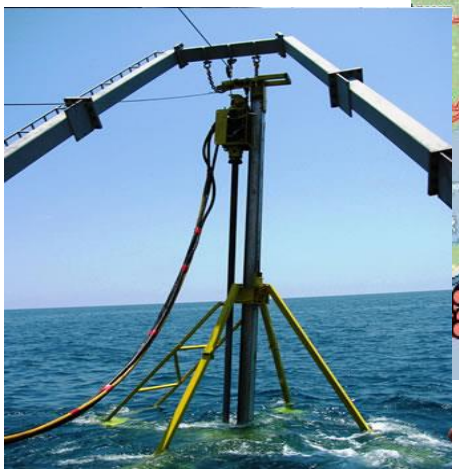
Atlantic Sand Assessment Project

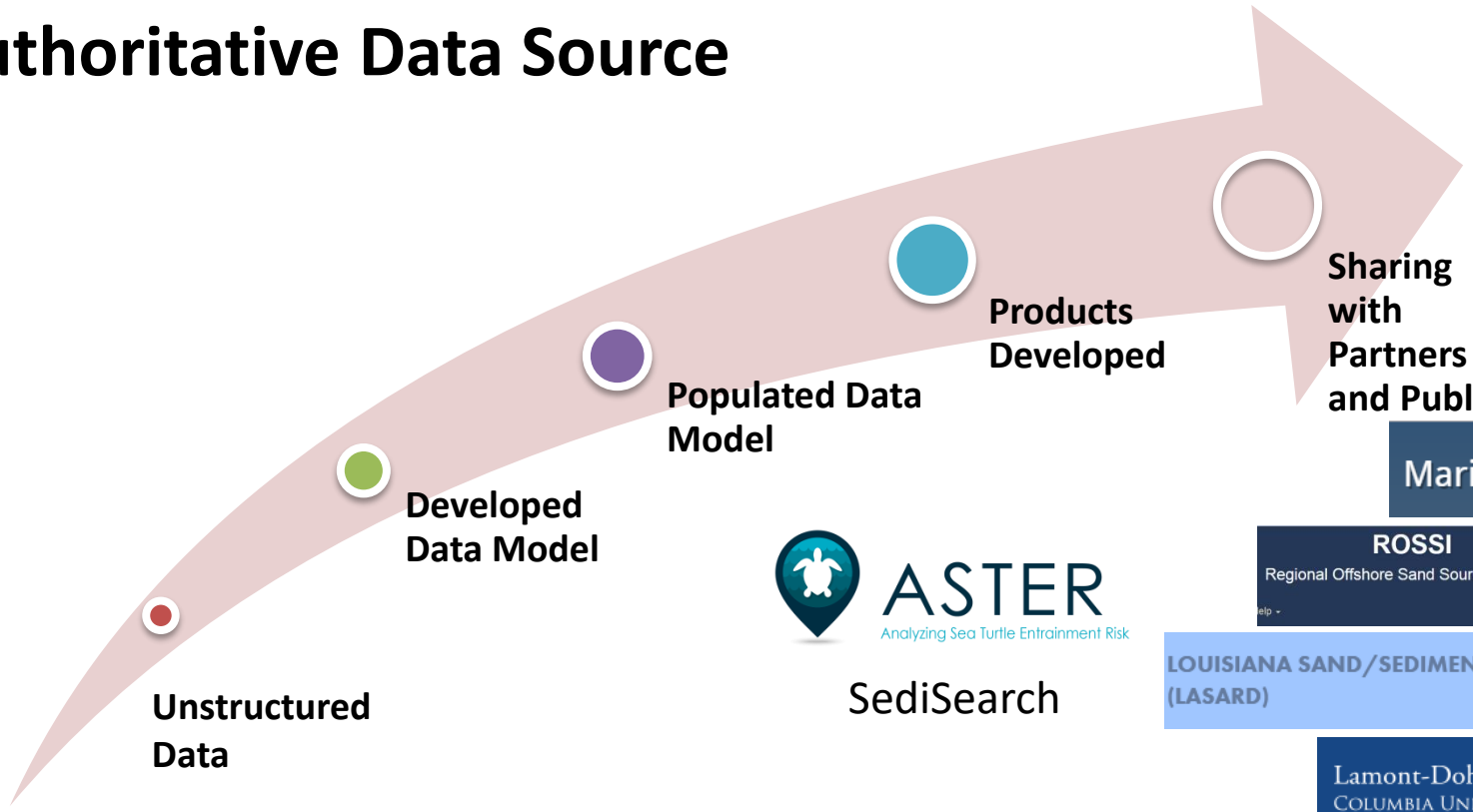
- Geophysical and Geological Surveys
- Data Acquisition Plan in coordination w/ states
- 3– 8 nm offshore
- Miami, Florida to Massachusetts
- Reconnaissance and Site-Specific Level





Marine Minerals Information System (MMIS)

Data Accessibility / Authoritative Data Source



ASTER
Analyzing Sea Turtle Entrainment Risk

SediSearch

NROC
Northeast Regional Ocean Council

MARCO
Mid-Atlantic Regional Council on the Ocean

GSAA COAST & OCEAN PORTAL

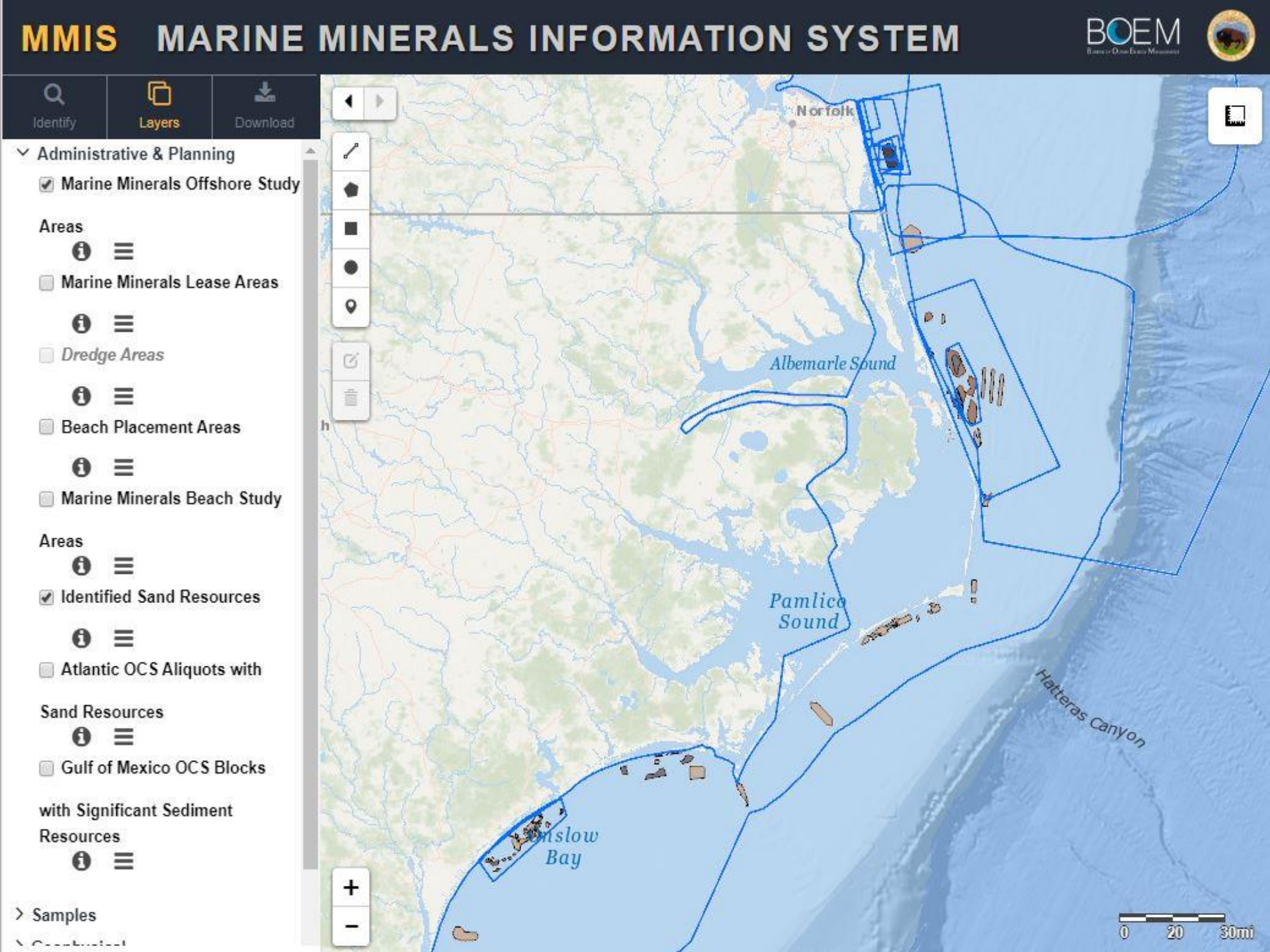
MarineCadastre.gov

ROSSI
Regional Offshore Sand Source Inventory

LOUISIANA SAND/SEDIMENT RESOURCES DATABASE (LASARD)

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

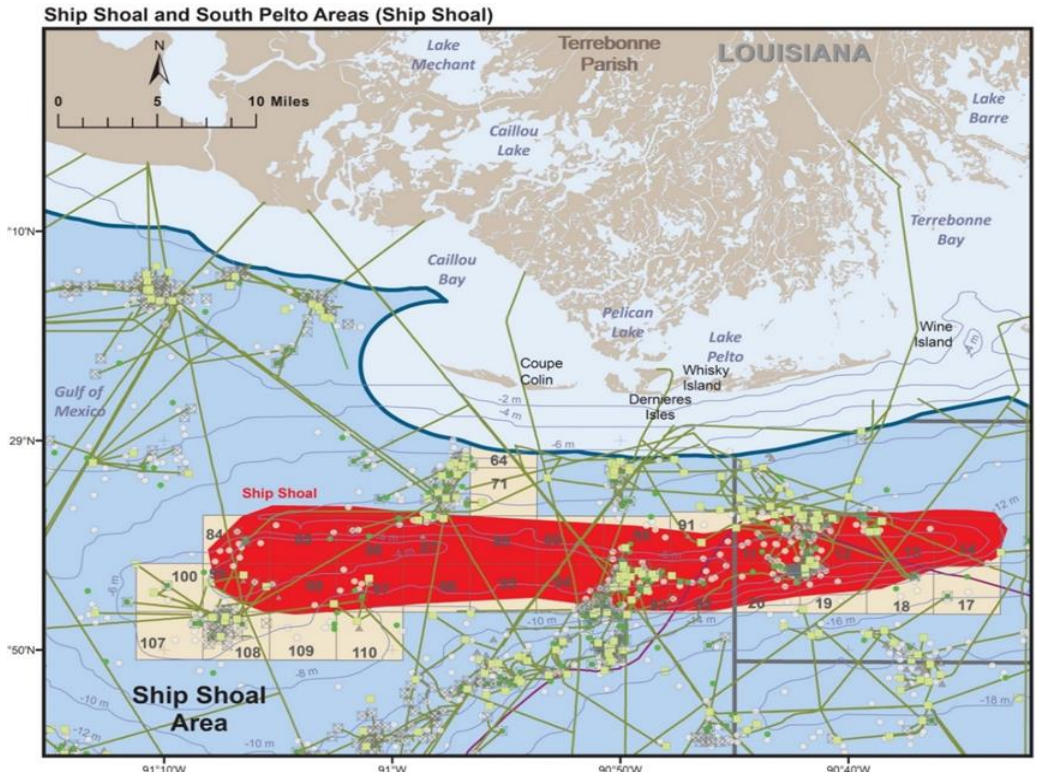
2014 2015 2016 2017 2018


MMIS MARINE MINERALS INFORMATION SYSTEM
BOEM
Identify
Layers
Download
Administrative & Planning
Marine Minerals Offshore Study Areas
Marine Minerals Lease Areas
Dredge Areas
Beach Placement Areas
Marine Minerals Beach Study Areas
Identified Sand Resources
Atlantic OCS Aliquots with Sand Resources
Gulf of Mexico OCS Blocks with Significant Sediment Resources
Samples
Norfolk
Albemarle Sound
Pamlico Sound
Hatteras Canyon
Bay
0 20 30mi

Potential Conflicting Uses

Types:

- Fiber optic and electric transmission cables, pipelines, platforms
- Other material demands
- Fishing
- Heavy mineral mining



Future OCS Sand Needs

- **BOEM supplies the sand for projects**
- **BOEM does not identify needs or plan projects <u>BUT</u> !**
  - Where, how much, and when material is needed are critical for management decisions
  - Planning is challenging when oftentimes need driven by last storm event and projects are funded individually
  - Regional perspective – FL example (Irma)

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Northeast Region : Opportunities, Avenues & Outcomes

1. Increase availability of existing data
2. Develop a Needs Assessment and Sand Inventory for states, region, and Atlantic Coast
3. Improve long-term sustainability and geomorphic function of resources
4. Utilize and develop collaborative web tools for states and Federal government
5. Identify data gaps for future surveys and implement large scale data acquisition and collaboration
6. Identify shared use stakeholders, determine environmental impacts and implement studies.
7. Increase communication between Federal, state agencies and stakeholders

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For More Information