ENVIRONMENTAL STUDIES PROGRAM: Ongoing Studies

Region: Atlantic

Planning Area(s): North, Mid, and South Atlantic

Title: Fishery Physical Habitat and Epibenthic Invertebrate Baseline Data Collection

BOEM Cost: $1,085,998 **Period of Performance:** FY 2013-2015

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 includes 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.

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.

Current Status: The interagency agreement was awarded on July 16, 2013. Field work is continuing in several WEAs. An interim report for the Maryland WEA was submitted in January 2015 and is under review.

Final Report Due: June 16, 2015

Publications: Interim Report: Benthic Habitat Assessment of the Maryland WEA (Draft January 2015).

Affiliated Web Sites: None.

Revised Date: February 13, 2015

ESPIS: Environmental Studies Program Information System
All *completed* ESP studies can be found here:
http://www.data.boem.gov/homepg/data_center/other/espis/espisfront.asp