BOEM
Bureau of Ocean Energy Management

FACT SHEET

Environmental Studies

Applied Science for Informed Decisions on Ocean Energy

The Bureau of Ocean Energy Management (BOEM) is responsible for overseeing renewable energy development on the outer continental shelf (OCS) in an environmentally sound manner. On the Atlantic and Pacific OCS, BOEM is contributing to the collection of information about the presence, distribution, and migratory pathways of marine mammals, sea turtles, and birds. BOEM is enhancing our understanding of important cultural resources such as shipwrecks from the Battle of the Atlantic through working with the Monitor National Marine Sanctuary. BOEM is also addressing information needs regarding important fishing activities through mapping of benthic habitats and evaluating the economic impact to fishing from offshore wind in selected areas. BOEM co-funds studies with states to address mutual information needs.

Atlantic Marine Assessment Program for Protected Species (AMAPPS)

BOEM is partnering with NOAA's National Marine Fisheries Service and the US Fish and Wildlife Service to collect data on the seasonal distribution and abundance of marine mammals, sea turtles, and seabirds through aerial and shipboard surveys. The goal of this initiative is to develop models and associated tools to provide seasonal, spatially-explicit density estimates of marine mammals, sea turtles, and seabirds in the western north Atlantic. BOEM will use the information to identify areas of high usage by these species and reduce conflicts with wind energy development. Concurrently, NOAA is also conducting telemetry studies, passive acoustic monitoring, and developing alternative survey methodologies. **Status:** Surveys started in 2010 and will continue through 2019. A final report for the first four years will be available in Spring 2017.

Fishery Physical Habitat and Epibenthic Invertebrate Baseline Data Collection

Baseline benthic habitat data are being collected from wind energy areas to inform consultations pursuant to the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act. Through its partnership with BOEM, NOAA's National Marine Fisheries Service is surveying the seafloor to identify sensitive benthic habitats for fish in current and proposed wind energy areas from Massachusetts to North Carolina. The data will allow for improved siting of wind projects, impact assessments, and provide a baseline to evaluate project-scale habitat surveys submitted by lessees. **Status:** A final report will be available in Fall 2016.

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Determining Offshore Use by Marine Mammals and Ambient Noise Levels Using Passive Acoustic Monitoring

BOEM and the State of Maryland are jointly funding a passive acoustic monitoring study in and around the offshore Maryland Wind Energy Area (WEA). Passive acoustic recordings allow for continuous monitoring of sound producing animals and can provide information on the daily cycles of behavior, habitat use, and regional distributions of marine animals, as well as provide information on inter-annual and seasonal variation. **Status:** Initiated in the fall of 2014, recording devices are currently in the water listening. Study results will be available in 2017.

Battle of the Atlantic

An inventory and evaluation of World War II vessel losses in this region is necessary information to support BOEM's consideration of historic properties as required under Sections 106 of the National Historic Preservation Act. BOEM and NOAA, Monitor National Marine Sanctuary (MNMS) have committed to a multi-year project to document the Battle of the Atlantic by conducting archaeological investigations on both Axis and Allied losses during World War II. This information is particularly timely and relevant as BOEM is currently considering renewable energy activities offshore North Carolina. **Status:** Data were collected from 2009 –2014. A final report will be available in fall 2016.

Integrative Statistical Modeling and Predictive Mapping of Seabird Distribution and Abundance on the Atlantic Outer Continental Shelf

Working with the National Ocean Service's National Centers for Coastal Ocean Science, BOEM is supporting the preparation and updates of maps of the statistical distribution of marine birds along the Atlantic Coast. Data sources for these maps include the Avian Compendium, AMAPPS and other sponsored surveys. The objective of this study is to provide easily understandable information to aid offshore wind development siting decisions and reduce the risk of impacts to birds. **Status:** Statistical modeling of 40 species is now available in the regional ocean data portals: Northeast Ocean Data Portal and Mid-Atlantic Regional Council on the Ocean Data Portal.

Renewable Energy *in situ* Power Cable Observation

Submarine transmission cables that power offshore oil platforms in the Pacific Region provide a unique opportunity to assess potential behavior and reaction of electromagnetic sensitive species to industry activities. Knowledge gained from this study will be directly applicable to renewable energy projects in any OCS planning area. **Status:** The final report has been released and may be found here: http://www.boem.gov/2016-008/

For more information: www.boem.gov/Renewable-Energy-Environmental-Studies/