Environmental Studies Program: Ongoing Study

Title	Marine Mammal and Sea Turtle Field Surveys and Marine Resource Characterization for Offshore Wind Energy Planning Offshore Rhode Island and Massachusetts (AT-22-x15)
Administered by	Office of Renewable Energy Programs
BOEM Contact(s)	Kyle Baker (kyle.baker@boem.gov)
Procurement Type(s)	Cooperative Agreement
Conducting Organization(s)	Massachusetts Clean Energy Center, New England Aquarium
Total BOEM Cost	$499,956
Performance Period	FY 2023-24
Final Report Due	April 28, 2024
Date Revised	August 8, 2023
PICOC Summary	
Problem	Need to develop a baseline of observations for protected species prior to wind energy development
Intervention	Collect surveys monthly for multiple years
Comparison	Will be compared to observations post development
Outcome	Determine whether there are shifts in patterns of protected species as a result of the presence of wind turbines
Context	Conducted off the coast of Massachusetts and Rhode Island

BOEM Information Need(s): BOEM integrates information into assessments for activities it authorizes with cumulative effects on threatened and endangered species. This information will facilitate the review of construction and operation plans by BOEM and the Commonwealth of Massachusetts by providing distribution and abundance data for key species. The information will also be used in consultations with NOAA for protected species. BOEM's regulations under the Outer Continental Shelf Lands Act as amended by the Energy Policy Act of 2005, the information from this study will help in BOEM's environmental assessments under the National Environmental Policy Act and the Endangered Species Act.

Background: BOEM oversees the exploration and development of oil, natural gas, and other minerals and renewable energy on the nations' Outer Continental Shelf (OCS). The program not only supports decisions made within the Department of the Interior, but also provides coastal states, tribes and local governments with the information necessary to ensure that all stages of offshore energy and mineral activities are conducted in a manner to protect both human and natural environments.
BOEM partnered with the Commonwealth of Massachusetts via a Cooperative Agreement for protected species field surveys in the renewable energy lease areas offshore Rhode Island and Massachusetts between 2012 and 2015. The final reports are now available at the links below. Phase two of the study will add an important third season of data for the Deepwater One Lease Area. This area was surveyed for only two seasons, while the Bay State Wind Lease Area and OffshoreMW Lease Areas located closer

to Martha's Vineyard, were surveyed for three seasons. Additionally, during Phase 2, BOEM and the Commonwealth address a key recommendation in the first report, and host a workshop in the fall/winter of 2017 to develop a framework to understand impacts to marine mammals from construction and operation of offshore wind. A key recommendation from the Phase 1 report stated: "We recommend some focused oceanographic studies in the Study Area (SA), in order to interpret the occurrence of endangered whales in the SA. Most importantly for future wind farm development, it will be important to separate two hypotheses. One, do wind farms alter the acoustic or physical characteristics in ways that cause displacement of whales to other areas? Two, are whale distributions food dependent, and the changes in distribution and/or behavior are due to changes in prey species in the area? Distinguishing between these two hypotheses will be important in the context of managing future development."

Objectives: The objective is to further establish baseline conditions for cetaceans and sea turtles in renewable energy lease areas in Southern New England and develop an understanding of the drivers of cetacean occurrence in the study area. In addition, the study develops a framework for understanding impacts to cetaceans from offshore wind energy development and operation.

Methods:

Major tasks:

1. Conduct and additional year of aerial surveys over the Deepwater One, Bay State Wind, and OffshoreMW Lease Areas to determine density and abundance estimates, large whales (with a focus on right, fin and minke whales) and turtles.

2. Automated vertical photography to capture smaller, cryptic species likely to be missed by observers scanning out to 2 nm. Distribution and abundance estimates of species sighted. Opportunistic vertical photography detection of mammals, sharks, fish and fixed fishing gear.

3. Conduct oceanographic studies to in order to interpret the occurrence of large cetaceans in the study area.

Specific Research Question(s):

What are the distributions of protected species in the Massachusetts and Rhode Island wind energy areas?

Current Status: Aerial surveys are underway.

Publications Completed: None

Affiliated WWW Sites: None