

Office of Renewable Energy Programs: Ongoing Studies

Study Area(s): Atlantic

Administered By: Office of Renewable Energy Programs

Title: Tracking Northern Long-Eared Bat Offshore Foraging and Migration Activities

BOEM Information Need(s) to be Addressed: Information from this study will be used to inform Endangered Species Act (ESA) consultations with the U.S. Fish and Wildlife Service (USFWS) and National Environmental Policy Act (NEPA) analyses on the risk of offshore wind development projects on the Atlantic Outer Continental Shelf (OCS) to the Northern Long-eared Bat.

Total Cost: \$94,699

Period of Performance: FY 2015-2016

Conducting Organization(s): U.S. Fish and Wildlife Service

BOEM Contact(s): [Dr. David Bigger](#)

Description:

Background: The Bureau of Ocean Energy Management (BOEM) is responsible for managing energy and mineral resources on the OCS. BOEM has a responsibility under the ESA to assess the risks of offshore wind energy development to listed species. To inform these assessments, BOEM has several completed investigating the potential risks of offshore energy development to bats on the Atlantic OCS (<http://www.boem.gov/Renewable-Energy-Environmental-Studies/>). Recently, the Northern Long-eared Bat (*Myotis septentrionalis*) population throughout US has been devastated by white noise syndrome, and as a result, this species is now listed as [threatened](#) under the ESA. It is well known that some bat species fly over the open ocean during migration (e.g., Hatch et al., 2013) and that non-migratory cave bats, such as the Northern Long-eared Bat, do use islands like Martha's Vineyard for roosting in the summer. However, it is not known whether these bats migrate across the OCS to the mainland or travel from island-to-island. Nano-tag transmitter technology can be used to detect and track of individual bats (Pelletier et al., 2012). Knowing when and under what conditions bats, like the Northern Long-eared Bat, arrive and depart from islands would ultimately improve risk assessments of offshore wind energy development to bats.

Objectives: This study will use nano-tag transmitter technology and a network of receivers to investigate the risk of offshore wind energy development to the Northern Long-eared Bats.

Methods: Mist-netting techniques will be used to capture bats in the summer on Martha's Vineyard. Nanotag series coded radio transmitters will be attached to up to 20 bats. A combination of hand held receivers will be used to track individual bat movements to roost trees to characterize roosting habitat. In addition, on-shore and

off-shore bat movement will be tracked through the fall by 2 towers placed on Martha's Vineyard and one on Naushon Island (part of the Elizabeth Island chain). These towers will also collect data other tagged birds (e.g., roseate terns and piping plovers) and bats from other studies that may pass within detection range.

Current Status: Bats were captured and tracked during the 2015 and 2016 field seasons.

Final Report Due: February 6, 2017

Publications Completed:

Johnson, L., L. Baldwin, Z. Dowling, J. Reichard, and S. vonOettingen. 2016. Maternity and Late Summer Roost Sites of the Threatened Northern Long-eared Bat on the Island of Martha's Vineyard, MA. Annual Meeting of the Northeast Bat Working Group, Baltimore, MD. (<http://www.nebwg.org/Resources/NEBWGProgram2016.pdf>)

Affiliated WWW Sites: <http://biodiversityworksmv.org/our-projects/northern-long-eared-bats/>

Revised Date: January 27, 2017