

ENVIRONMENTAL STUDIES PROGRAM: Ongoing Studies

Study Areas: North, South, and Mid-Atlantic

Administered By: Office of Renewable Energy Programs

Title: Fishery Physical Habitat and Epibenthic Invertebrate
Baseline Data Collection

Importance to BOEM: At present there is a lack of a systematic independent baseline benthic habitat characterization of offshore wind energy areas. This information is not only important for the evaluation and assessment of a lessees construction and operations plan, but also necessary for consultations with NMFS pursuant to the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act.

Total Cost: \$1,085,998

Period of Performance: FY 2013-2017

Conducting Organization(s): National Oceanic and Atmospheric Administration, Northeast Fisheries Science Center

BOEM Contact: [Brian Hooker](#)

Description:

Background: This project will build upon previous efforts to collect baseline habitat data and to analyze the data in the context of potential impacts from renewable energy development. There is a lack of standard regional or WEA scale baseline benthic habitat data that includes areas for potential wind energy development along the Atlantic OCS. Previous habitat characterization efforts have primarily been inshore or designed for other specific purposes in areas that do not overlap with potential wind energy lease areas.

The study will assess and characterize benthic habitat and the epibenthic macro-invertebrate community in existing and proposed WEAs from Massachusetts to North Carolina via multibeam sonar, and optical (still and video) imaging of the seafloor. This survey will collect data allowing the selection of appropriate control study sites and setting a baseline of macrofaunal species presence, abundance, and sediment/seabed type. This study may include analysis of previously collected data of similar type as well as new data collection and analysis.

The study will conduct multibeam sonar data and imaging surveys (video and still photography) of benthic habitat at present and proposed WEAs. Currently, 11 Wind Energy Areas (WEAs) have been identified for survey sampling in Massachusetts, Rhode Island, New Jersey, Delaware, Maryland, and Virginia. Additionally, North Carolina has identified 3 potential areas off its coast and areas may be identified in Maine, New York, and South Carolina depending on

the availability of funds. Sampling resolution may be increased based upon diversity of habitat types found. The survey will use high resolution geophysical surveys, videography, and still imagery to characterize the benthic habitat. This survey will provide distribution and density estimates of prevalent megafauna and a classification of substrate type across the survey domain. The number of stationary quadrats per station and/or length of survey tows will be refined in the project plan. Final products of this project will include at a minimum, a report characterizing the benthic habitat in the identified wind energy areas, a data catalog of video and still imagery, and the classification of biological and physical properties of benthic habitat.

Objective: The objective of this study is to establish baseline benthic habitat characteristics at regional/WEA scales. This data would allow for improved siting, impact assessments, and provide a baseline to evaluate project-scale habitat surveys submitted by lessees.

Table 1. Progress as of May 31, 2015 and projected completion dates for tasks to complete project goals. “C” indicates completed tasks, years “2015” and “2016” indicate expected completion dates. Blanks indicate tasks not yet scheduled.

phase	data type	Wind Energy Areas							
		MA	RIMA	NY	NJ	DE	MD	VA	NC-KH
physical	acoustic mapping	2015	C	2015	2015		C	C	C
	photo survey collected/analyzed	C	C	C	C		C		
	sediment analysis performed	C	C	C	C		C	C	2015
	hydrological survey data compiled	C	C	C	C	C	C	C	C
biological	benthic infauna sampled/analyzed	C	C	C	C		C	C	2015
	benthic epifauna sampled/analyzed	C	C	C	C		C	C	2015
	fish survey data assembled	C	C	C	C	C	C	C	C
integrate	physical habitats defined	2016	2016	2016	2016		C	2016	2016
	biotic habitats defined	2016	2016	2016	2016		P	2016	2016
	integrated habitat model	2016	2016	2016	2016		P	2016	2016
	habitat maps created	2016	2016	2016	2016		2016	2016	2016

Current Status: The interagency agreement was awarded on July 16, 2013. Field work is underway in several WEAs.

Final Report Due: July 2017

Publications: [Maryland Wind Energy Area Interim Report](#)

Affiliated Web Sites: None.

Revised Date: January 23, 2017