Improved Planning to Minimize Dredging Impacts to Essential Fish Habitat

A Geospatial Assessment of Essential Fish Habitat in Relation to Offshore Sand Shoals

National Centers for Coastal Ocean Science (NCCOS) and Office for Coastal Management scientists worked with the Bureau of Ocean Energy Management (BOEM) to develop cutting-edge data-support tools that guide wise use of offshore sand shoals while minimizing impacts to essential fish habitats

What we are doing

Offshore sand resources, including sand shoals, are increasingly being used for beach renourishment and barrier island restoration to enhance resiliency of coastal communities. In addition, federal agencies are required to comply with the **Magnuson-Stevens Fishery Conservation and Management Act**, which protects fisheries through designation of **Essential Fish Habitat.**

Synthesize scientific literature

The impact of sand dredging on fish is difficult to assess because fish distributions are poorly known and impacts are uncertain. NCCOS is synthesizing published literature on the effects of sand dredging on fish to determine the extent, severity, and duration of impacts. Impacts include increased turbidity, sedimentation, change in geomorphology or substrate, underwater sounds, and direct mortality of fish and their prey.

BOEM Bureau of Ocean Energy Management

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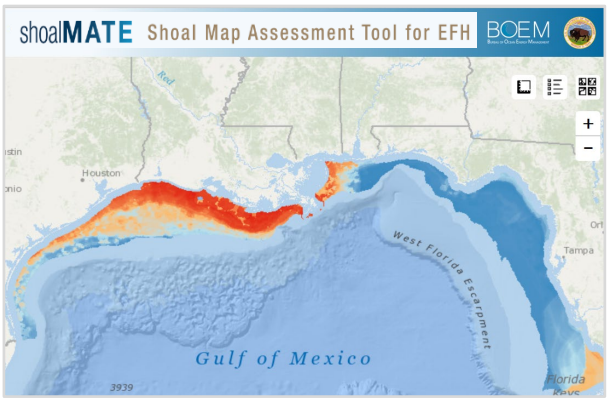

Predict fish distributions

We are predicting the distribution of selected marine fish species of commercial, recreational, and conservation importance using monitoring data combined with data on the ocean environment. The result will be maps delineating sand shoals and the most important waters for selected marine fish in the South Atlantic and Gulf of Mexico.

Develop an Interactive Decision-support Tool

NCCOS and partners have developed **ShoalMATE,** an interactive decision-support tool that provides BOEM with a consistent, science-based framework to streamline **Essential Fish Habitat** consultations with NOAA's National Marine Fisheries Service, to identify, address, and minimize impacts to fish and their habitats. For the first time, the extent of sand shoals of the Atlantic and Gulf of Mexico have been mapped and classified. The tool assesses potential cumulative impacts to fish, identifies best management practices, and quantifies the habitat value of areas under consideration for dredging.

For More Information

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