BOEM
Bureau of Ocean Energy Management

Marine Minerals Information System

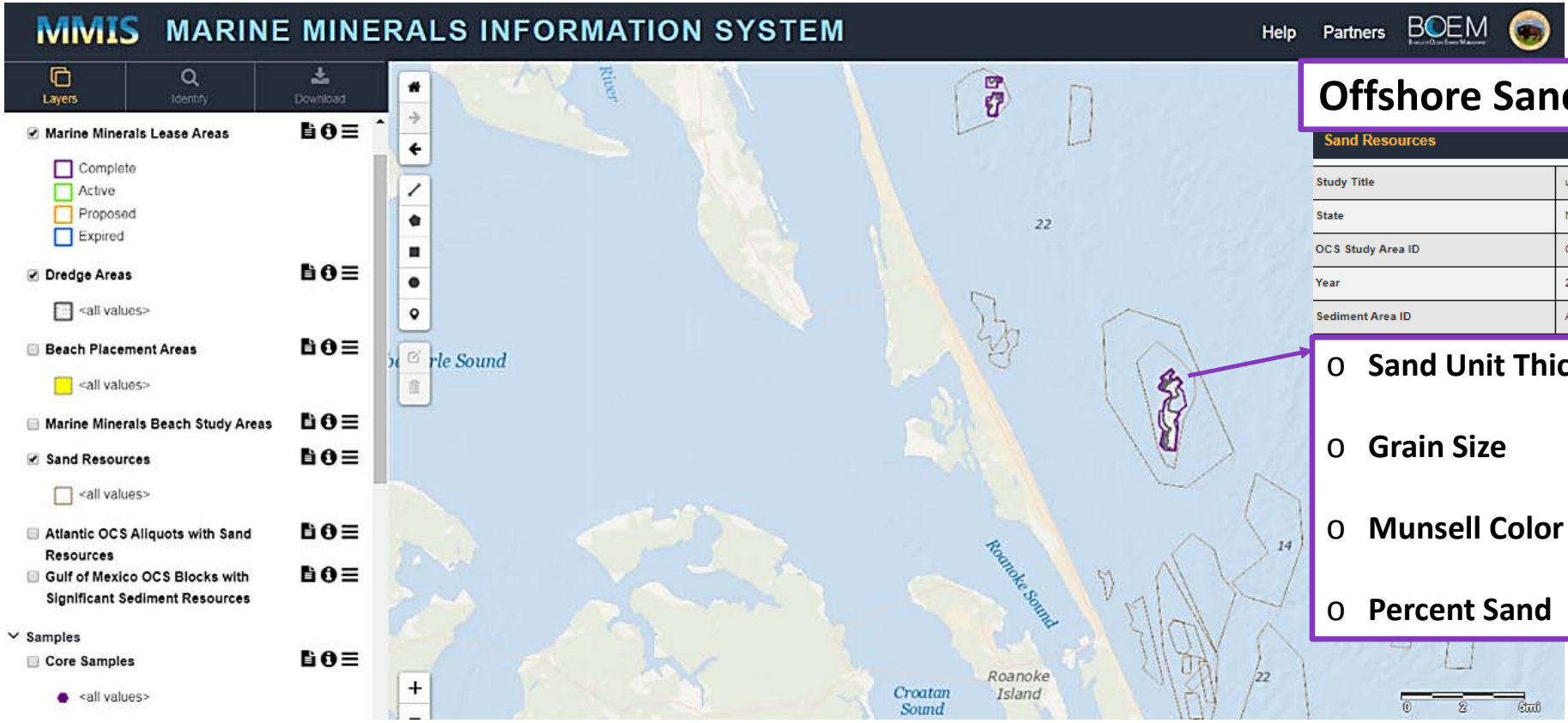
March 13, 2019

Lora Turner | ASBPA Coastal Summit – Investing in Resilient Coasts

Restoring and Protecting Our Nation's Coasts through Stewardship of OCS Sediment

MMIS

Steward of OCS Sediment Resources



Offshore Sand Resources

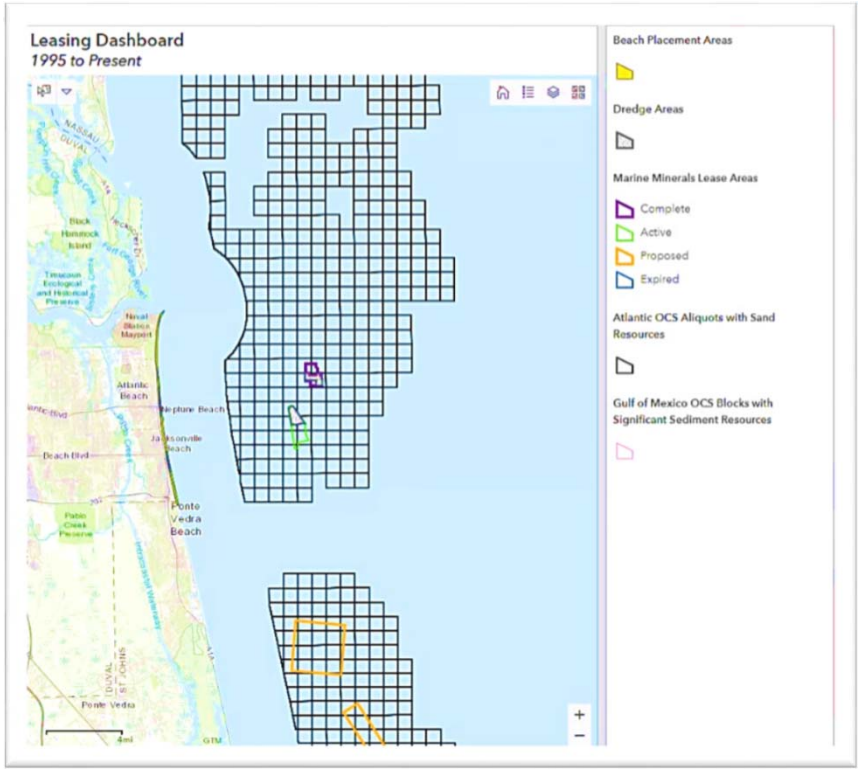
Sand Resources	
Study Title	undefined
State	NC
OCS Study Area ID	OffshoreNC_CoopM14AC00009_CPE2015
Year	2015
Sediment Area ID	Area A

- **Sand Unit Thickness Volume**
- **Grain Size**
- **Munsell Color**
- **Percent Sand**

managing physical sediment resources across xx million acres of offshore

MMIS - Agenda

- What is MMIS? (short demo)
- Marine Minerals Resource Steward
  - Core Samples
  - Sand Resources
- Multi-Ocean use case
- Outreach
- Summary

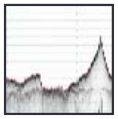


need to know what we have to manage the resource successfully

What is MMIS?

Data Development

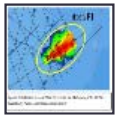
Collaboration with our Partners


Analyzed Geotechnical / Geophysical Source Data

Digital data from physical core samples

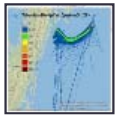
Digital derived data from external drives, CD's, paper sources

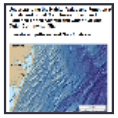
Cooperative Agreements



Leasing data

Dredge data



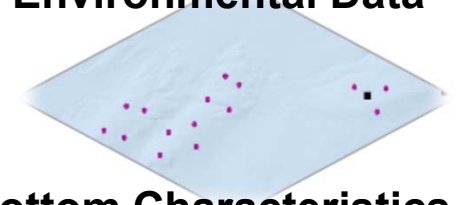

Research / Environmental Studies Data

Enterprise Relational Database

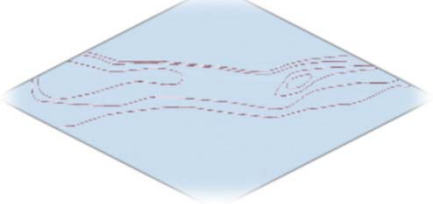
MMIS

Bathymetry & Backscatter

Environmental Data



Bottom Characteristics



Leasing / Planning/Construction

Discover

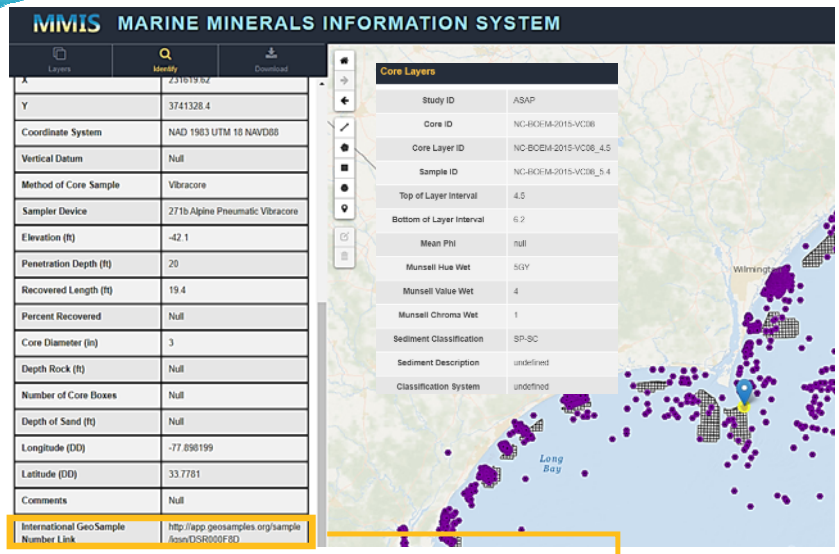
Analysis

Id Gaps

MMIS Demo

https://mmis.doi.gov/boemmmis/

MMIS – Core Sample Data



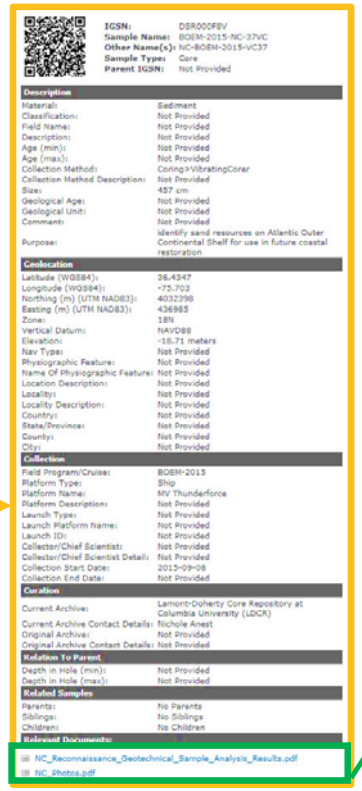
Access SESAR sample profile via IGSN link in *Identify* tool window

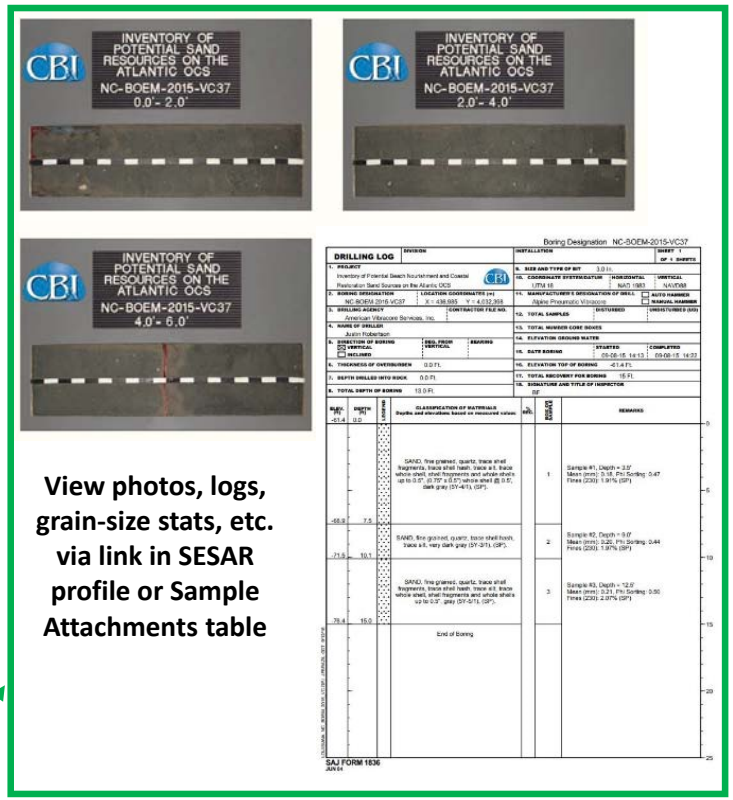
Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

SESAR
SYSTEM FOR EARTH SAMPLE REGISTRATION

http://www.geosamples.org/

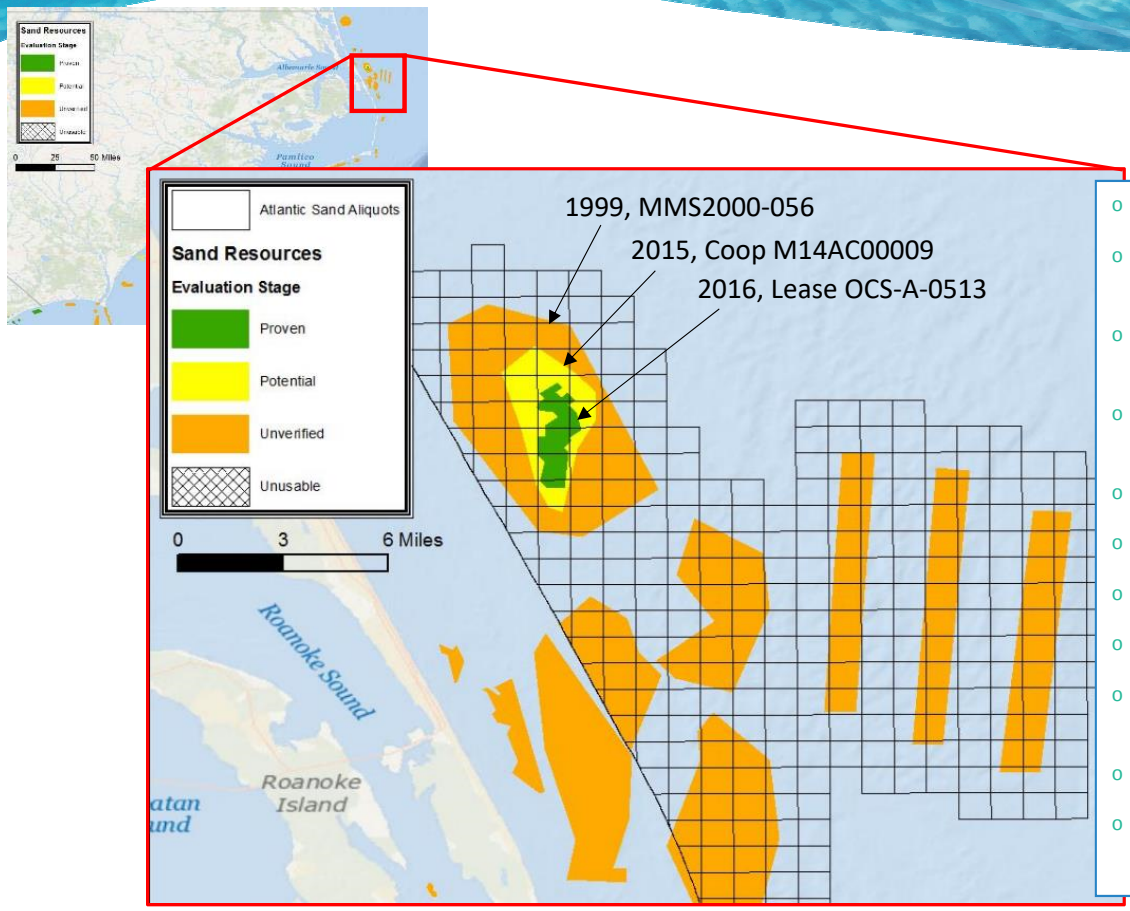
IGSN (international geosample number) SESAR sample profile and links





View photos, logs, grain-size stats, etc. via link in SESAR profile or Sample Attachments table

MMIS – Sand Resources

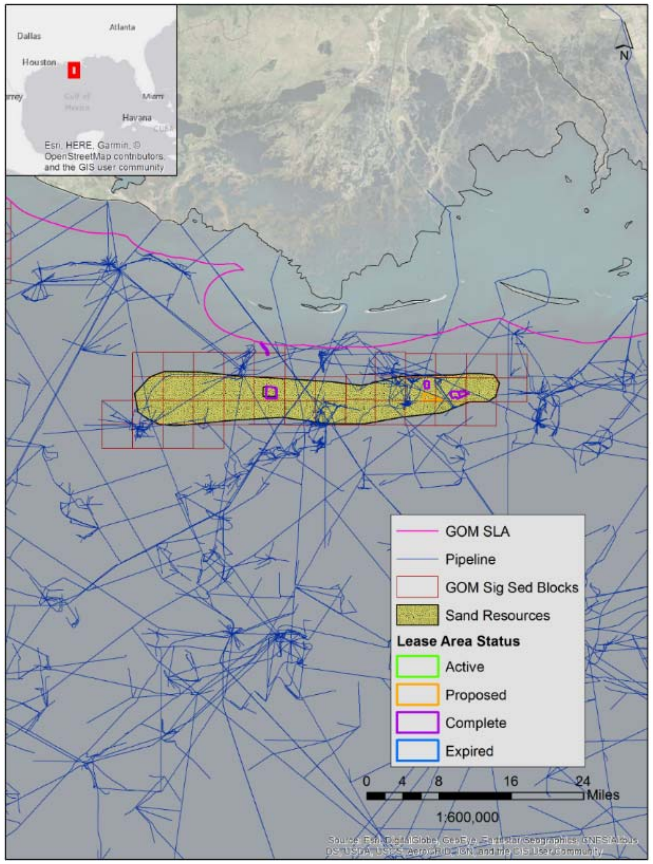


- State
- Year (of delineation)
- Mean grain size (phi)
- % sand, gravel, and fines
- % carbonate
- Resource Area ID
- Study ID
- Evaluation stage
- Sand body thickness
- Area
- Volume

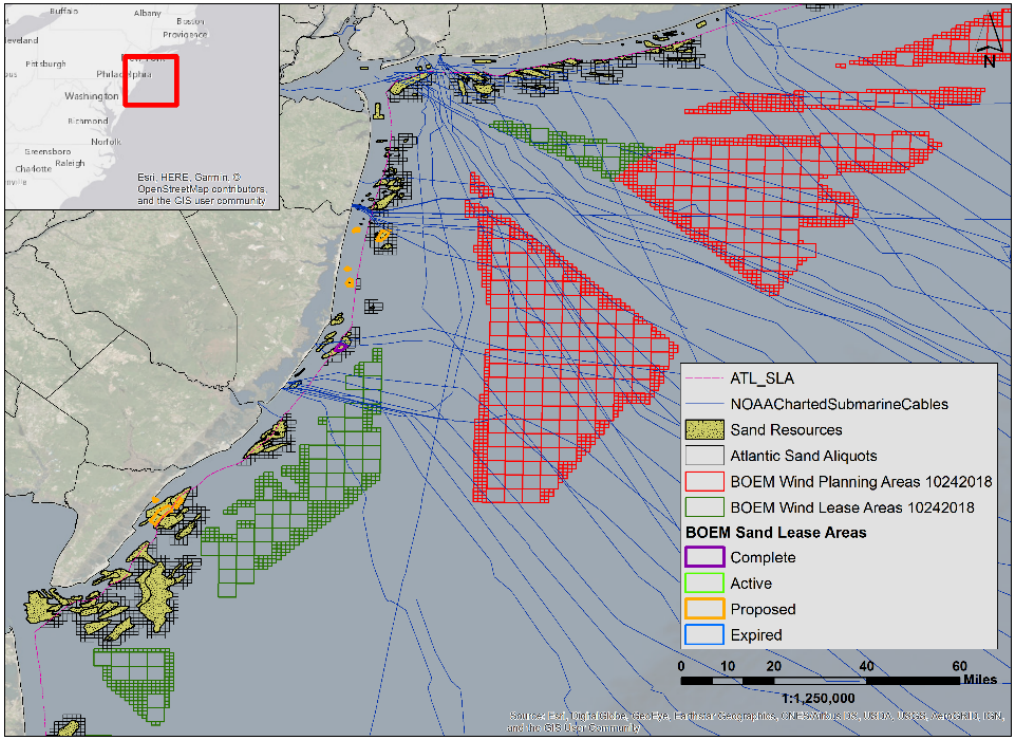
Evaluation Stage	Description
Proven	Resource areas whose thickness and lateral extent have been fully determined through design-level geotechnical and seismic coverage. Generally reserved for (but not limited to) areas that have already been authorized as part of a lease.
Potential	Resource areas whose existence has been verified through sufficient geotechnical and geophysical data. Thickness and/or lateral extent has not been fully determined. All areas have some combination of geotechnical and geophysical datasets (vibracore, bathymetry, sidescan, and seismic).
Unverified	Resource areas hypothesized to exist on the basis of indirect evidence (seismic profiles, bathymetry, or sidescan sonar). Inferred sediment types, unit thicknesses and lateral extents have not been confirmed through direct sampling methods.
Unusable	Resource areas that as a result of additional surveys, prior dredging activity, or infrastructure development are not (or no longer) suitable for future dredging; this designation should not be considered terminal and is subject to change.

MMIS – Managing Multiple Uses of the OCS

Oil & Gas Infrastructure - Gulf of Mexico

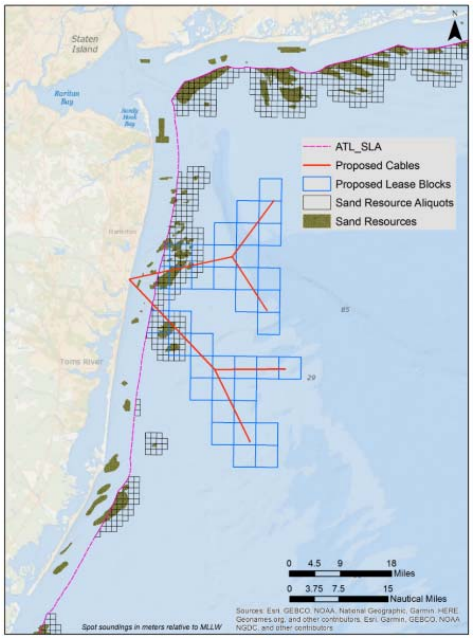


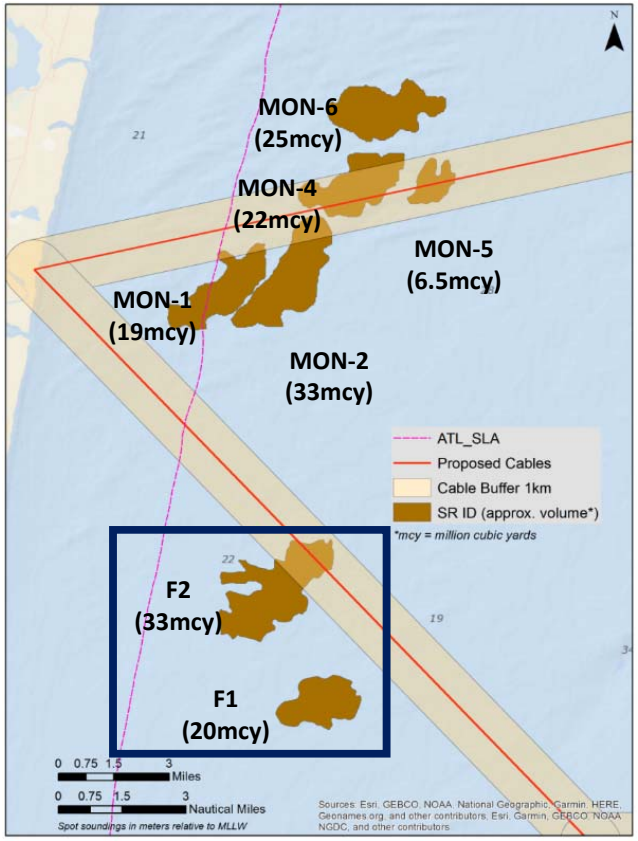
Submarine Cables – North Atlantic



MMIS - Managing Multiple Uses of the OCS

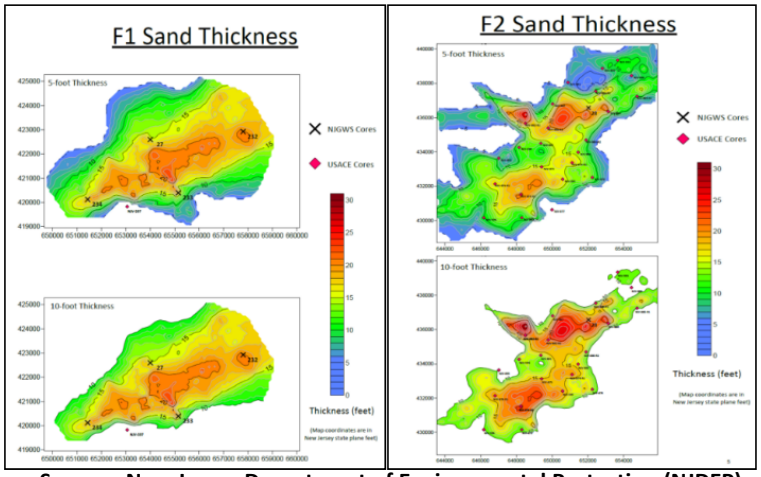
Hypothetical cable route for illustration purposes only





evaluate impacts

to quantify potential losses



Source: New Jersey Department of Environmental Protection (NJDEP) / New Jersey Geological Survey (NJGS)

make recommendations for proposed alternatives

MMIS – Outreach and Coordination

Federal Agencies

- BOEM
- BSEE
- DOI OCIO
- USACE
- USGS
- NOAA

State Entities

- New Jersey Department of Environmental Protection
- New York State Department of State
- Virginia Department of Mines, Minerals and Energy
- Maryland Department of Natural Resources
- Florida Department of Environmental Protection
- South Carolina Department of Natural Resources
- Maine Geological Survey
- Louisiana Geological Survey
- Geological Survey of Alabama

Educational Institutions

- University of Delaware - Delaware Geological Survey
- University of Rhode Island
- University of New Hampshire
- University of Massachusetts Amherst - Massachusetts Geological Survey
- Dept of Geological Sciences, East Carolina University & UNC Coastal Studies Institute
- Skidway Institute of Oceanography, University of Georgia
- Louisiana State University
- The University of Texas
- Texas A&M University

Industry

- Coastal Engineering Consulting Firms
- Geospatial Services Services

Community Associations

- ASBPA
- FSBPA
- NCBIWA

USGS (St Petersburg, Woods Hole, Santa Cruz)

USACE Districts (New York, Charleston, Philadelphia, Norfolk, Wilmington, Jacksonville, Mobile, New Orleans, Galveston)

NOAA (NCEI, Office of Coastal Management)

MMIS - Summary

- **MMIS is a capability to help BOEM and our partners in offshore mineral resource management (National Sand Inventory)**

- **MMIS facilitates proactive planning**

- **MMIS Next Steps**
  - Continue to advance and maintain a repository of applicable offshore marine mineral data of BOEM's investments of historic and current project data

  - Continue to work with our partners to improve meaningful data to support planning and operational needs, data discovery and accessibility, and partner usability

BOEM

Bureau of Ocean Energy Management

BOEM.gov

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MMIS - Alignment with Priorities & Federal Strategies

DOI

- Ensure access to mineral resources
- Manage non-energy mineral development
- Apply science
- Provide dependable and efficient information technology

BOEM

- Sustainable use of OCS Marine Minerals
- Responsible management of these resources based on the best available science
- National Sand Inventory

Marine Minerals Program

- Facilitate effective stewardship
- Inform ocean use planning with mapping and offshore sampling
- Build and maintain partnership programs in caring for and managing physical sediment resources across xx million acres of offshore
- MMIS hardware and software asset authorized and managed
- Partner with USACE in Sand Availability and Needs Determination Efforts

Executive Order 13840 - 'Ocean Policy to Advance the Economic, Security, and Environmental Interests of the United States'