BOEM
Bureau of Ocean Energy Management

Marine Minerals Information System

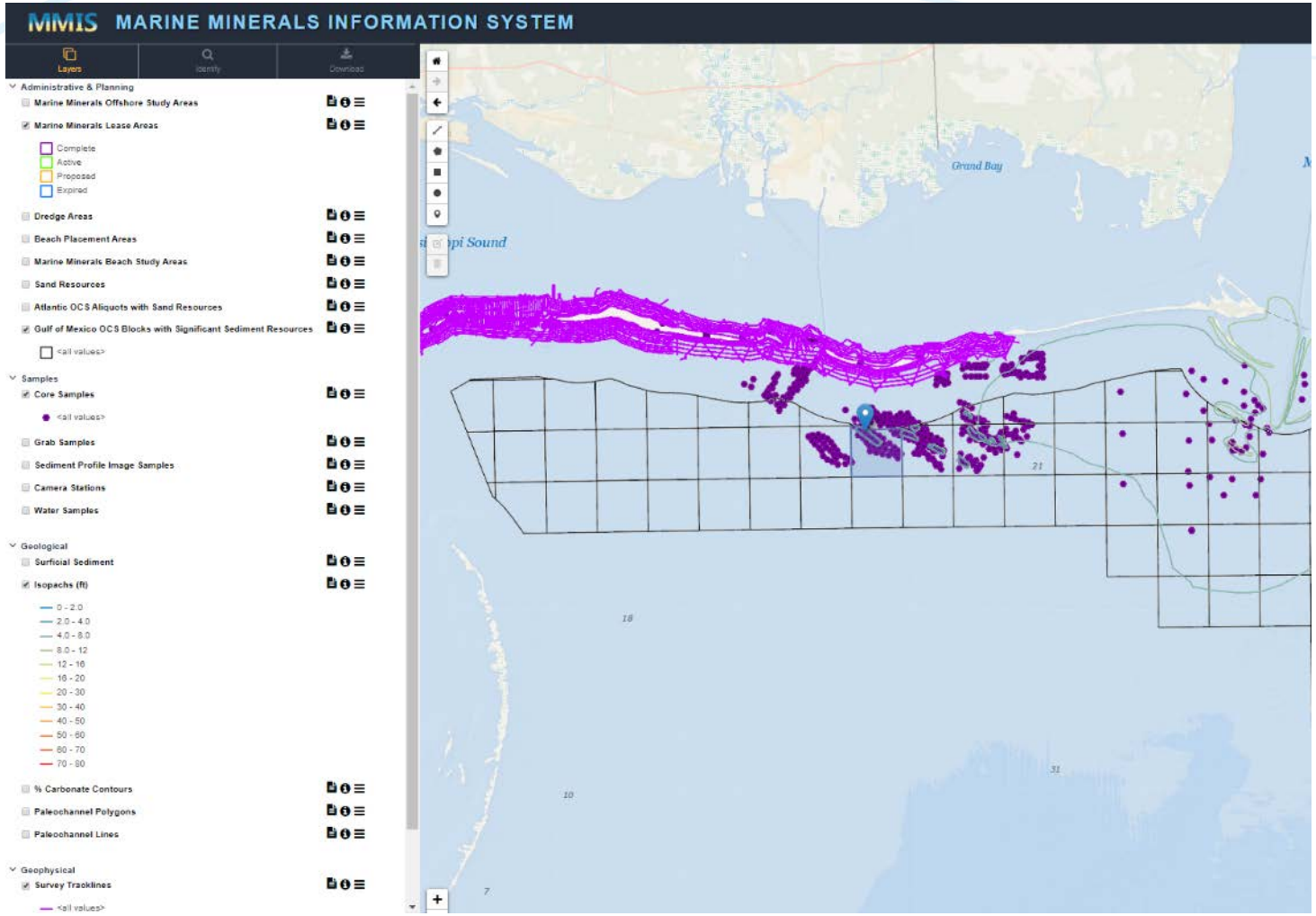
June 12, 2019

Lora Turner | Gulf of Mexico Alliance – All Hands Habitat Team

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

MMIS

Steward of OCS Sediment Resources



Layers	Identify	Download

State	MS
Lease Number	OCS-G-35929
Project ID	MsCIP 2017
Project Count	1
Total Sand Allocated	19600000
Fiscal Year	2017
Lease Initiation Date	12/1/2016
Lease Expiration Date	12/1/2021
Original Volume Allocated	19600000
Borrow Area ID	PBP West 1, 3-5, PBP East 1-5
Amendment Date	Null
Amendment Number	Null
Additional Sand Allocated	Null
Lease Status	Active

Open Related Data

Core Samples

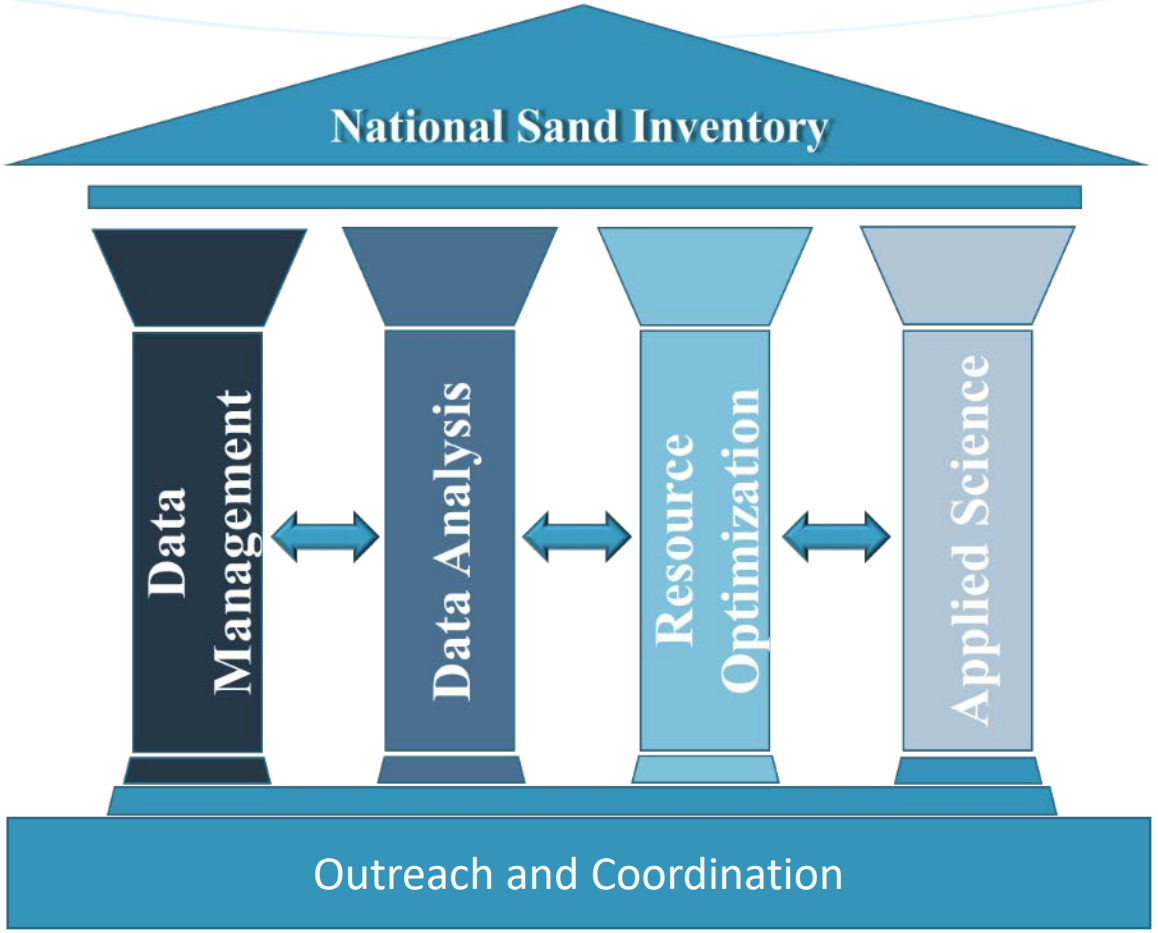
Study Title	Mississippi Coastal Improvement Program (MsCIP): Mississippi Sound And The Gulf Of Mexico Benthic Macroinfauna Community Assessment
Core ID	BI-PBS-94-12
State	MS
OCS Study Area ID	CoastalMS_MsCIP
Agency ID	US Army Corps of Engineers, State of Mississippi
Contact ID	American Vibracore Systems, Inc.
Contact Name	Mike FitzHarris, Geologist
Sample Date	11/26/2012

- 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?**
- **MMIS**
  - Viewer
  - Data
  - Sediment Resource Evaluation
  - Managing Multiple Uses of the OCS
  - Decision Support Tools
- **Outreach and Coordination**
- **Opportunities**
- **Summary**

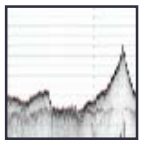


need to know what we have to manage the resource successfully

What is MMIS?

Data Development

Collaboration with our Partners

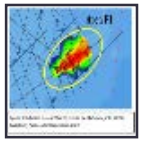


Analyzed Geotechnical / Geophysical Source Data

Digital data from physical core samples

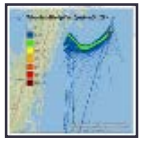
Digital derived data from external drives, CD's, paper sources

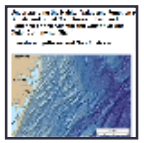
Cooperative Agreements



Leasing data

Dredge data





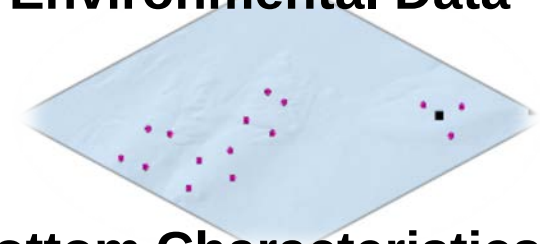
Research / Environmental Studies Data

Enterprise Relational Database

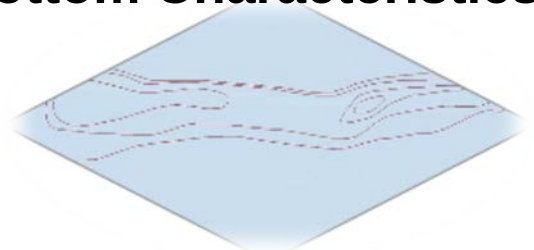
M M I S

Bathymetry & Backscatter

Environmental Data



Bottom Characteristics



Leasing / Planning/Construction

Discover

Analysis

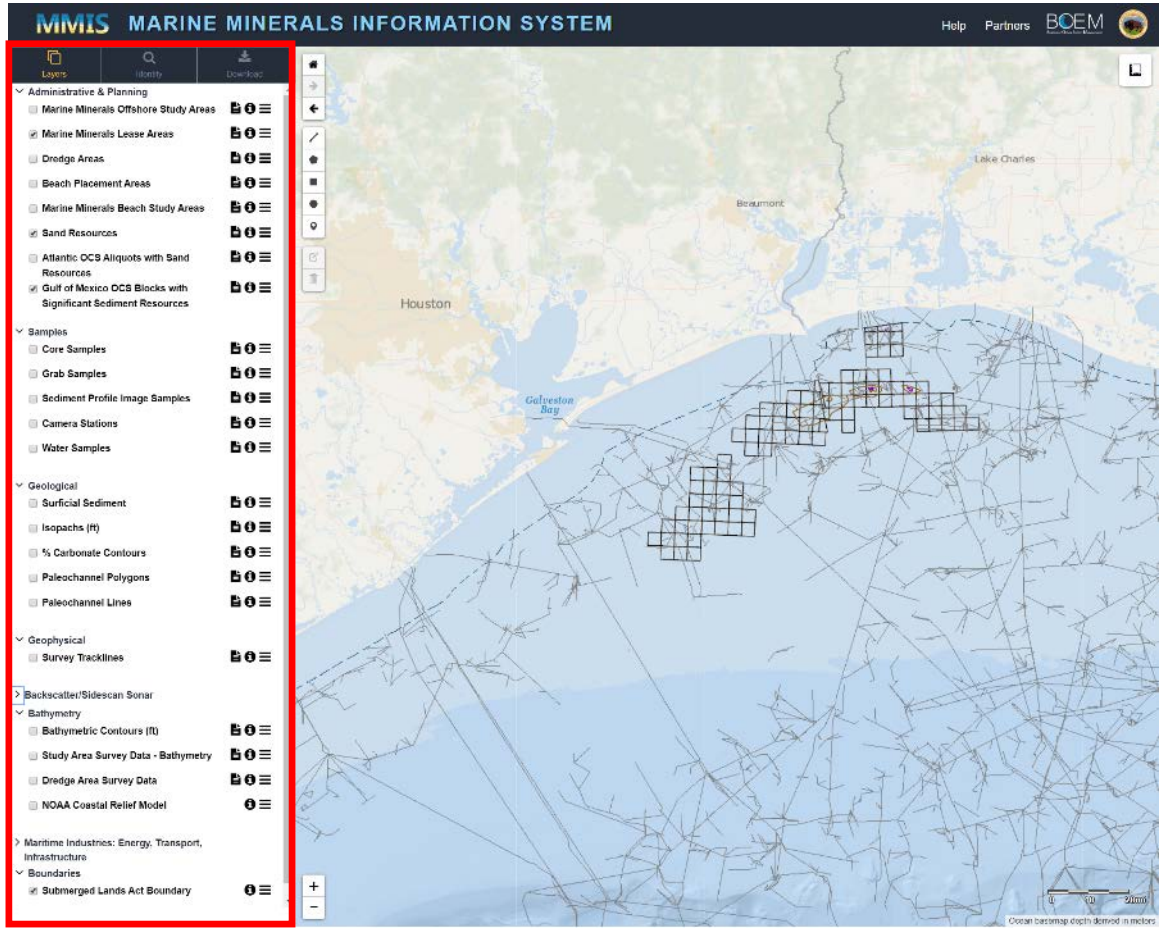
Id Gaps

MMIS

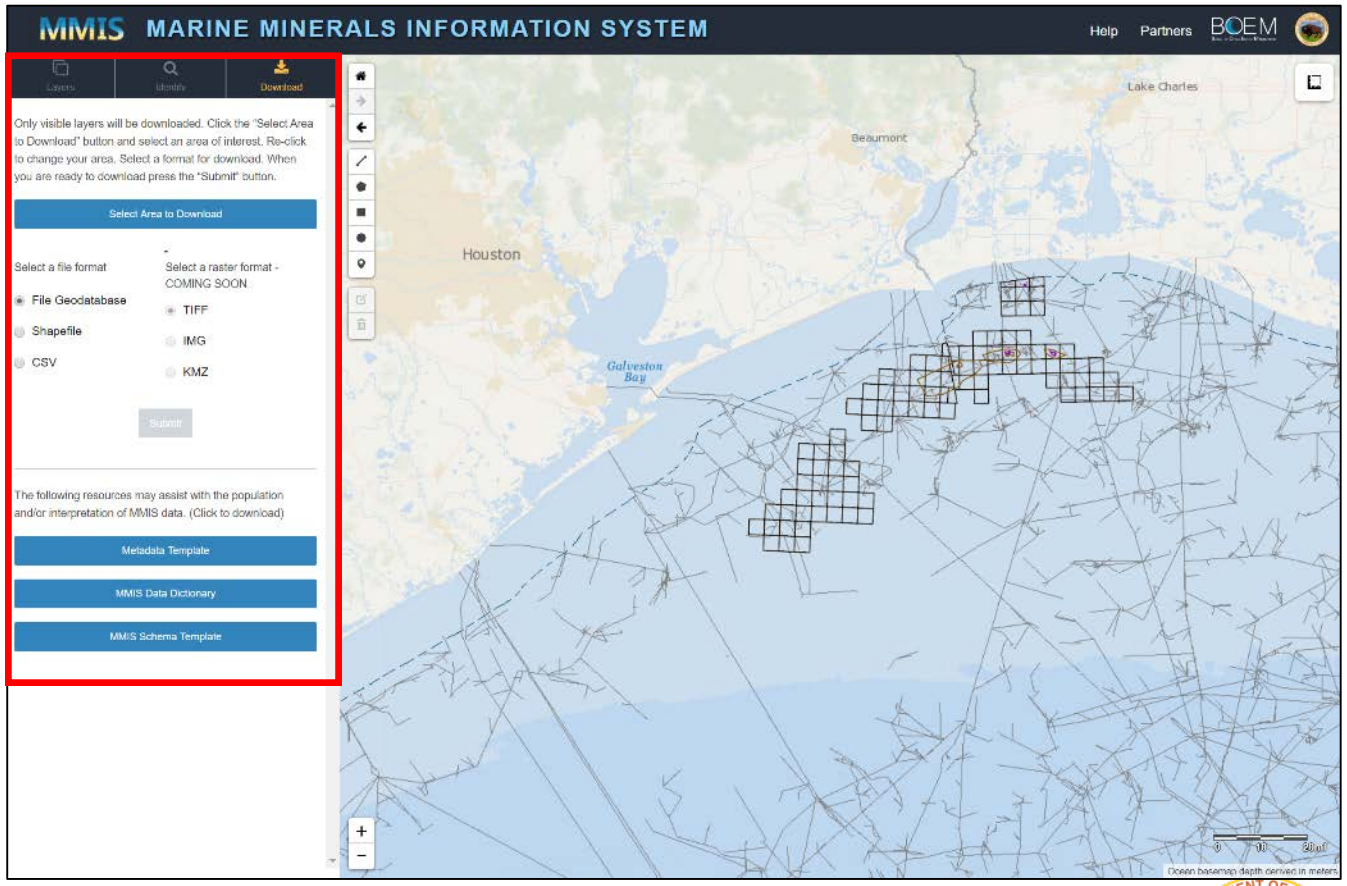
Web Link – https://mmis.doi.gov/boemmmis

Viewer

Viewer Layers

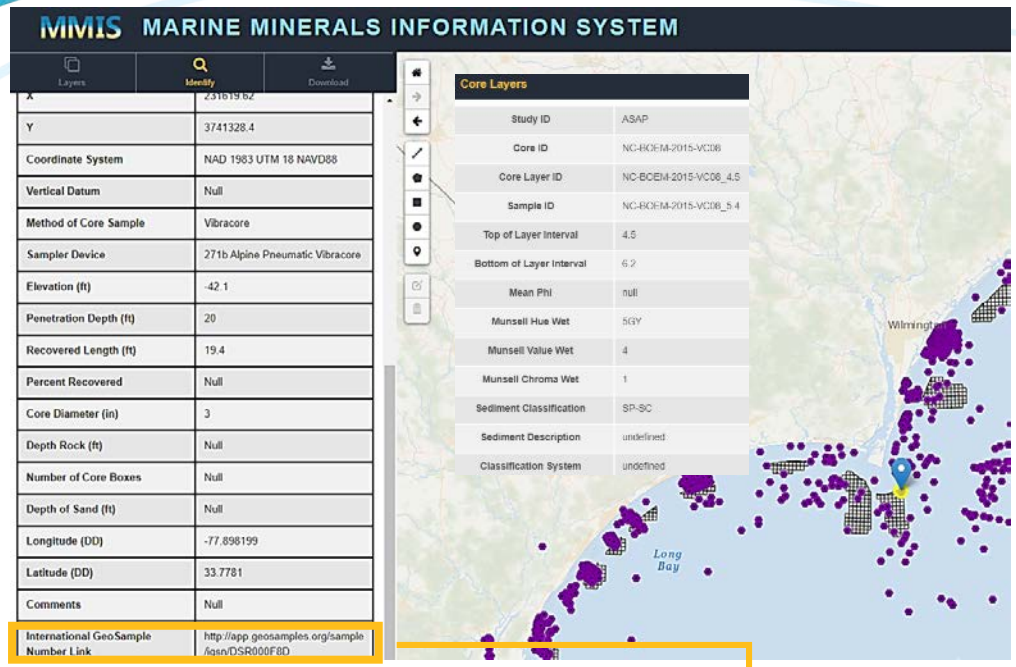


Viewer Downloads



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

IGSN: DSR000F8V
Sample Name: BOEM-2015-NC-37VC
Other Name(s): NC-BOEM-2015-VC37
Sample Type: Core
Parent IGSN: Not Provided

Description

Material:	Sediment
Classification:	Not Provided
Field Name:	Not Provided
Description:	Not Provided
Age (min):	Not Provided
Age (max):	Not Provided
Collection Method:	Coring>VibratingCorer
Collection Method Description:	Not Provided
Size:	457 cm
Geological Age:	Not Provided
Geological Unit:	Not Provided
Comment:	Not Provided
Purpose:	identify sand resources on Atlantic Outer Continental Shelf for use in future coastal restoration

Geolocation

Latitude (WGS84):	36.4347
Longitude (WGS84):	-75.703
Northing (m) (UTM NAD83):	4032398
Easting (m) (UTM NAD83):	436985
Zone:	18N
Vertical Datum:	NAVD88
Elevation:	-18.71 meters
Nav Type:	Not Provided
Physiographic Feature:	Not Provided
Name Of Physiographic Feature:	Not Provided
Location Description:	Not Provided
Locality:	Not Provided
Locality Description:	Not Provided
Country:	Not Provided
State/Province:	Not Provided
County:	Not Provided
City:	Not Provided

Collection

Field Program/Cruise:	BOEM-2015
Platform Type:	Ship
Platform Name:	MV Thunderforce
Platform Description:	Not Provided
Launch Type:	Not Provided
Launch Platform Name:	Not Provided
Launch ID:	Not Provided
Collector/Chief Scientist:	Not Provided
Collector/Chief Scientist Detail:	Not Provided
Collection Start Date:	2015-09-08
Collection End Date:	Not Provided

Curation

Current Archive:	Lamont-Doherty Core Repository at Columbia University (LDCR)
Current Archive Contact Details:	Nichole Anest
Original Archive:	Not Provided
Original Archive Contact Details:	Not Provided

Relation To Parent

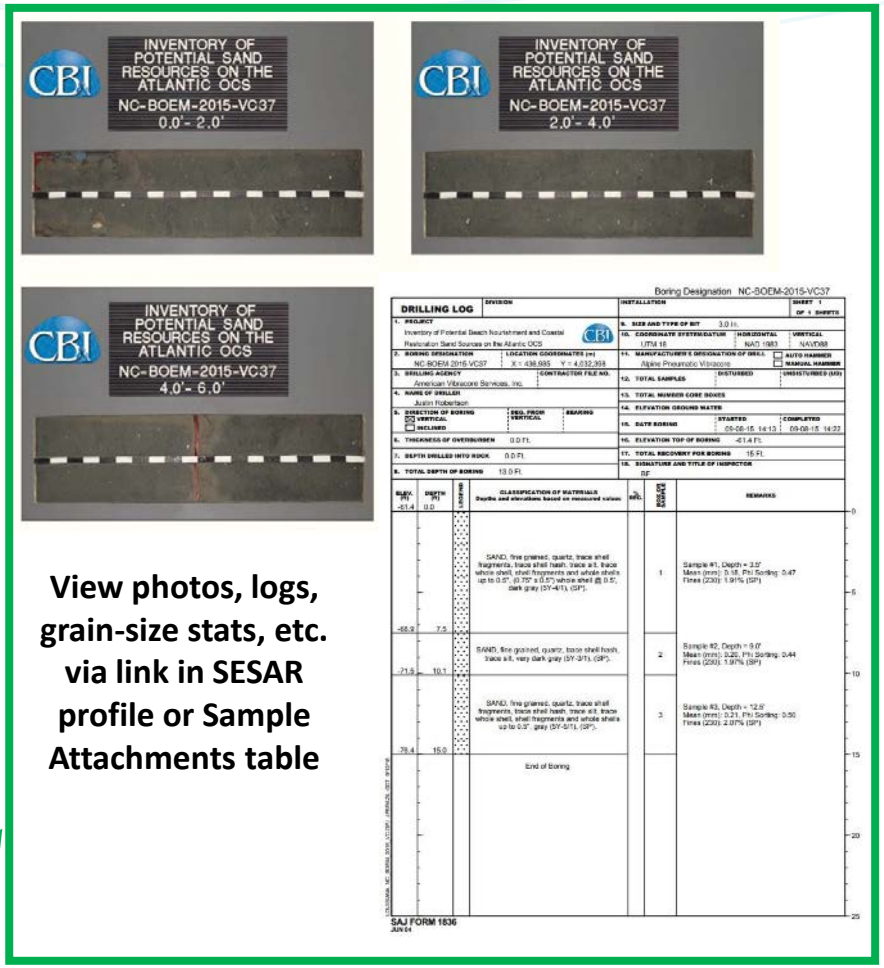
Depth in Hole (min):	Not Provided
Depth in Hole (max):	Not Provided

Related Samples

Parents:	No Parents
Siblings:	No Siblings
Children:	No Children

Relevant Documents:

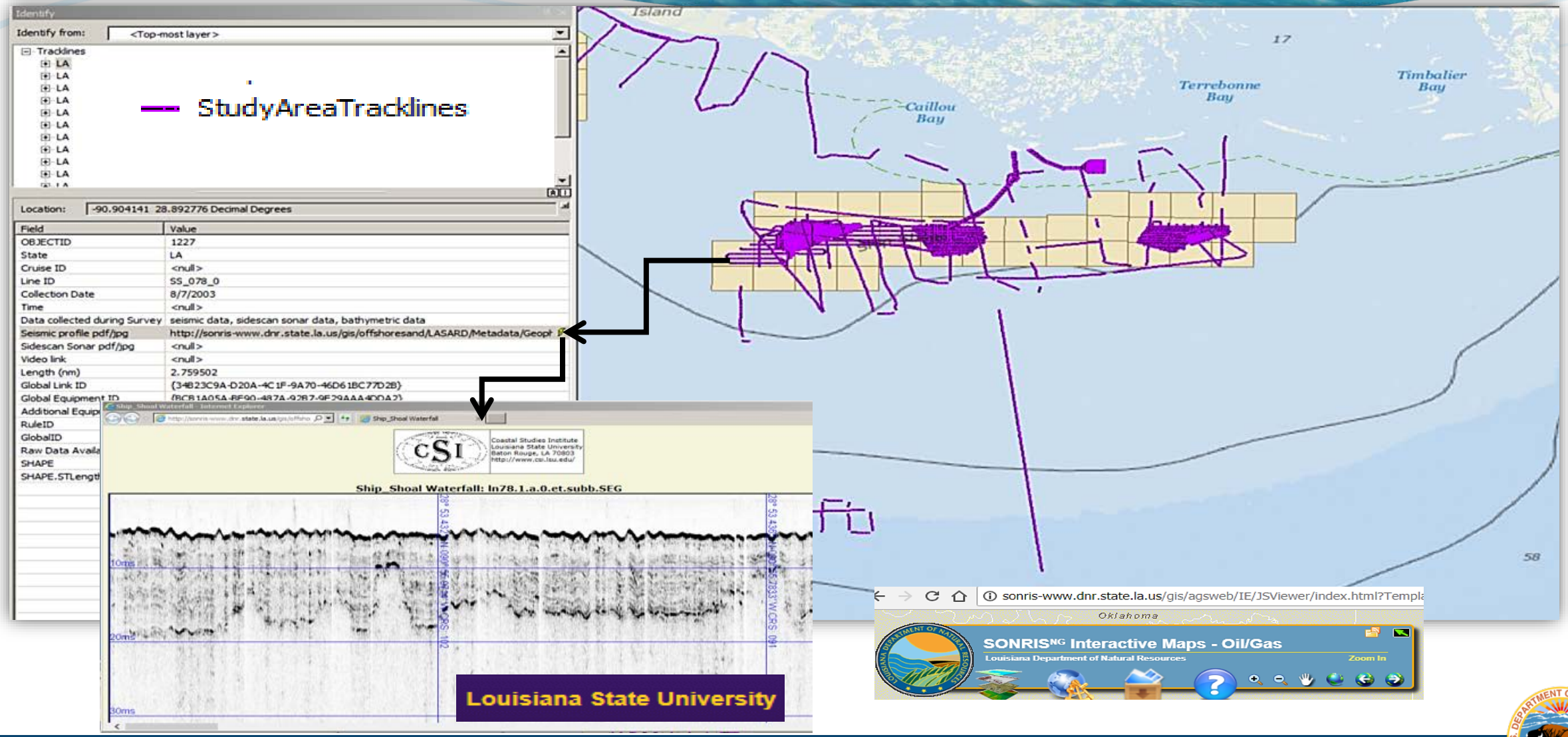
NC_Reconnaissance_Geotechnical_Sample_Analysis_Results.pdf
NC_Photos.pdf



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

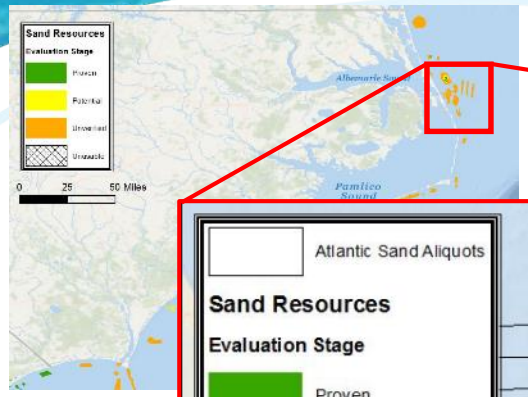
MMIS

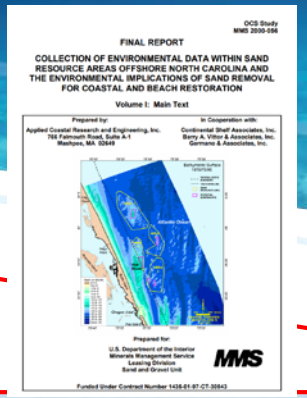
Partner Seismic Data



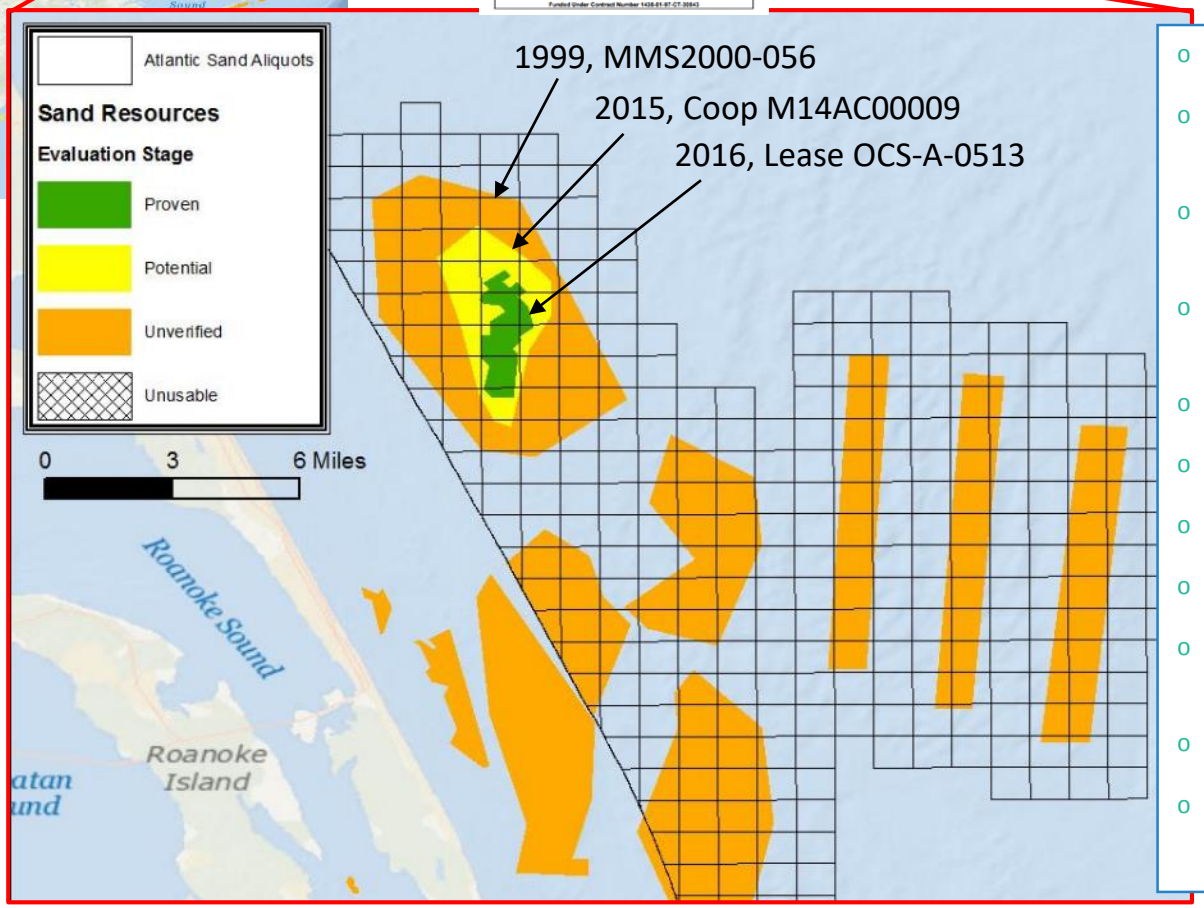
MMIS

Sediment Resource Evaluation





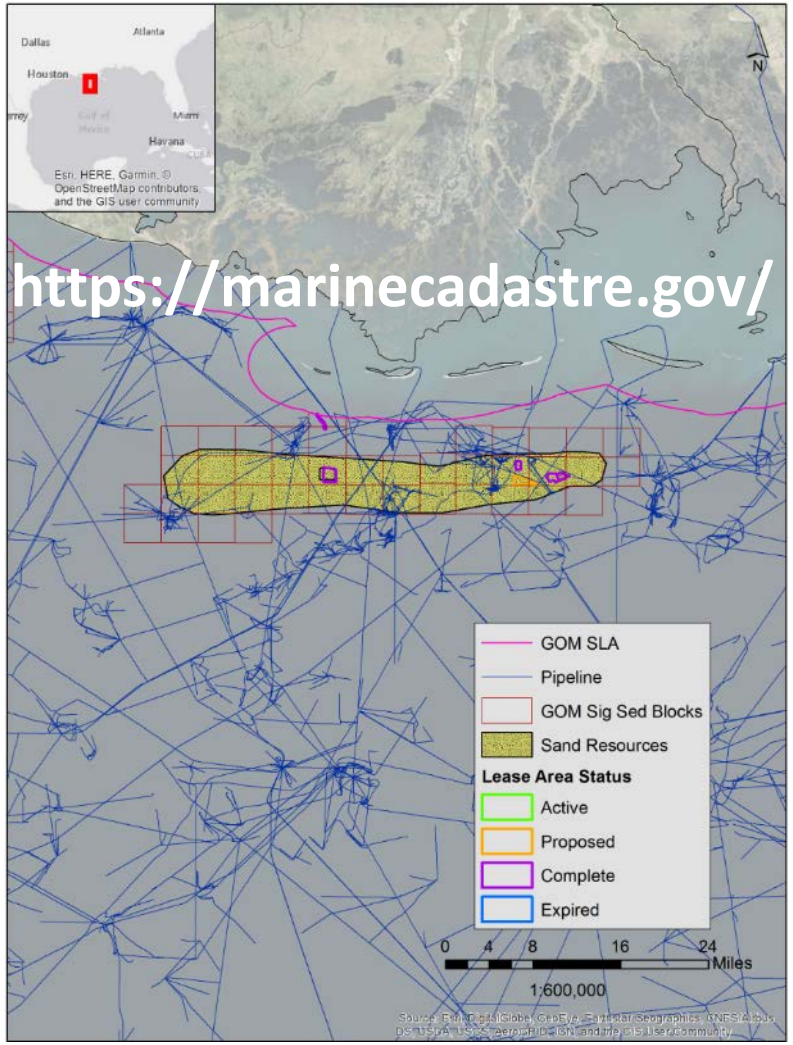
NC - BOEM Cooperative Agreement



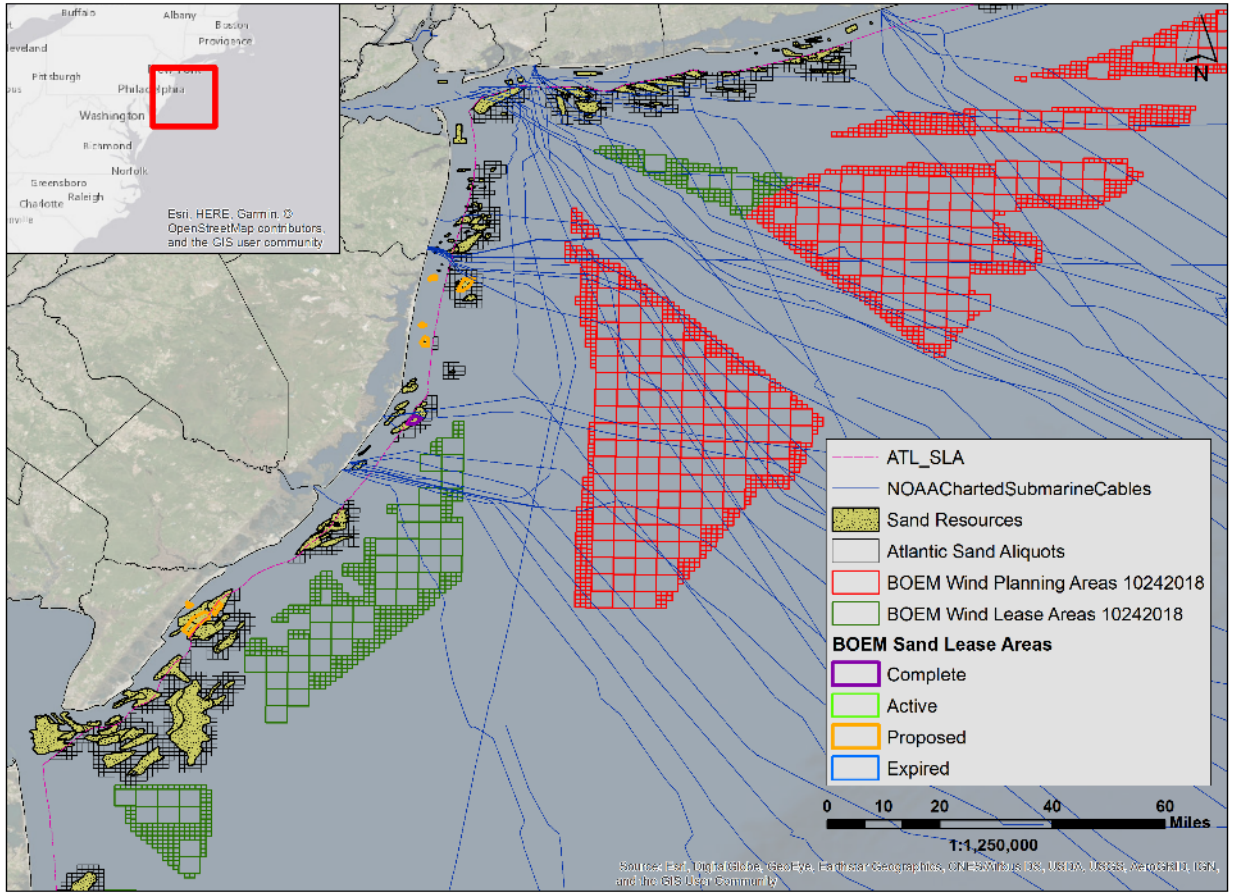
- State
- Year (of delineation)
- Mean grain size (phi)
- % sand, gravel, and fines
- % carbonate
- Resource Area ID
- Study ID
- Evaluation stage
- Sand body thickness
- Area
- Volume

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.

Oil & Gas Infrastructure - Gulf of Mexico

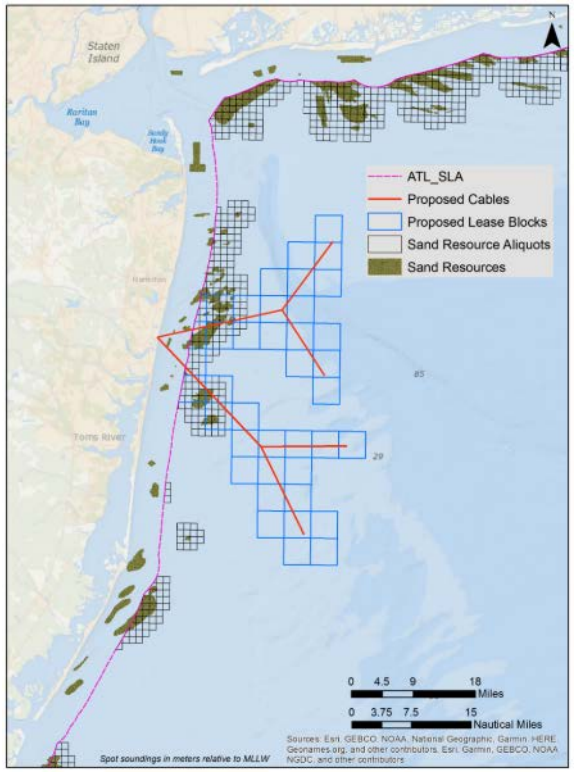


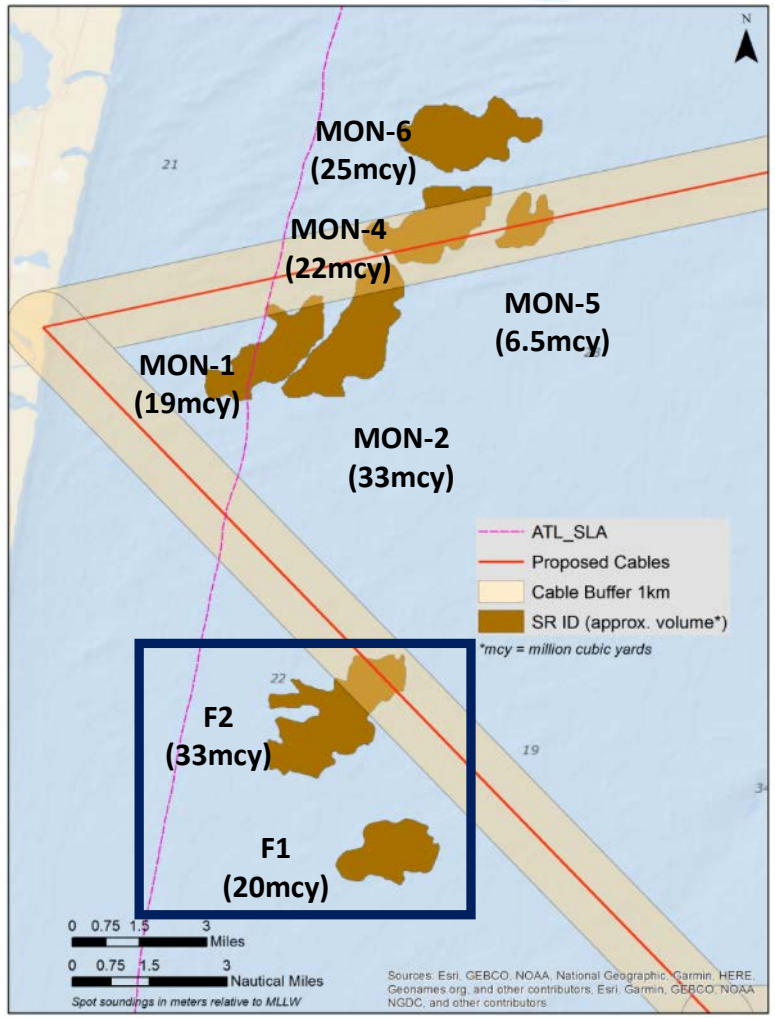
Submarine Cables – North Atlantic



MMIS

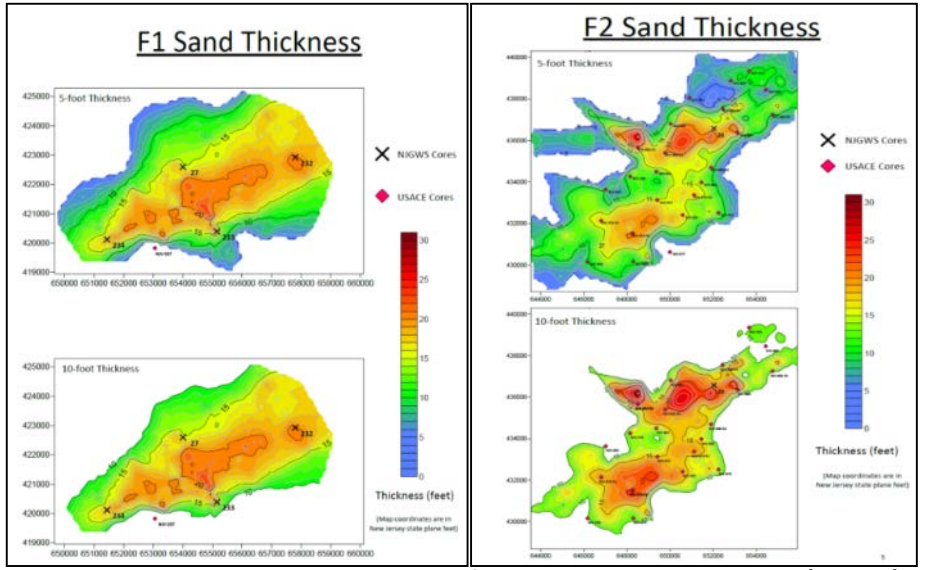
Hypothetical cable route for illustration purposes only





evaluate impacts

to quantify potential losses



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

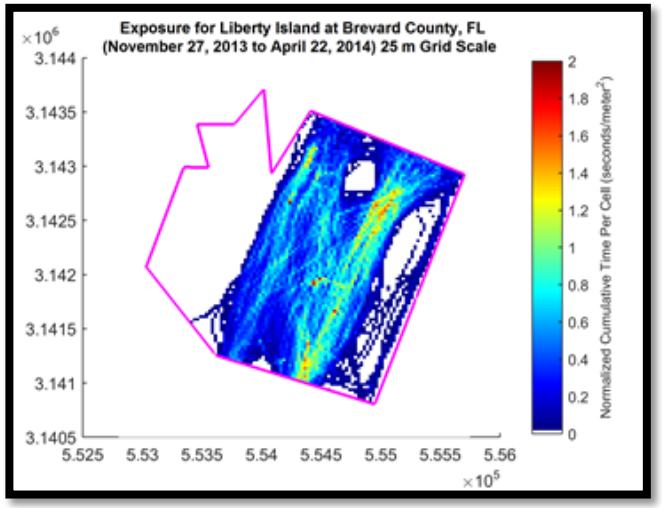
make recommendations for proposed alternatives

MMIS

Decision Support Tools

MMIS MARINE MINERALS INFORMATION SYSTEM

Dredge Intensity Products into MMIS

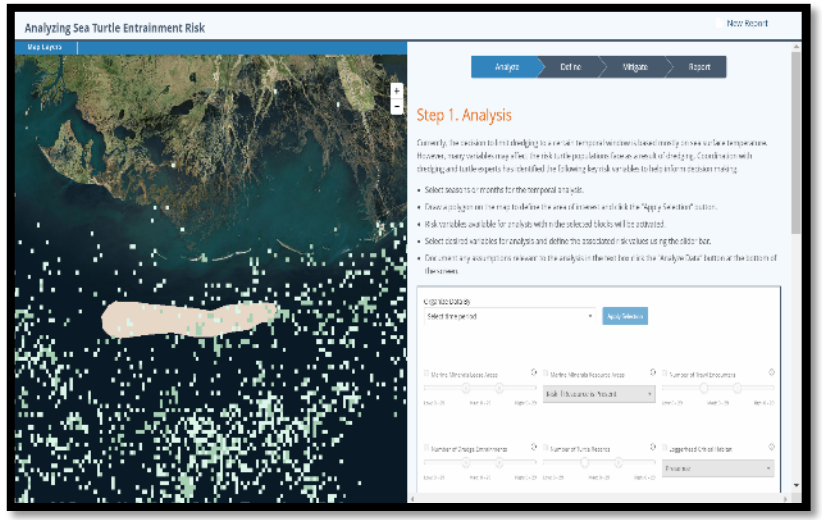


MMIS Datasets into Decision Support Tools

ASTER
Analyzing Sea Turtle Entrainment Risk

Marine Geospatial Ecology Lab Duke University

quantum SPATIAL



EFH Tool

BOEM Bureau of Ocean Energy Management

National Sand Inventory – Applied Science

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
- Gulf of Mexico Alliance

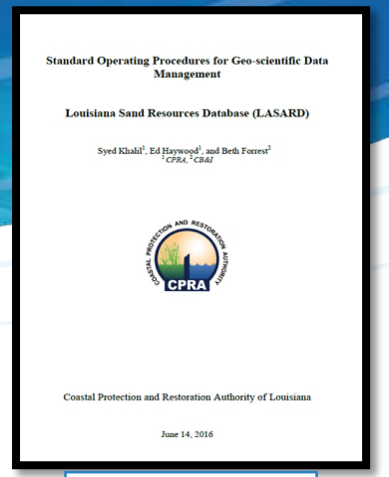
USGS (St Petersburg, Woods Hole, Santa Cruz)

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

NOAA (NCEI, Office of Coastal Management, National Centers for Coastal Ocean Sciences)

Opportunities

SONRIS


Standard Operating Procedures for Geo-scientific Data Management

Louisiana Sand Resources Database (LASARD)

Syed Khalil[1], Ed Haywood[1], and Beth Forrest[2]
[1]CPRA, [2]CB&I

CPRA

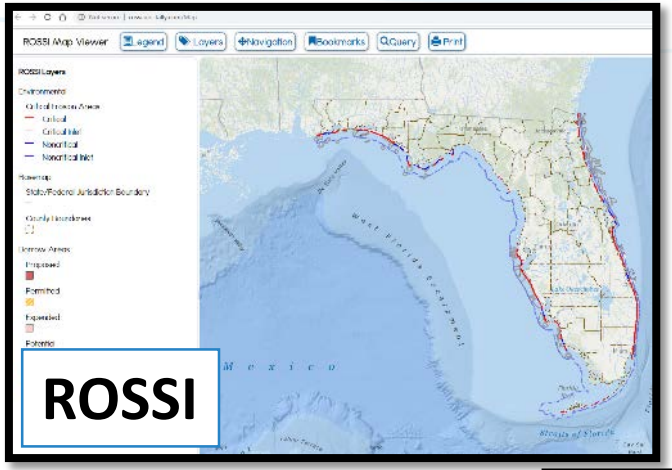
Coastal Protection and Restoration Authority of Louisiana

June 14, 2016

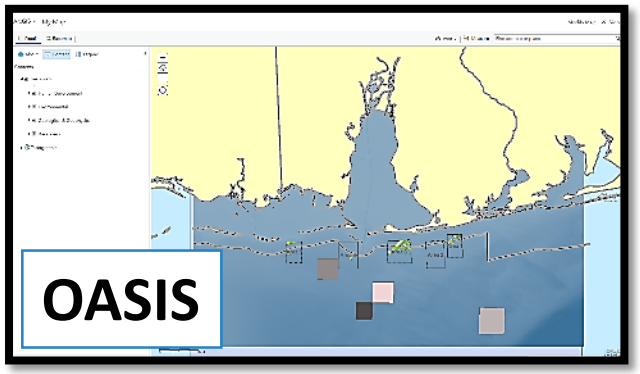
LASARD

System Interoperability Opportunities

- **Louisiana Department of Natural Resources**
  - Strategic Online Natural Resources System (SONRIS)
- **Coastal Protection and Restoration Authority**
  - Louisiana Sand Resource Database (LASARD)
- **Florida Department of Environmental Protection**
  - Regional Offshore Sand Inventory (ROSSI)
- **Texas General Land Office / U.S. Fish and Wildlife Service**
  - TxSed Mapping Viewer
- **Geological Survey of Alabama**
  - Offshore Alabama Sand Information System (OASIS)
- **USACE**
  - Sediment Analysis & Geo-App (SAGA)



ROSSI



OASIS

TxSed

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

Thank you!

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Lora Turner | marineminerals@boem.gov | https://mmis.doi.gov/boemmmis/