



# OCS Scientific Committee Meeting May 2014

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



## BOEM Information Needs:

- Minimize adverse effects to sea turtles associated with dredging operations in the OCS through:
  - Deliberate project specific planning efforts
  - Implementation of relevant and effective mitigation measures

## Date Information is Required:

- Ongoing need for current and future projects



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**Tentative Ranking: 2**

## Background:

### A) Relationship with Previous Work/Efforts

- Hopper Dredge Entrainment Risk:
  - Benthic orientation relative to “dragheads”
- Engineering Modifications:
  - Turtle deflecting draghead
  - Inflow/overflow screening
  - Draghead operating parameters



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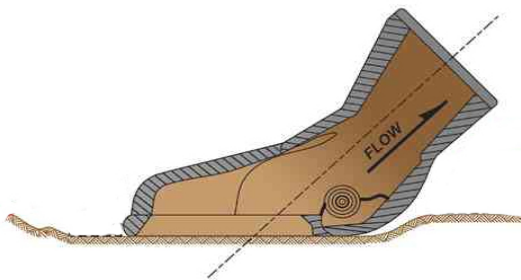


Tentative Ranking: 2

## Background:

### A) Relationship with Previous Work/Efforts

- Established Mitigation Measures: NMFS Biological Opinions
- Residual Risk: Limited consideration for project specific efficacy
- Since 1996: >20 sea turtle mortalities associated OCS dredging.



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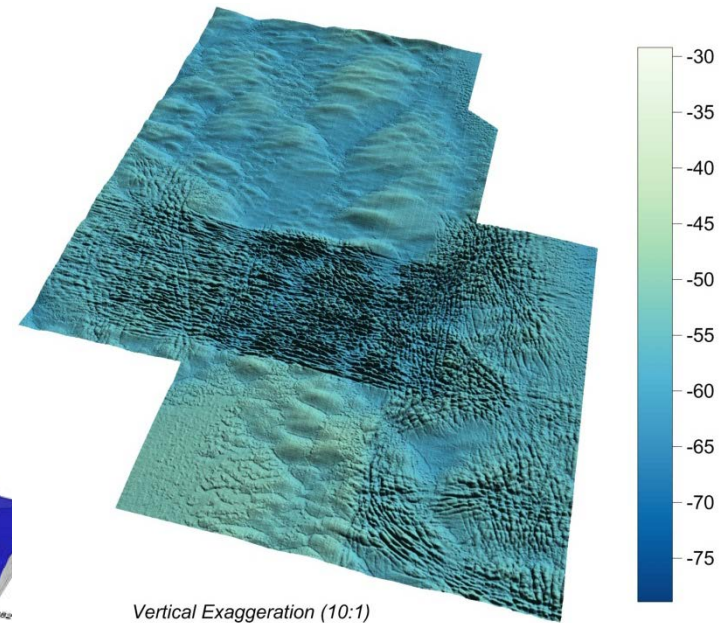
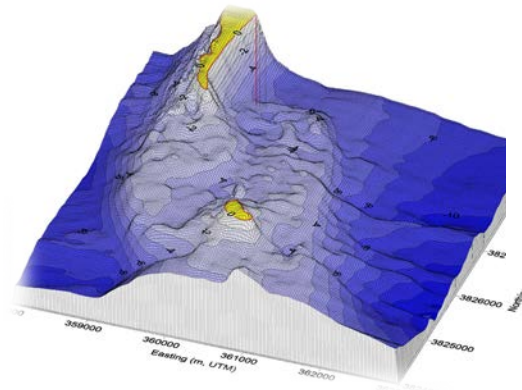
## Background:

### B) Relationship with Concurrent/Future Efforts

- Stakeholder interest in regional planning
- Borrow area dredging
  - Increased frequency
  - Varying habitat types
- South Atlantic Regional Biological Opinion
- Technology improvements



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## **Study's Objectives:**

- Evaluate and document entrainment risk parameters for dredging activities in the OCS
- Develop a geographically and temporally based standardized decision support tool to assess project specific dredging entrainment risk
- Guide mitigation planning decisions within federal marine mineral resource areas



## Study's Methods:

- **Identify and Weight Risk Parameters:**

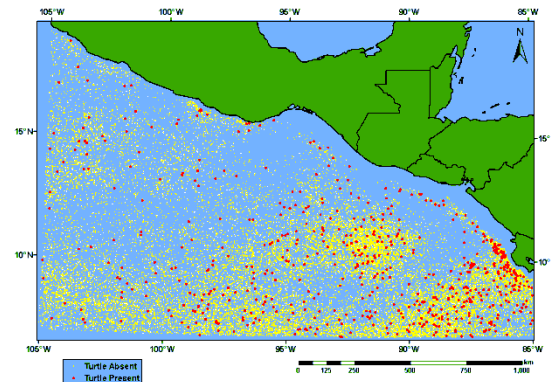
- Geomorphology and physical dynamics
- Habitat type/use
- Entrainment history
- Sea turtle distribution, abundance, and behavior (i.e., leveraging existing telemetry data).

- **Develop a Decision Support Tool:**

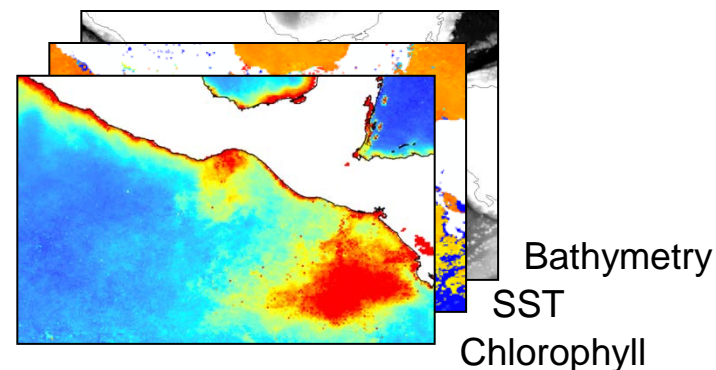
- Regional entrainment risk classifications of OCS sand resources

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### Point observations of species



### Gridded environmental data

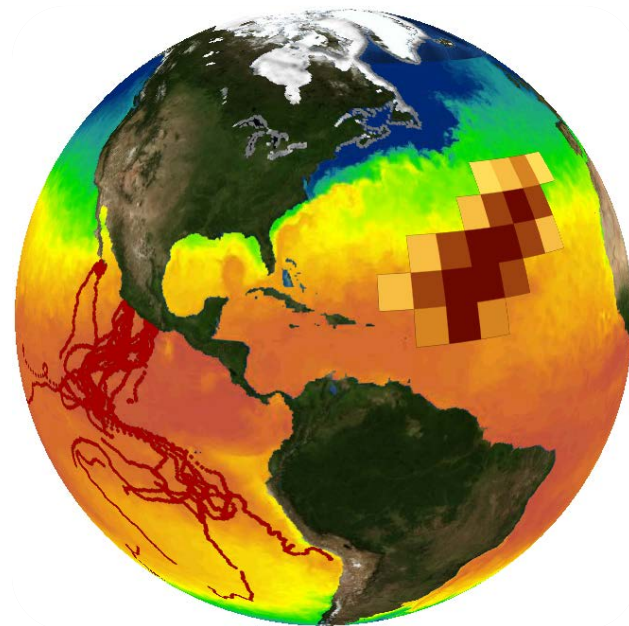


Tentative Ranking: 2



## Additional *Pertinent* Information

- **Partnership and Collaboration:** USACE, NMFS, BOEM, sea turtle biologists, Industry
- **Leveraging Opportunities:** (i.e. Atlantic Marine Assessment Program for Protected Species (AMAPPS))
- **Future Applications:** Framework of the decision support system could accommodate other species (i.e. Atlantic sturgeon)



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