



Technical Announcement

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

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Characterization and Potential Impacts of Noise-Producing Construction and Operation Activities on the Outer Continental Shelf (OCS): Data Synthesis

[OCS Study BOEM 2014-608](#)

The Bureau of Ocean Energy Management (BOEM), Gulf of Mexico OCS, announces the availability of a new study report, *Characterization and Potential Impacts of Noise-Producing Construction and Operation Activities on the Outer Continental Shelf: Data Synthesis*.

This study characterizes specific sources of noise from BOEM-permitted actions associated with the construction and operation of an offshore wind facility and ambient noise measurements on the Atlantic OCS. These data on ambient and existing anthropogenic sounds will help quantify the relative contribution to ambient noise levels and, consequently, the potential impact(s) that introducing sound into the marine environment may have on biological marine resources. The objective was to record and analyze acoustic data near the Cape Wind site in Nantucket Sound and at a lease site in Delaware Bay that is under consideration by Bluewater Wind.

Constructing offshore renewable facilities will introduce a considerable amount of noise into the marine environment for a period. To better understand the cumulative effects of noise from renewable energy construction and development activities on the OCS, BOEM contracted this study to characterize all aspects of noise-producing activities during the construction and operation of an offshore wind facility. BOEM needs to understand the zone of influence from sound generated by these activities and to measure existing ambient noise levels in order to determine potential impacts (i.e., behavior, number of species present during activities, etc.) to marine mammals, sea turtles, fish, and the surrounding habitats.

This report describes the recording and analysis program, and provides results, discussion, and recommendations. Percentile-level descriptions of the ambient sound levels over 1 year at offshore Delaware Bay and Nantucket Sound were determined and compared with the envelope values of the Wenz curves. Both manual and automated detection and classification were performed on the recordings to identify prominent sources of sound. The acoustic recordings provide an accurate acoustic baseline that may be used for comparisons to ambient levels during wind turbine construction. These baseline descriptions can also be used for comparison with other sites. The deliverables include a final analyses report, Microsoft® PowerPoint® presentation, and CD of all processed and raw data collected.

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 2014-608. To download a pdf copy, use the Environmental Studies Program Information System and search using the study report number:

http://www.data.boem.gov/homepg/data_center/other/espis/espismaster.asp?appid=1.

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