



**OCS Scientific Committee Meeting  
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## **BOEM Information Need:**

- Cumulative environmental effects from recurrent dredging of same sand resource is a growing concern
- Evaluate if effects can be better managed by optimizing resource use via a strategic, adaptive planning process that incorporates long-term project requirements with resource availability and impact minimizing strategies
- Approach focuses consultations and coordination → improved environmental and stewardship outcomes

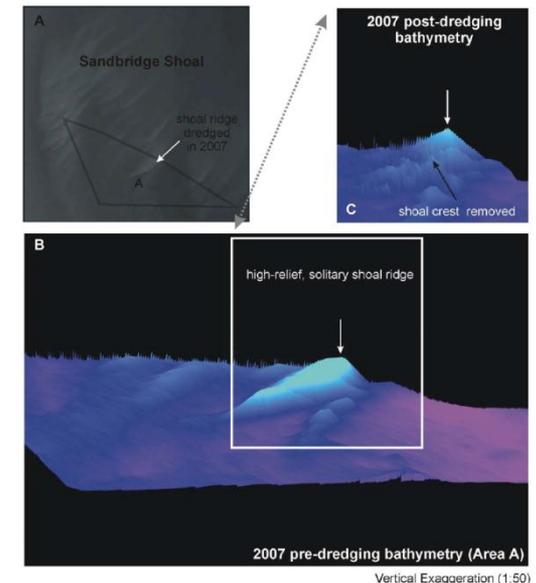
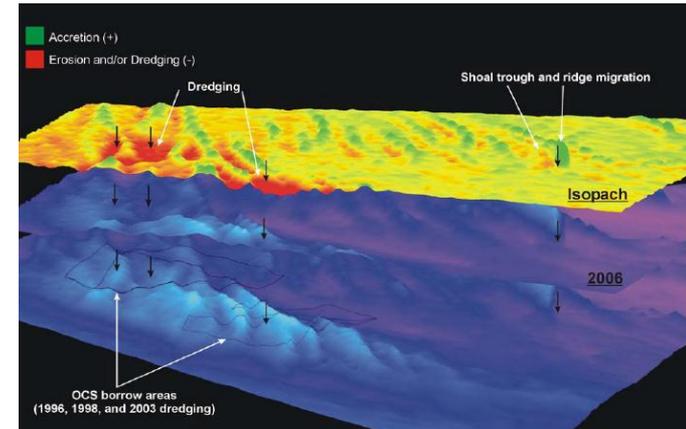
## **Date Information is Required:**

To coincide with multiple dredging events at select study areas during the next 5 years.

**Tentative Ranking: 18**

**Background:**

- Typical project involves initial and regularly-spaced maintenance construction using same sand resource (maybe >50 years)
- Mining productivity and transport distance often determine borrow location, not dredging intensity
- Each dredge event diminishes sand resource and body profile, affecting hydrodynamics, substrate, and morphologic evolution
- Series of coupled changes magnified over multiple dredging events potentially impacts ecosystem function, indirectly impacts cultural resources, and alters sensitive biological habitat in vicinity



## Background:

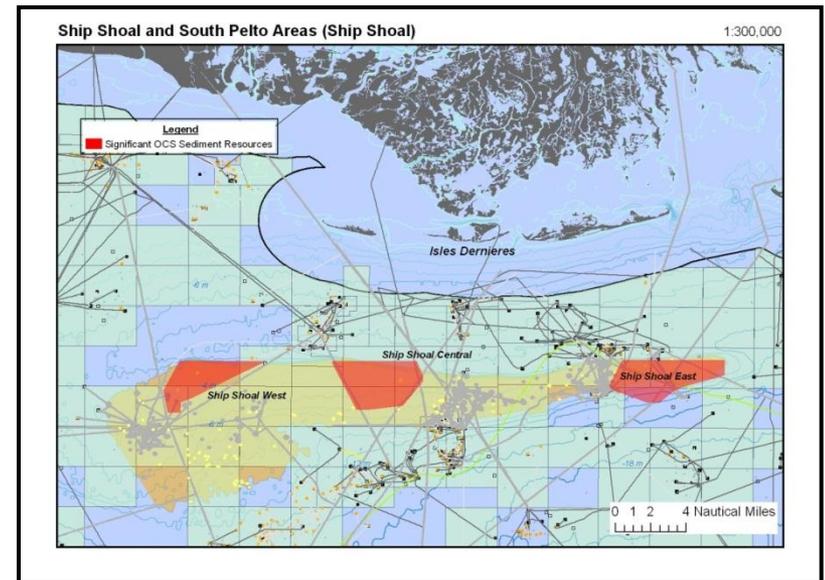
- Four tier management approach focusing on use optimization:

Tier 1: assess sand resources, sediment dynamics, and project engineering requirements

Tier 2: integrate environmental and multiple use conflict considerations

Tier 3: integrate best practice and mitigation measures to minimize excessive dredging intensity and maximize recovery

Tier 4: determine cost effectiveness and quantitatively analyze decision tradeoffs



**Tentative Ranking: 18**

**Study's Objectives:**

- Develop appropriate methodology for sand resource use optimization planning
- Demonstrate planning process by developing a draft optimization plan for two OCS borrow areas characterized by frequent dredging and/or multiple users (i.e., Ship Shoal offshore Louisiana, Sandbridge Shoal offshore Virginia, or Canaveral Shoal offshore Florida)

## **Methods:**

- Review and synthesize existing scientific, engineering, geotechnical and geophysical, and economic data and studies
- Define useful vehicles for stakeholder coordination and deliberation
- Additional data collection to fill important data gaps
- Comparative analysis within GIS framework
- Preparation of borrow area management plan:
  - Cost effectiveness analysis
  - Multi-criteria decisional analysis