

Environmental Studies Program: Ongoing Study

Title	Southern New England Cooperative Ventless Trap Survey (NSL #AT 17-03)
Administered by	Office of Renewable Energy Programs
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Conducting Organizations(s)	University of Rhode Island, Graduate School of Oceanography
Total BOEM Cost	\$1,342,691
Performance Period	FY 2013–2020
Final Report Due	July, 2020
Date Revised	February 7, 2020
PICOC Summary	
<i>Problem</i>	What is the baseline characterization of the lobster/Jonah crab resource in the Rhode Island/Massachusetts Wind Energy Area.
<i>Intervention</i>	Capture, measure, and tag lobsters and Jonah crab throughout the lease area using fishermen's knowledge.
<i>Comparison</i>	This is a control to be compared to a future state.
<i>Outcome</i>	A baseline understanding of lobster and Jonah crab presence/abundance in the lease area.
<i>Context</i>	Wind energy development area offshore Rhode Island.

BOEM Information Need(s): Information about the seasonal and spatial patterns of the economically important lobster and Jonah crab fisheries will be used to evaluate any changes in distribution that result from the placement of offshore wind facilities in the area.

Background: The American lobster fishery is one of the most valuable fisheries in southern New England, producing nearly \$70 million in revenue annually (Atlantic States Marine Fisheries Commission, 2009). Massachusetts and Rhode Island are the primary contributors to the southern New England lobster fishery, supporting fleets of 1500 and 250 vessels, respectively (Dean, 2010; Hasbrouck et al. 2011). In addition to nearly 2000 commercial fishing jobs, the southern New England lobster fishery also sustains a variety of support businesses, such as trap-builders, gear suppliers, bait and ice dealers, shipyards, fuel companies, engine sales and repair businesses, and marine electronic retailers.

The Southern New England Cooperative Ventless Trap Survey (SNECVTS) aims to develop a baseline for measuring the cumulative effects of offshore development offshore Rhode Island and Massachusetts, as well as contribute to the assessment of the southern New England lobster stock, which is currently at a low level of abundance (Atlantic States Marine Fisheries Commission, 2010). The proposed study is needed to

distinguish the potential effects of offshore energy development from the effects of fishing and other population stressors (Schmitt & Osenberg, 1998). To the extent possible, this project will follow Atlantic States Marine Fisheries Commission survey protocols and adhere to the Atlantic Coastal Cooperative Statistics Program data requirements.

This project will help to fill a data gap that exists between state surveys, conducted within three miles of the coast, and Federal surveys, conducted in deep waters offshore (>30 miles). The objective is to establish a cooperative ventless trap survey to monitor the potential effects of offshore renewable energy development and to contribute to lobster stock assessment. Two years of survey work were completed in 2015, an additional year was completed in 2018.

Objectives:

- Establish a ventless trap survey protocol to assess the potential impacts of wind energy development offshore Rhode Island and Massachusetts.
- Determine the seasonal and spatial patterns of lobster abundance within these development areas.
- Conduct three years of pre-development monitoring that will allow Before-After and Control-Impact (BACI) comparisons to be made. This monitoring survey will establish pre-construction conditions. Continuation of monitoring during construction and post-construction will assess possible impacts in the context of a regional database.

Methods: The sampling design employed in this project is consistent with Atlantic States Marine Fisheries Commission ventless trap survey, in which stations are selected randomly at the start of the season and are then retained for the duration of the year. New stations are then randomly selected each year. Maintaining fixed locations approximates the operations of commercial lobstermen, keeps the locations occupied, and reduces the time spent moving gear.

Specific Research Question(s): What are the specific research questions this study proposes to address? If there is more than one question, use a numbered list.

Current Status: The field work for this final year of baseline work has been completed. Report writing and information outreach will continue in 2019 and 2020.

Publications Completed: Put citations here, following the format of the References section below.

Collie, J.S. and King, J.W. 2016. Spatial and Temporal Distributions of Lobsters and Crabs in the Rhode Island Massachusetts Wind Energy Area. US Dept. of the Interior, Bureau of Ocean Energy Management, Atlantic OCS Region, Sterling, Virginia. OCS Study BOEM BOEM 2016-073. 48 pp

Affiliated WWW Sites: <https://www.boem.gov/Renewable-Energy-Ongoing-Studies/>.

References:

Atlantic States Marine Fisheries Commission (ASMFC). 2009. American Lobster Stock Assessment. <http://www.asmfc.org/species/american-lobster> accessed Accessed April 16, 2014.

Atlantic States Marine Fisheries Commission (ASMFC). 2010. Recruitment failure in the southern New England lobster stock. Prepared by the American Lobster Technical Committee, Atlantic State Marine Fisheries Commission, 58 pp.

Dean, M.J. 2010. Massachusetts Lobster Fishery Statistics for 2006. Technical report of the Massachusetts Division of Marine Fisheries, Commonwealth of Massachusetts. 30 pp.

Hasbrouck, E.C, Scotti, J., Stent, J. and Gerbino, K. 2011. Rhode Island commercial fishing and seafood industries : The development of an industry profile. 124 pp.

Schmitt, R.J. and Craig W. Osenberg. 1996. *Detecting Ecological Impacts: Consents and Applications in Coastal Habitats*. Academic Press. San Diego, California. 401 p.