



U. S. Department of the Interior
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region

Technical Announcement

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Baseline Bioacoustic Characterization for Offshore Renewable Energy Development in the North Carolina and Georgia Wind Planning Areas

[OCS Study BOEM 2015-026](#)

The Bureau of Ocean Energy Management (BOEM) announces the availability of a new study report, *Baseline Bioacoustic Characterization for Offshore Renewable Energy Development in North Carolina and Georgia Wind Planning Areas*.

Under the auspices of the National Oceanographic Partnership Program (NOPP) and the President's Interagency Committee on Ocean Science and Resource Management Integration, the Renewable Energy Broad Agency Announcement, this study was conducted for BOEM as a baseline biological study of focal marine vertebrate species at two wind planning areas in the U.S. Southeast Atlantic coast section of the Outer Continental Shelf (OCS). The wind planning areas are part of the Beaufort (block NI18-04; North Carolina) and Brunswick (block NH 17-02; Georgia) lease blocks, within Onslow Bay and the Georgia Bight, respectively. These sites are coastal, shallow water habitats that are home to range of fish species, marine mammals, turtles, and sub-tropical coral reefs that have varying degrees of protected status or fisheries importance.

To address the occurrence of marine mammals and fishes and the ambient noise conditions, acoustic data were collected using three marine autonomous recording units (MARUs) at each of the North Carolina and Georgia sites. Acoustic data were recorded at 2 kHz in two consecutive deployments of the MARUs at each site, June 2012–April 2013.

We characterized the occurrence of North Atlantic right whales (*Eubalaena glacialis*), fin whales (*Balaenoptera physalus*), and humpback whales (*Megaptera novaeangliae*), black drum (*Pogonias cromis*), and oyster toadfish (*Opsanus tau*) by identifying the species-specific vocalizations. To evaluate the ambient noise conditions of the sites, acoustic data from each MARU were processed and presented in long duration spectrograms and power spectra. These two wind planning areas show a significant amount of bioacoustic activity. Right whales, black drum, and toadfish were detected across nearly the entire study period at the Georgia site, but on only a few days in North Carolina. Fin whales and humpback whales were detected only on a low number of days at both locations.

This report is available on CD from the Bureau of Ocean Energy Management, Gulf of Mexico OCS Region, for \$15.00, and free of charge as a pdf file downloaded from the BOEM Website. Copies can also be viewed at selected Federal Depository Libraries. The addresses are listed below.

To order a CD, use the Gulf of Mexico OCS Region contact information below and reference OCS Study BOEM 2015-026. To download a pdf copy, use the [Environmental Studies Program Information System](#) (ESPIS) and search on the study report number. In the near future, you will also be able to get this report also from the National Technical Information Service.

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