



# Marine Minerals Program Studies



**Jessica Mallindine**

Marine Minerals Program





- Provide the information needed to predict, assess, and manage impacts from offshore marine mineral exploration, development, and production activities on human, marine, and coastal environments
- About \$40 million over the past 22 years
- Potential mitigation and minimization measures derived from research findings
- Provide information for consultations
- Identify critical data gaps for guiding future research needs
- <http://www.boem.gov/Marine-Mineral-Studies/>
  - Studies organized by state and/or programmatic relevance
- <http://marinecadastre.gov/espis>





## Environmental Studies Program

### Studies Development Plan Fiscal Years 2016-2017

## Studies Development Plan (SDP)

- Internal, strategic planning tool for the upcoming two years of studies and beyond.
- Describes a cohesive and integrated plan to collect and generate the environmental information needed to support the Bureau's activities.
- Lays the foundation on which to make future decisions regarding the National Studies List (NSL)



- Understanding the Habitat Value and Function of Shoals and Shoal Complexes to Fish and Fisheries on the Atlantic and Gulf of Mexico Outer Continental Shelf, a Literature Synthesis and Gap Analysis. BOEM 2015-012
- Propagation Characteristics of High-Frequency Sounds Emitted During High-Resolution Geophysical Surveys
- Development of a Monitoring Program for Water Quality and Biogeochemical Processes of Louisiana Sediment Borrow Areas
- Assessment of Mud-Capped Dredge Pit Evolution on the Outer Continental Shelf of the Northern Gulf of Mexico
- Glider-based fish tracking – Canaveral Shoals, FL





- Regional Essential Fish Habitat Geospatial Assessment and Framework of Offshore Sand Features
- Sediment sorting during coastal restoration projects: implications for resource management, environmental impacts, and multiple use conflicts
- **Discerning behavioral patterns of sea turtles in the Northern Gulf of Mexico to inform management decisions**
- **Develop decision support tool to assess project entrainment risk and improve effectiveness mitigation planning w/in sand borrow areas**



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- **Interagency Agreement:** BOEM / USGS
- **Study Objective :** Capture and tag sub-adult, juvenile, and adult sea turtles in the Northern GOM using trawling operations.
- **Specific goals:**
  - Determine the extent of movements and seasonal site fidelity
  - Fine scale characterization of dive profiles
  - Identify and assess physical and biological features to characterize habitats
  - Assess the population structure and isotopic signatures
  - Status of abundance and distribution
- **Methodologies:**
  - Flipper, PIT, and satellite tagging/tracking (w/ acceleration data loggers (ADLs))
  - Biological sampling and gastric lavage
  - Health assessments
  - Sampling and analysis of available coastal data
  - Mapping suitable turtle habitats within the Northern GOM.



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**Concern:** Adverse effects to sea turtles associated with dredging operations in the OCS could be minimized through deliberate project specific planning efforts

**Specific Goals:** 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





## The Marine Minerals Program:

- Is a science-based program that responsibly manages development of America's offshore non-energy resources.
- Has robust partnerships with other federal agencies, states and communities
- Is forward-looking to build and strengthen coastal resilience.





# ADDITIONAL BACKGROUND & FACT SHEETS:

Website: <http://www.boem.gov/Marine-Minerals-Program/>

Fact sheets: <http://www.boem.gov/BOEM-Fact-Sheets/>

- MARINE MINERALS FACT SHEET
- HURRICANE SANDY FACT SHEET
- ATLANTIC SAND ASSESSMENT FACT SHEET
- SEA TECHNOLOGY MAGAZINE ARTICLE BY DIRECTOR HOPPER

Ocean Science Magazine: <https://www.boem.gov/OS-Nov-2017/>

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