



# **Marine Minerals Program**

## **OCS Scientific Committee Meeting May 13, 2014**

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Chief, Marine Minerals Branch  
Leasing Division**

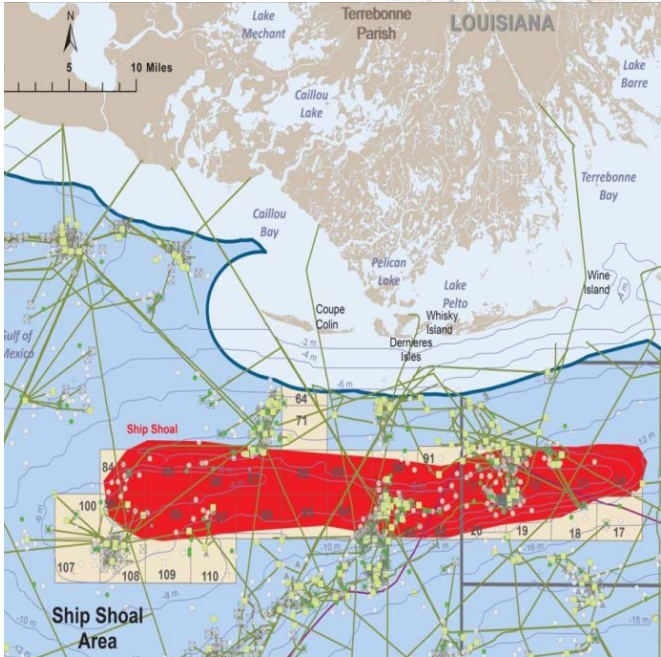


**MMP = MMB (Leasing), DEA (Env Assessment), and GOMR**

**We are the only Agency responsible for managing development of OCS marine mineral resources.**

- **Noncompetitive Negotiated Agreements for Sand for Federally-authorized and/or Federally-funded Projects**
- Hard Mineral Competitive Leasing
  - Gold, Rare Earth Minerals, Copper, Zinc, Silver
- Competitive Sand Leasing (aggregate industry)





**Whiskey Island, LA**  
8.3 mil cu yds



**Long Beach Island, NJ**  
7 mil cu yds

**NASA Wallops, VA**  
Initial 3 mil cu yds  
800K cu yds

**Brevard County, FL**  
2.4 mil cu yds

● Active Projects  
● Completed Projects



## **Outreach and Collaboration**

- **Regional Sand Management Working Groups**
  - Florida
  - Central Atlantic
  - Northeast
  - New England
  - LA/GOM
- **Regional Planning Groups**
  - Gulf of Mexico Alliance, Regional Sediment Mgmt Team
  - RESTORE Act Regulatory Groups
  - Mid-Atlantic Regional Council on the Ocean (MARCO)
  - Northeast Regional Ocean Council (NROC)
- **Future Marine Minerals ITM**



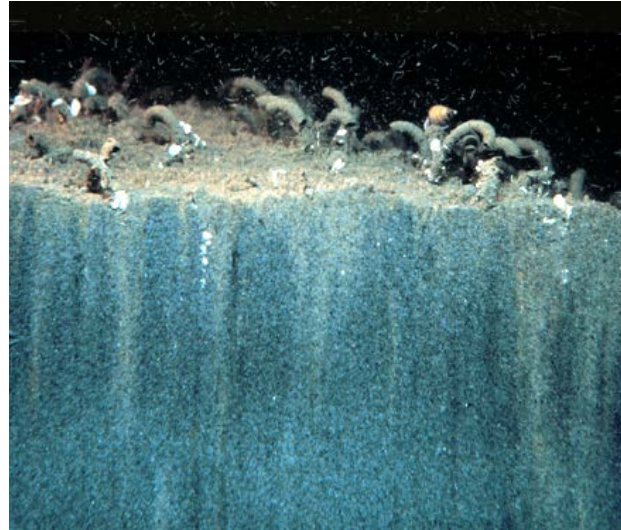
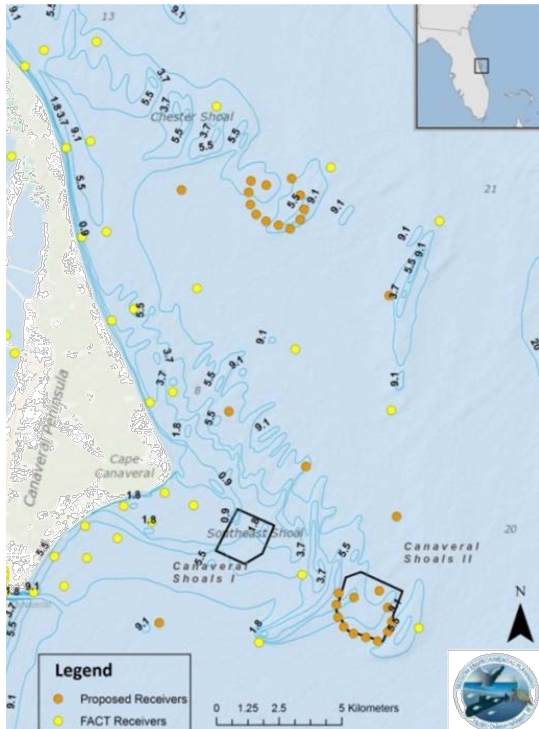
## Hurricane Sandy Support

- **\$11.7 M Disaster Relief Appropriations Act plus \$1.9 M supplemental funding**
- **Analysis Existing Sand Resource Data and Determination of Sand Needs**
  - ✓ Cooperative Agreements w/ 13 Atlantic States
- **Identification of OCS Sand Resources**
  - ✓ Broad Agency Announcement (BAA) for OCS Data Acquisition issued March 21, 2014
  - ✓ Cooperative Agreements w/ 13 Atlantic states
- **Environmental Monitoring**
  - ✓ Canaveral Shoals, FL



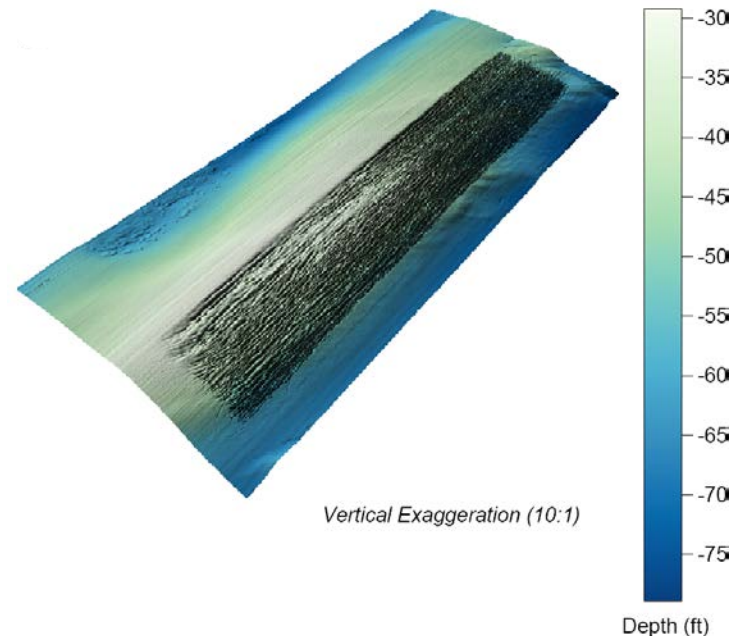
## Environmental Studies Support

- Compliance w/ environmental laws and regulations
- Responsible management of public resources
- Identification of long-term and cumulative impacts



## **Dredging Impact Concerns on the OCS**

- Impacts to Essential Fish Habitat (EFH)
- Impacts to protected species
- Alterations to substrate character, bathymetric relief, and morphodynamics
- Long-term impact to offshore hydrodynamics and sediment transport
- Damage to historic resources
- Cumulative impacts to benthic habitat and species diversity



OCS Study  
BOEM 2013-0119

## Review of Biological and Biophysical Impacts from Dredging and Handling of Offshore Sand



## \$15.2 million spent on MMP Environmental Studies

- “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>)
- “Review of Biological and Biophysical Impacts from Dredging and Use of Offshore Sand” (<http://www.data.boem.gov/PI/PDFImages/ESPIS/5/5268.pdf>)





- Ecological Function and Recovery of Biological Communities within Dredged Ridge-Swale Habitats and in the South-Atlantic Bight study
- Natural Habitat Associations and the Effects of Dredging on Fish at the Canaveral Shoals, East-Central Florida
- Wave-Bottom Interaction and Bottom Boundary Layer Dynamics in Evaluating Sand Mining at Sabine Bank for Coastal Restoration, Southwest Louisiana
- Response of Late Quaternary Stream and Estuarine Systems to Holocene Sea Level Rise on the OCS Offshore Louisiana and Mississippi: Preservation Potential of Paleolandscapes and Identification of Sand Resources for Coastal Restoration
- Environmental Investigation of the Long-Term use of Trinity and Tiger Shoals
- Analyzing the Potential Impacts to Cultural Resources at Significant Sand Extraction Areas



## BOEM MMP Studies Proposed for the Fiscal Year 2015

SDP Page Number	Discipline	Program Ranking	Study Title
367	FE/HE	1	Ecological Function and Recovery of Biological Communities within Dredged Ridge-Swale Habitats in the South-Atlantic Bight
371	FE/HE	2	Development of a Decision Support Tool to Reduce Sea Turtle Dredging Entrainment Risk
373	IM	3	Managing Dredge Impacts by Optimizing the Use of Sand Resources
377	FE	4	Sediment Sorting During Coastal Restoration Projects: Implications for Resource Management, Environmental Impacts, and Multiple Use Conflicts

### Discipline Codes

FE = Fates & Effects

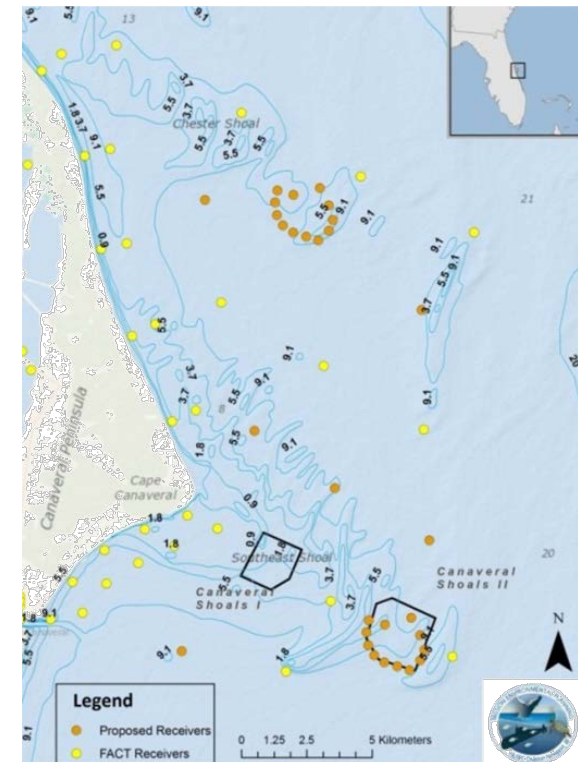
HE = Habitat & Ecology

IM = Information Management

## Ecological Function and Recovery of Biological Communities w/in Dredged Ridge-Swale Habitats in South-Atlantic Bight

**Concern:** BOEM needs to observe prolonged biological, physical and chemical recovery of borrow areas to understand the importance of dredged habitats to benthos, fish, and trophic structure/bioenergetics

**Proposed Study:** Continue an existing two-year collaborative effort between BOEM, Navy, NASA, UF, and USACE to investigate the long-term recovery of benthic and fish communities following dredging of a borrow area offshore central Florida



## Development of a Decision Support Tool to Reduce Sea Turtle Dredging Entrainment Risk

**Concern:** Current required hopper dredging windows are based on water temperature, are conservative, and may increase costs unnecessarily.

**Proposed Study:** Develop a standardized decision support tool to assess project specific dredging entrainment risk and improve the effectiveness of mitigation planning decisions within federal marine mineral resource areas



## Managing Dredge Impacts by Optimizing the Use of Sand Resources

**Concern:** OCS sand resources are finite and need to be carefully managed

**Proposed Study:** Optimize borrow area use by integrating geological, engineering, economic, environmental, and dredge operation variables in a common analytical framework over relevant time horizons



## **Sediment Sorting During Coastal Restoration Projects: Implications for Resource Management, Environmental Impacts, and Multiple Use Conflicts**

**Concern:** Extent of sediment sorting during dredging, handling, and placement processes

**Proposed Study:** Determine the percent of fine-grained losses during each phase of dredging, to better inform environmental trade-offs and impacts assessments





# Marine Minerals Program Contact



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