



# Environmental Monitoring of Benthic and Fish Resources at the Sandbridge Shoal, VA.

## ERDC Dredging Operations Technical Support Program (DOTS)

U.S. ARMY CORPS OF ENGINEERS

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### Response Summary:

The U. S. Army Corps of Engineers Norfolk District is proposing maintenance of a beach along the Sandbridge oceanfront, Virginia Beach, Virginia. Construction is scheduled for the summer of 2019. Compatible sand will be excavated to create a 50 foot wide berm at an elevation of 6 feet. Environmental concerns that arise in connection with sand dredging from areas identified as suitable for beach nourishment focus on potential ecological impacts directly or indirectly associated with either removal of the sand from the borrow area or placement of the sand on the beach. The Sandbridge shoal has been identified in the Essential Fish Habitat (EFH) assessment as EFH for 22 Federally managed species. Given that dredging occurs at the Sandbridge Shoal every 5 years, there are concerns from resource agencies that the benthic epifauna and infauna communities have difficulty fully recovering after sand dredging. The Wetlands and Coastal Ecology Branch of the Environmental Lab is tasked with the development of a field monitoring plan to evaluate the physical and biological impacts of benthic communities and their trophic relationships to fish.

### Period of Performance:

Project Start: October 2018

Project End: Spring 2022

### Benefits of the Response to the USACE Dredging/Navigation Program:

The issue of coastline protection has become increasingly critical as erosion associated with coastal storms and thus coastal sediment transport have significantly altered or eliminated ecologically, recreationally, and commercially important coastal habitats. In a need to protect sensitive coastal ecosystems the use of beach nourishment as a means of shore protection has increased. Beach nourishment address the sand budget deficit by adding sand taken from an offshore borrow site. Concerns from resource agencies that sand removal negatively impacts benthic invertebrates as well as the fish communities that rely on them as a primary food source. This study will document the recovery of benthic invertebrates after sand mining activities and assess any potential impacts to the juvenile fish population that utilizes the offshore shoal. The Sandbirdge Shoal is an important sand resource for sand replacement at several beaches along the Virginia Coast, including the U. S. Navy's Dam Neck Fleet Training Center.

### Deliverable:

The deliverable for this DOTS response is a Scope of Work which develops an environmental monitoring plan to assess both baseline and recovery of benthic invertebrates and fish assemblages at the Sandbridge Shoal after sand dredging activities. A series of conference calls will finalize the environmental monitoring plan.



Providing environmental and engineering technical support to the U.S. Army Corps of Engineers  
Operations and Maintenance navigation and dredging missions

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