

# ***Central Atlantic Sand Management Working Group***

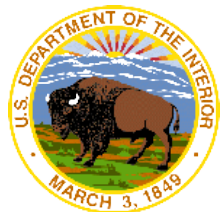
***Wilmington, North Carolina***

***March 31, 2014***

***1 to 4 p.m.***

# Meeting Objectives

- Exchange information and updates on progress since last Working Group meeting
- Discuss funding opportunities, research efforts, coastal projects, and challenges
- Promote communication between BOEM, localities, states, other Federal agencies, educators, specialists, regulators, policy makers, and end-users

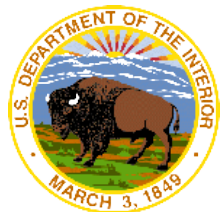


Time	Discussion Topic
1:00	Welcome and Introductions
1:15	BOEM Marine Minerals Program – Overview, History, and Future
1:45	Decision-Making Science: Studies/Research
2:15	OCS Opportunities and Investments: Hurricane Sandy
2:45	Break
3:00	Central Atlantic Projects
3:50	Wrap Up and Next Steps
4:00	Adjourn

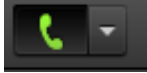

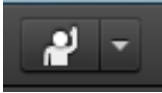



# Ground Rules

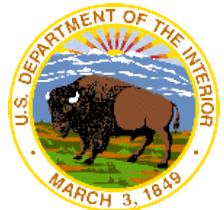
- “Honor” the agenda
- Participate actively and respectfully
- Focus comments and speak concisely
- Speak in order, using tent cards; facilitator will mind the queue
- Speak clearly into the microphone for those joining by phone/webinar
- Limit side conversations or take them outside
- Cell phones off/silent



# Ground Rules for Webinar Participants

- Please select \*6 or the mute button to mute your audio to the phone  
- **Please do not put the line on hold!**
- Click the “raise hand” icon in the top of the webinar window to enter the discussion queue; click again to lower your hand after speaking 
- You can also share questions using the chat pod in the bottom left of the webinar window
- Click the “full screen” button – top right of the presentation pod – to make the presentation bigger 

*This call will be recorded for those unable to attend.*



# Introductions





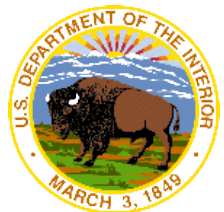
# BOEM Marine Minerals Program

*Overview, History, and Future*

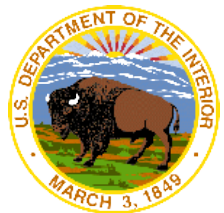
Jeff Reidenauer

Chief, Marine Minerals Branch

Marine Minerals Program



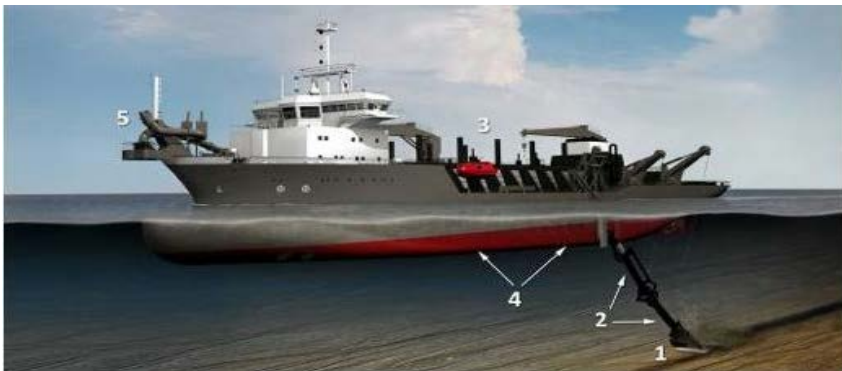
- **Marine Minerals Program (MMP)**
- Renewable Energy Program (OREP)
- Oil and Gas Program (O&G)



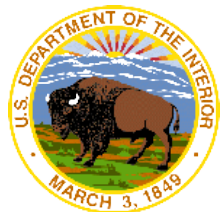


Manage development of Outer Continental Shelf (OCS) marine mineral resources in an environmentally and economically responsible way.

- Outer Continental Lands Act of 1953 (OCSLA)
- OCS extends from 3 nautical miles from shore (or 3 leagues offshore Texas and west coast of Florida)

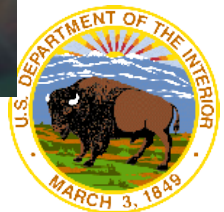


- Negotiate Leases/Agreements for use of OCS sand resources
- Develop policy for development of OCS marine minerals
- Identify OCS sand resources suitable for beach nourishment and coastal restoration projects
- Develop and implement studies to improve decision-making

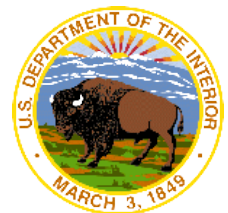




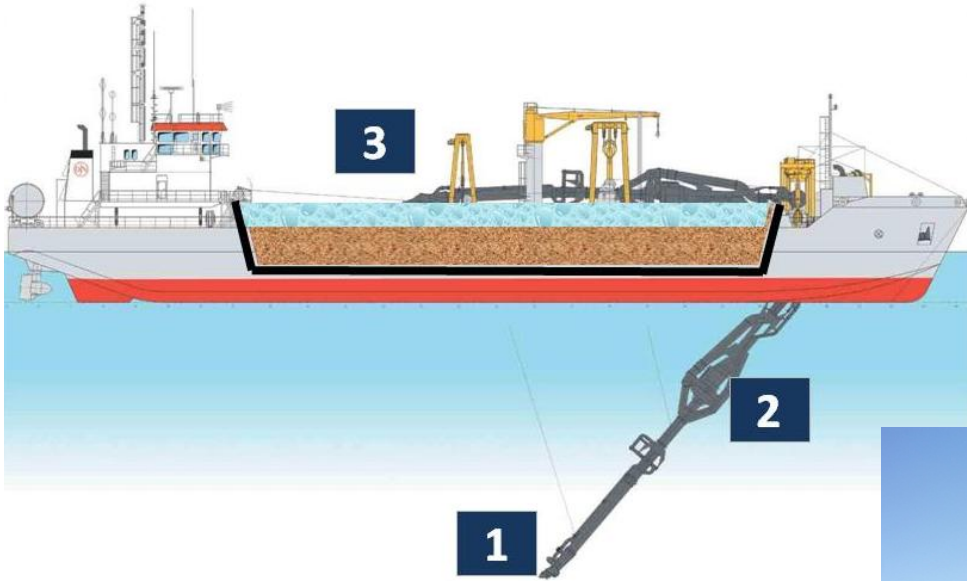
Pelican Island, LA - before and after construction



# Completed and Active Projects/Leases







Trailer Suction Hopper Dredge



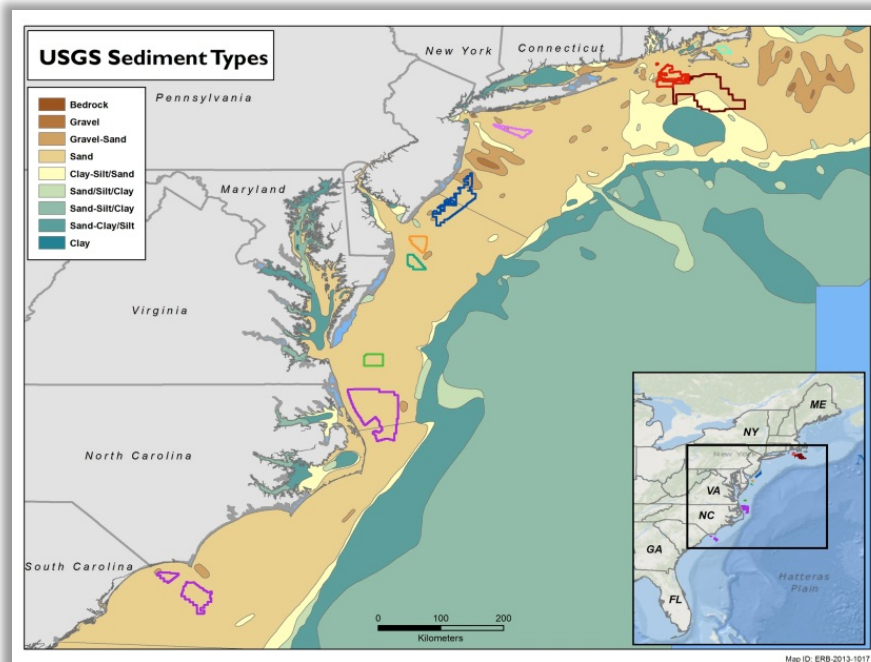
Wallops Island, VA

- Analyzing states' needs, existing data
  - Cooperative Agreements w/ 13 East Coast states)
- Identification of OCS Sand Resources
  - Broad Agency Announcement (BAA) for OCS Data Acquisition
- Research and Environmental Studies
- Regional Management
- Policy Development

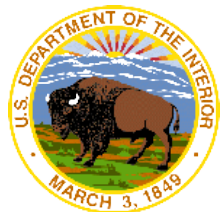




- Identify and Prioritize Needs
- Use of OCS Sand Resources
- Multi-Use Management
- Environmental Constraints
- Economic Constraints



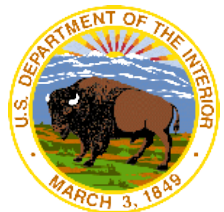
- Wilmington - August 7, 2012
- Charleston – August 8, 2012
- Topics included:
  - Joint EFH and ESA consultations
  - Lesson-learned experiences from Emerald Isle FEMA
  - Review and discussion of relevant BOEM studies for the Marine Minerals Program
  - Changes to FONSI/ROD Stipulations
  - Current / future projects



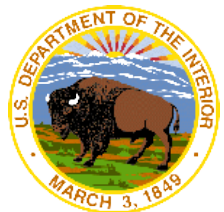


BOEM and the MMP is moving into a virtual world

- Increase visibility, lower the cost of travel
- Follow-up SMWG Webinar in Fall 2014
- More Accessibility



1. Is the role and function of the MMP and BOEM clear?
2. Do you have questions about the current status of BOEM activities?



# Decision-Making Science

Jennifer Culbertson and Doug  
Piatkowski

Division of Environmental Assessment  
Marine Minerals Program





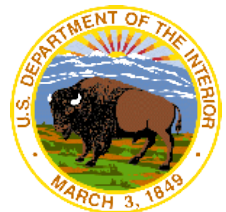
# Decision-Making Science

- BOEM Environmental Studies Program
  - More than 40 site specific and programmatic studies
- 13 ongoing programmatic studies
- Have been referenced or represented in:
  - International Studies
  - Nationwide Studies
  - Peer Reviewed Journal Articles
  - NEPA Analysis and Research
  - FWS/NMFS documents
  - Master thesis and PhD dissertations
  - Conference presentations/proceedings
  - In-house documents





- Ecological Function and Recovery of Biological Communities within Dredged Ridge-Swale Habitats and in the South-Atlantic Bight study awarded to the University of Florida, Dr. Debra Murie
- Natural Habitat Associations and the Effects of Dredging on Fish at the Canaveral Shoals, East-central Florida study awarded to the Navy (NAVSEA) PIs – Joe Iafrate and Dr. Stephanie Watwood; Contractor (KSC) – Dr. Eric Reyier



- Seasonal movement of the fish and habitat associations will be documented by supplementing the existing Florida Atlantic Coast Telemetry (FACT) Array receivers with 23 additional receivers
- Complemented by 200 + existing receivers

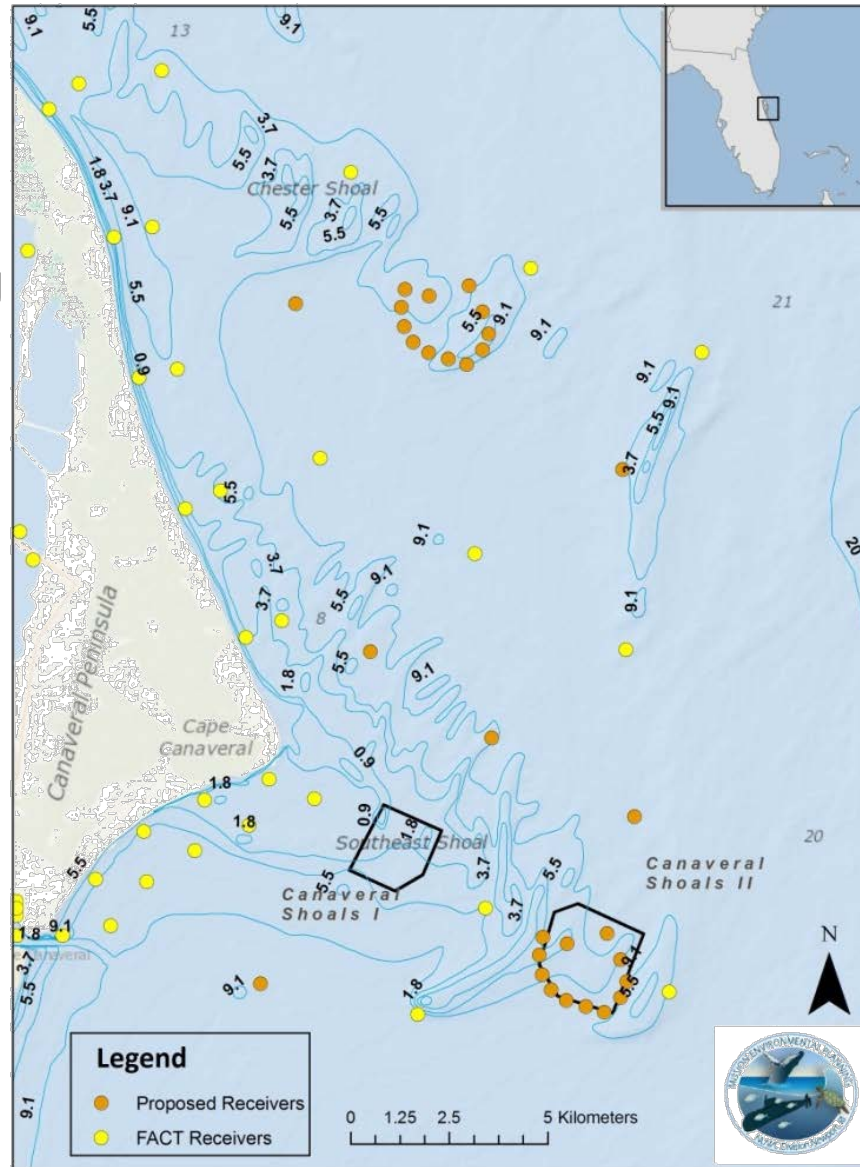


Figure 1. Existing and Proposed Receivers in Canaveral and Chester Shoals, FL



**Target Species (n=30 each site, 2 releases):**

Spot Croaker (*Leiostomus xanthurus*)

Atlantic Croaker (*Micropogonias undulatus*)



**Target Species (n=40 each, one release):**

Finetooth shark (*Carcharhinus isodon*)

Red drum (*Sciaenops ocellatus*)

Scalloped hammerhead (*Sphyrna lewini*) - NASA



December 2013 – January 2014:

Finer Scale Movements of Benthic Fish Species

- 30 croaker and 30 spot (CSII)
- 36 croaker and 24 spot (Chester)

Natural Habitat Associations and the Effects of Dredging

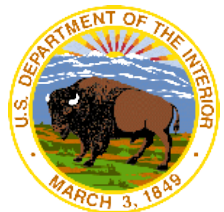
- 31 adult red drum
- 10 finetooth sharks





- \$15.2 million spent on MMP Environmental Studies
  - State-of-the-art study to develop “Dredging Guidelines to Maintain and Protect the Integrity of Offshore Ridge and Shoal Regimes/Detailed Morphologic Evaluation of Offshore Shoals” (<http://www.boem.gov/Non-Energy-Minerals/Marine-Mineral-Studies.aspx>)
  - “Biological and Biophysical Impacts from Dredging and Use of Offshore Sand “ (<http://www.data.boem.gov/PI/PDFImages/E-SPIS/5/5268.pdf>)

- Mitigation and minimization measures derived from research findings such as rotational dredging methods and better emissions estimates
- Identify critical data gaps for guiding future research needs





- Concern: Current required hopper dredging windows are based on water temperature, are conservative, and may increase costs unnecessarily.
- Proposed Study: Assess the risk of turtle incidental take in OCS borrow areas to inform mitigation that minimizes take while avoiding any unnecessary time/area closures.



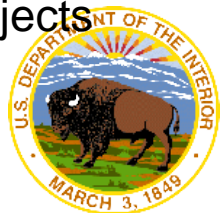
Blair Witherington,  
Florida Fish and Wildlife Conservation Commission



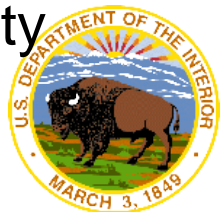


[http://www.data.boem.gov/homepg/data\\_center/other/espis/espismaster.asp?appid=1](http://www.data.boem.gov/homepg/data_center/other/espis/espismaster.asp?appid=1)

- Ecological Function and Recovery of Biological Communities within Dredged Ridge-Swale Habitats and in the South-Atlantic Bight study (Culbertson)
- Natural Habitat Associations and the Effects of Dredging on Fish at the Canaveral Shoals, East-central Florida (Culbertson)
- Workshop and Research Planning to Improve Understanding of the Habitat Value and Function of Shoal/Ridge/Trough Complexes to Fish and Fisheries on the Atlantic and Gulf of Mexico Outer Continental Shelf (Culbertson)
- Improving Emission Estimates and Understanding of Pollutant Dispersal for Impact Analysis for Beach Nourishment and Coastal Restoration Projects (Wikel)
- Characterization of Underwater Sound during Hopper Dredging (Wikel)
- Propagation Characteristics of High-Frequency Sounds Emitted During High-Resolution Geophysical Surveys (Wikel)
- Best Physical Oceanography Practices Study (Wikel)
- Social Welfare Analysis for Beach Nourishment / Coastal Restoration Projects (Richardson)



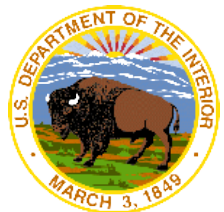
- Analyzing the Potential Impacts to Cultural Resources at Significant Sand Extraction Areas (GOM, Doug Jones)
- Response of Late Quaternary Stream and Estuarine Systems to Holocene Sea Level Rise on the Outer Continental Shelf Offshore Louisiana and Mississippi: Preservation Potential of Prehistoric Cultural Resources and Identification of Sand Resources for Coastal Restoration (GOM, Miner)
- South Atlantic Information Resources: Data Search and Literature Synthesis (Tre Glenn)
- Wave-Bottom Interaction and Bottom Boundary Layer Dynamics in Evaluating Sand Mining at Sabine Bank for Coastal Restoration, Southwest Louisiana (GOM, Wikel)
- Environmental Investigation of the Long-Term use of Trinity and Tiger Shoals (GOM, Wikel)



- Ecological Function and Recovery of Biological Communities within Dredged Ridge-Swale Habitats in the South-Atlantic Bight
- Optimizing Use of Sand Resources and Managing Dredge Impacts through Development of Borrow Area Management Plans
- Sediment Sorting During Coastal Restoration Projects: Implications for Resource Management, Environmental Impacts, and Multiple Use Conflicts
- Using Dredge Plant Operational Data to Measure Cumulative Use and Cumulative Impacts
- Integration of Marine Minerals Program Geospatial Data into a Uniform Data Model and Geodatabase
- Development of a Decision Support Tool to Reduce Sea Turtle Dredging Entrainment Risk

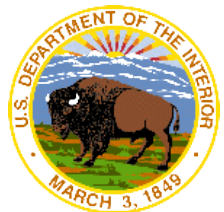


1. Are there topics or concerns associated with the use of offshore borrow sites that you would like to see addressed through our studies?
2. Are there studies, data collections, or any other information sources that you think we may find useful?



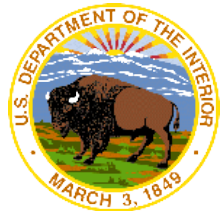
# OCS Opportunities and Investments: Hurricane Sandy

Jennifer Rose  
Leasing Division  
Marine Minerals Program

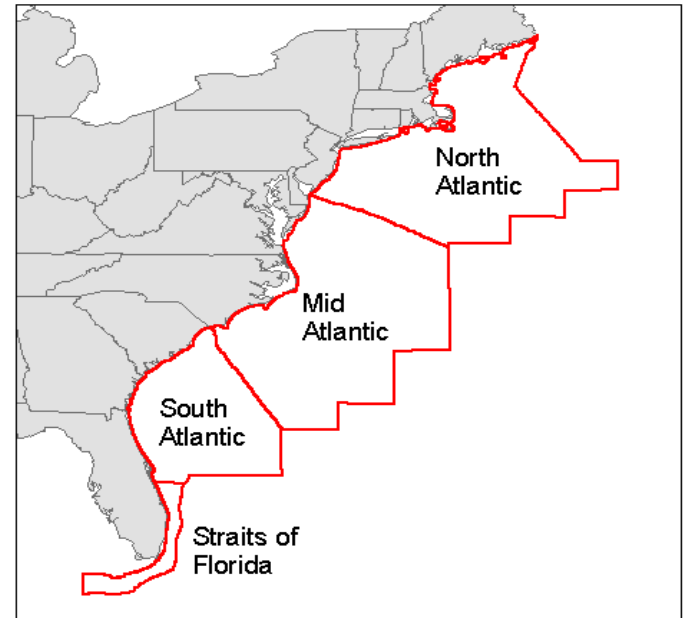




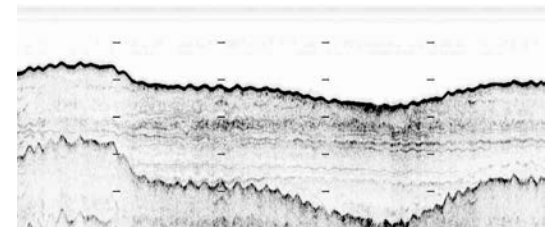
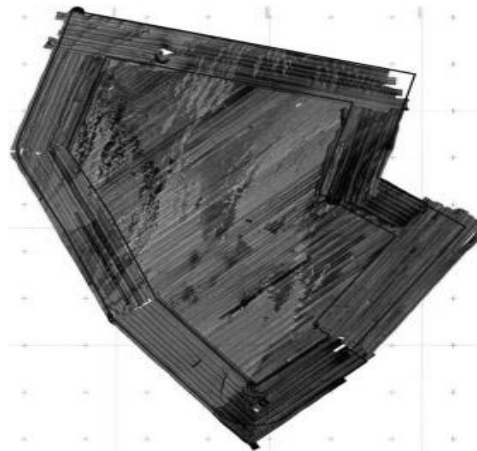
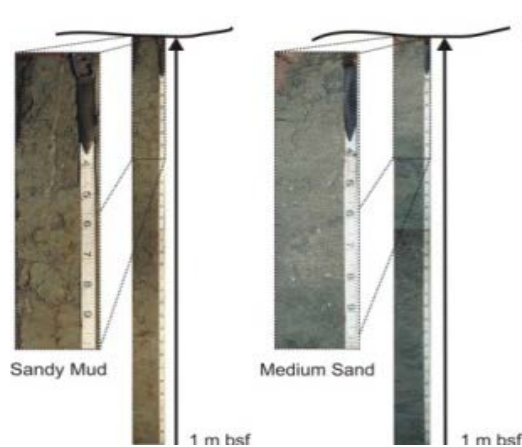
- \$13.2M
  - Geological & Geophysical (G&G) Data Acquisition
  - Cooperative Agreements with States
  - Environmental Monitoring
  - Environmental Assessment
  - Outreach




- Comprehensive data set
  - Delineate sand resources
  - Build Inventory
  - Distribute data
  - Manage resources



- Round 1: Analyzing/Discussing State needs
  - Review/consolidate existing data
- Round 2: Analysis of G&G data



- Up to \$200,000 per state
- Assist East Coast states
- One Coop per state
- No matching required
- 24 months to complete

 **Marine Minerals Activities - Hurricane Sandy**  
Marine Minerals Activities  
Number: 15.424  
Agency: Department of the Interior  
Office: The Bureau of Ocean Energy Management, Regulation, and Enforcement

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PROGRAM INFORMATION

**Authorization (040):**  
Outer Continental Shelf (OCS) Lands Act, 43 U.S.C. 1331.

**Objectives (050):**  
To evaluate OCS sand deposits for coastal restoration and beach nourishment needs, and to foster good working relationships regarding OCS mineral issues with coastal States due to effects from hurricanes and coastal erosion. This can be accomplished through a variety of activities such as conducting state needs assessments, geophysical and geological surveys of specific areas on the OCS, analysis of existing or new geophysical and geological data to delineate new borrow areas, offshore bathymetry research, seismic data analysis and interpretation, application of marine resistivity or other geophysical techniques for sand resource identification, and cultural resources identification.

**Types of Assistance (060):**  
Cooperative Agreements

**Uses and Use Restrictions (070):**  
The funds must be spent for OCS-related sand activities. These cooperative agreements are awarded to assist States in order to identify needs and sand supplies for beach nourishment projects.

**Eligibility Requirements (080)**

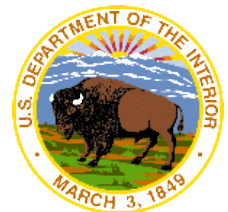
**Applicant Eligibility (081):**  
Proposals are received from coastal States in need of coastal restoration.

**Beneficiary Eligibility (082):**  
State agencies and organizations participating in the project, as well as the general public.

**Credentials/Documentation (083):**  
States submit proposals to BOEM, which furnish evidence of the applicant's qualifications for performance of the proposed research. OMB Circular No. A-67 applies to this program.

**Application and Award Process (090)**

**Preapplication Coordination (091):**





Do you have any clarifying questions about these opportunities?



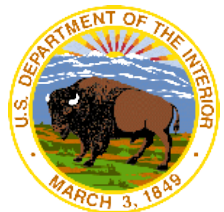
# Break



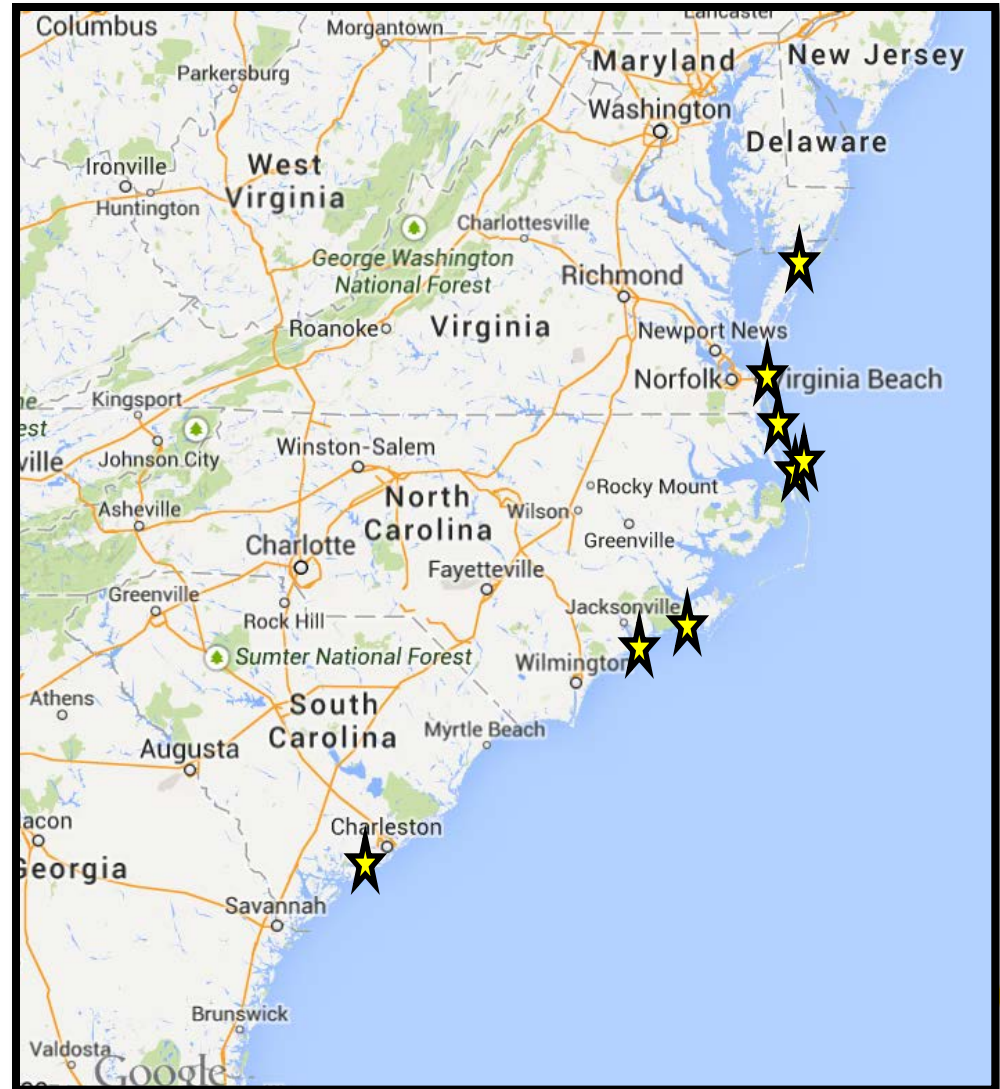
# Central Atlantic Projects

Jennifer Culbertson and Jennifer Rose

Marine Minerals Program



- **Virginia**
  - Wallops Island
  - Sandbridge
- **North Carolina**
  - Duck
  - Kitty Hawk
  - Kill Devil Hills
  - Bogue Banks  
(Civil Works and Regulatory)
  - Surf City/N. Topsail
- **South Carolina**
  - Folly Beach

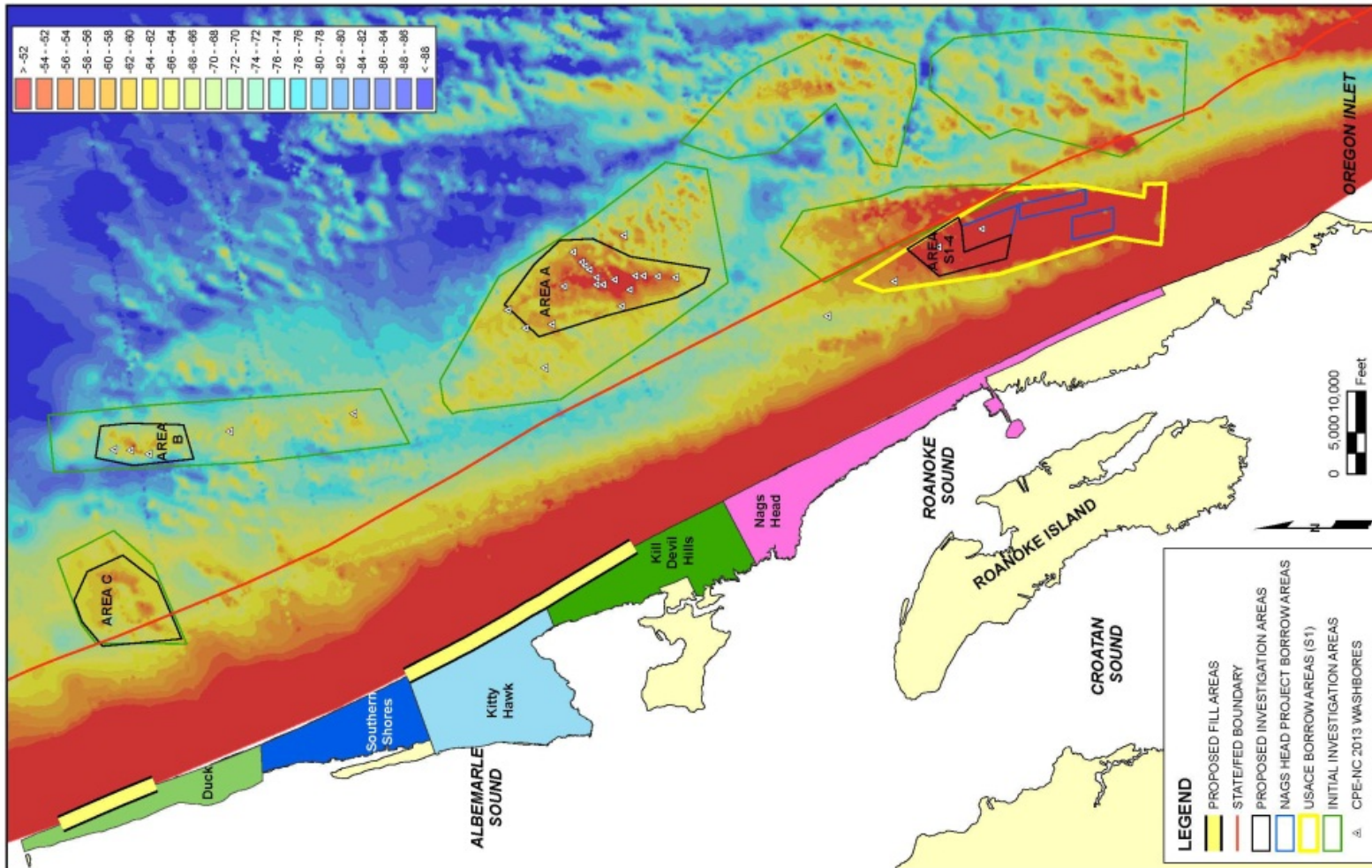




## Carteret County

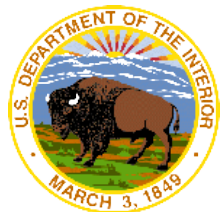
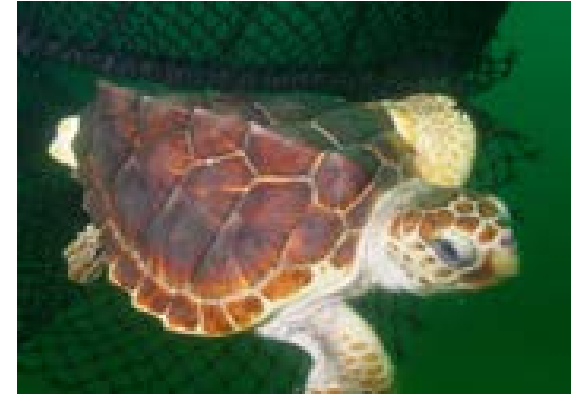


## Dare County



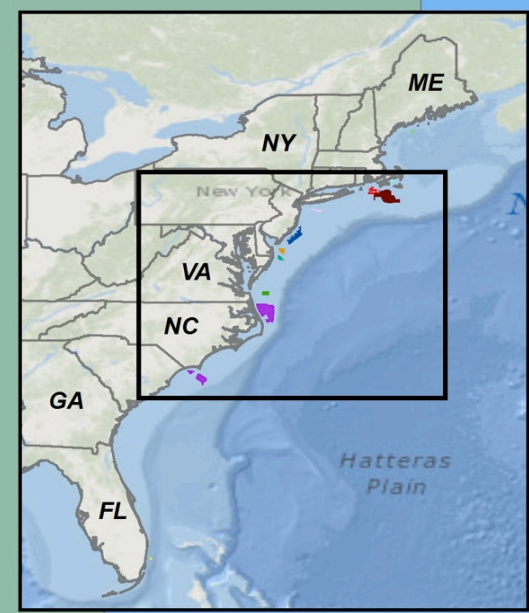
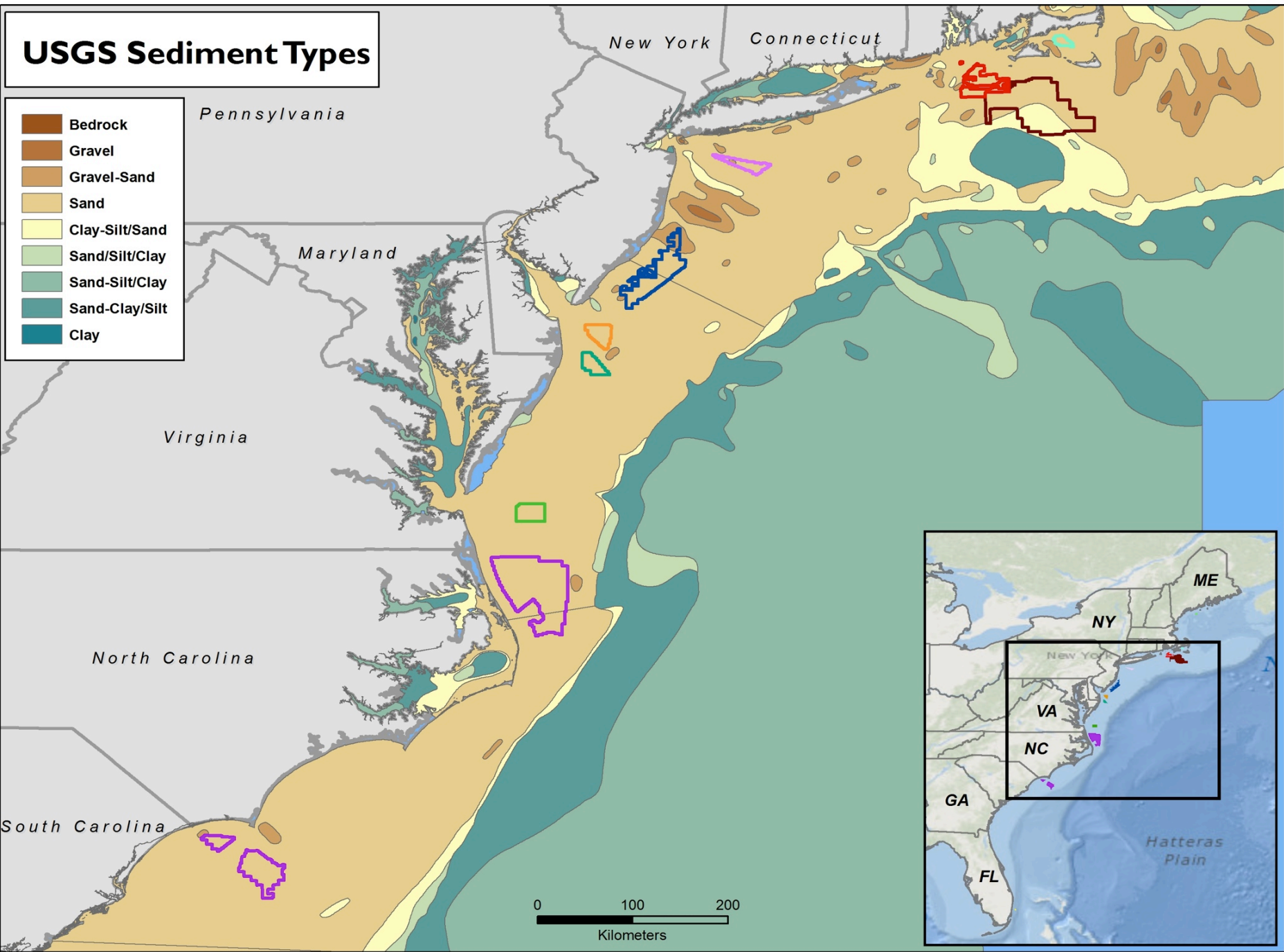


- How to manage multiple users?
  - Pilot Regional Use Lease (Florida)
- How to manage consultations?
  - Endangered Species Act Section 7 (NMFS vs FWS)
    - SARBO
    - Individual Biological Opinions
    - Programmatic Biological Opinions
    - Batched Biological Opinions
- Each State or locality may approach it differently



# USGS Sediment Types

- Bedrock
- Gravel
- Gravel-Sand
- Sand
- Clay-Silt/Sand
- Sand/Silt/Clay
- Sand-Silt/Clay
- Sand-Clay/Silt
- Clay





## Issue:

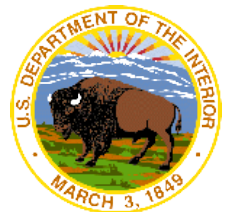
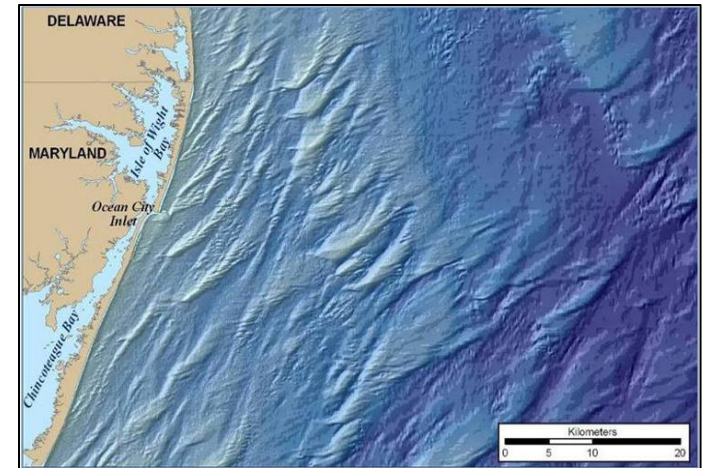
- Beach quality sediment quantity
- Multiple use conflicts
- Dredging intensity is not systematically planned

## Need:

- Regional strategies
- Optimal use of sand resources
- Advanced planning
- Impact minimization

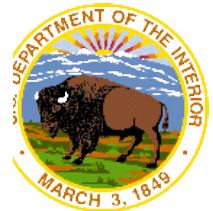
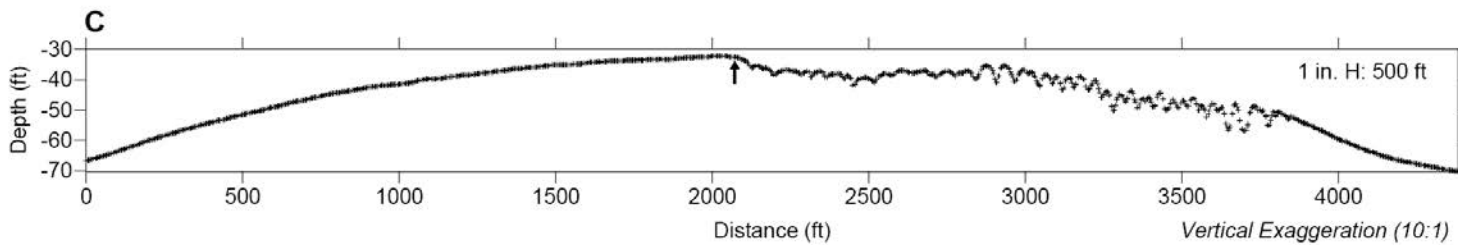
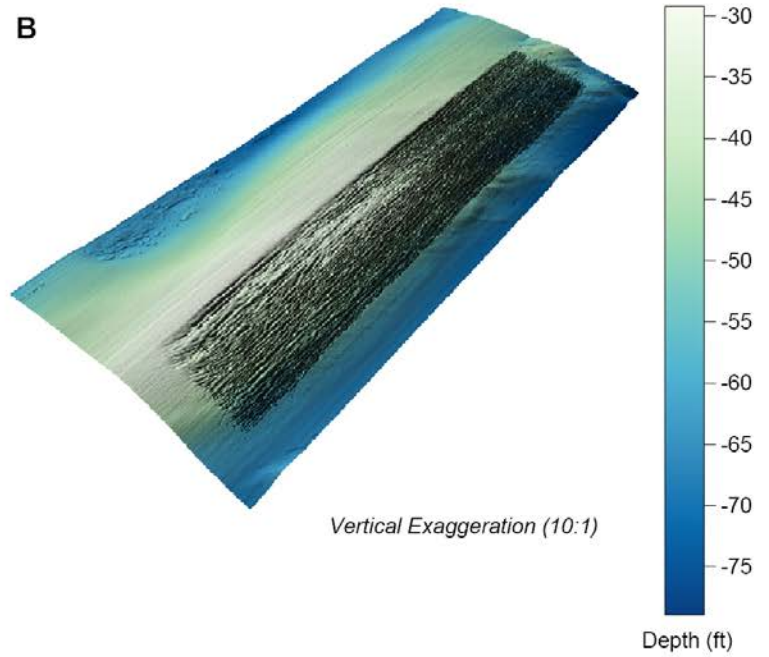
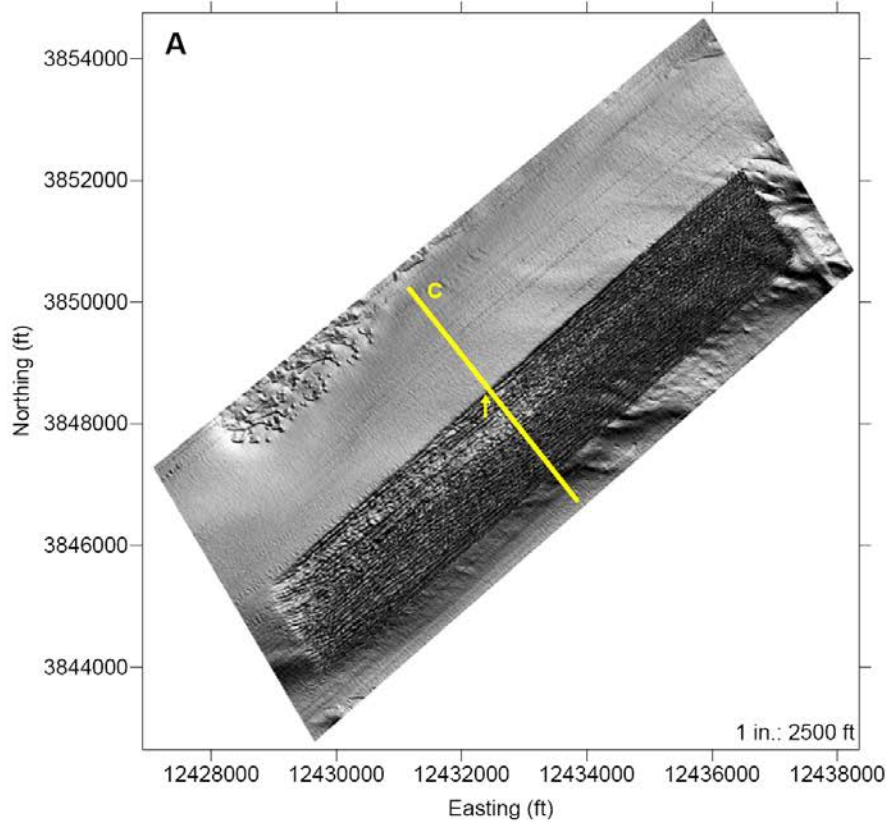
## Strategy: Programmatic consultation

1. Identify what is present utilizing existing data
2. Categorize into various features
3. Identify physical processes
4. Identify biological communities
5. Habitat model?
6. Identify quantities of beach compatible sand within each mapped feature
7. Attempt to place a range of values
8. Mitigation/minimization measures with each feature



# Wallops Island, VA

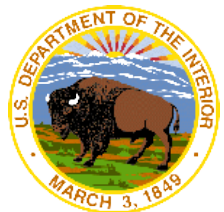
**Sand Ridge -  
Wallops Island (VA)  
Shoal A Borrow Area  
Post-Construction Bathymetry (Hopper Dredge)**



1. Are there potential projects in your state that may use offshore borrow sites that we should be aware of?
2. Are there any regional sediment management issues you would like to discuss?
3. Are there any methods to regional sediment management you think BOEM should consider?



- Hurricane Sandy/MMP research
- Program elevation (within DOI and externally)
- Focus on regional resource management (identification and environmental issues)
- Studies for science-backed decisions
- Opportunity to refine leasing process, Sand Management Working Groups, and streamline NEPA and consultations
- Any suggestions or ideas for future meetings?





Jeffrey Reidenauer, Chief, Marine Minerals Branch

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