

Tracking Movements of Endangered Roseate Terns and Threatened Piping Plovers in the NW Atlantic

David Bigger, Ph.D.
Avian Biologist

Atlantic

(707) 787-1802
david.bigger@boem.gov



BOEM Information Need

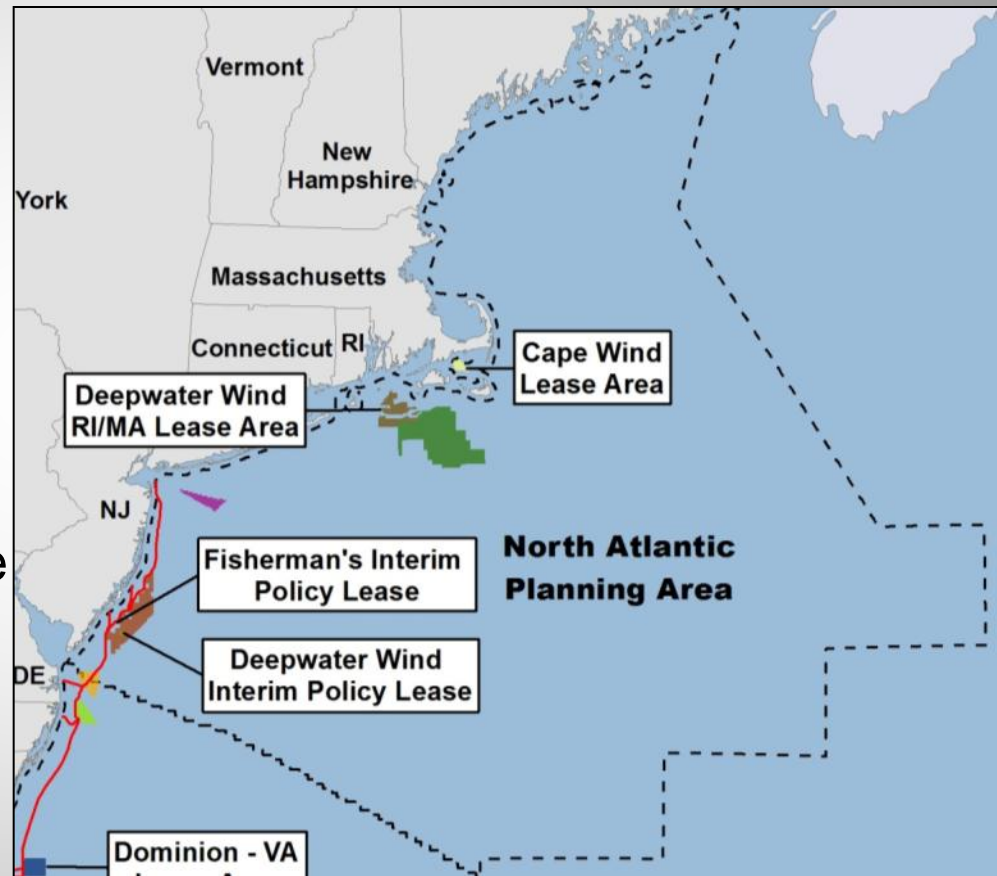
- ESA consultations & NEPA analyses

Date Information is Required

- Now

Study's Objectives

- Describe movement within the planning area during the breeding, staging and migration periods.



Pilot study: Tracking offshore occurrence of common terns and American oystercatchers with VHF Arrays ([AT-13-01](#))

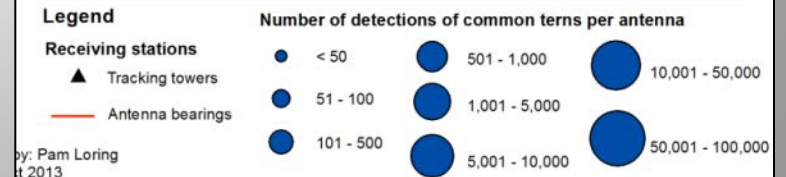
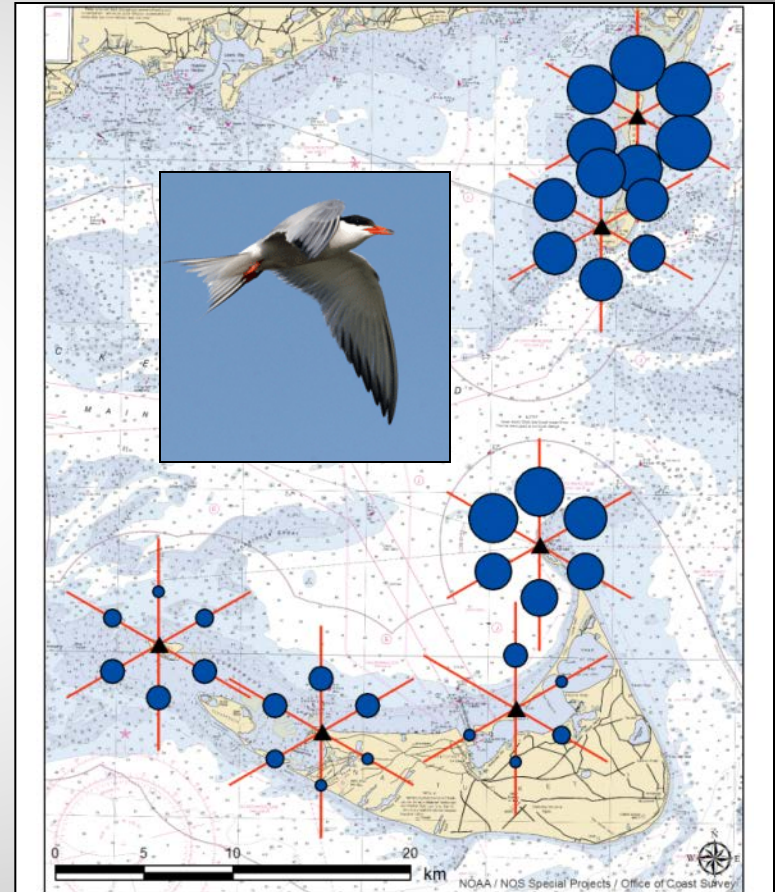
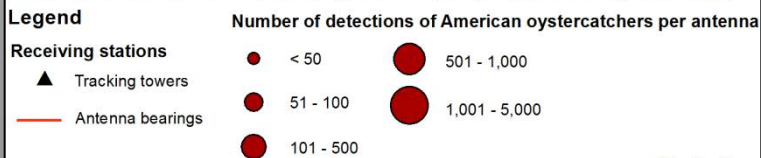
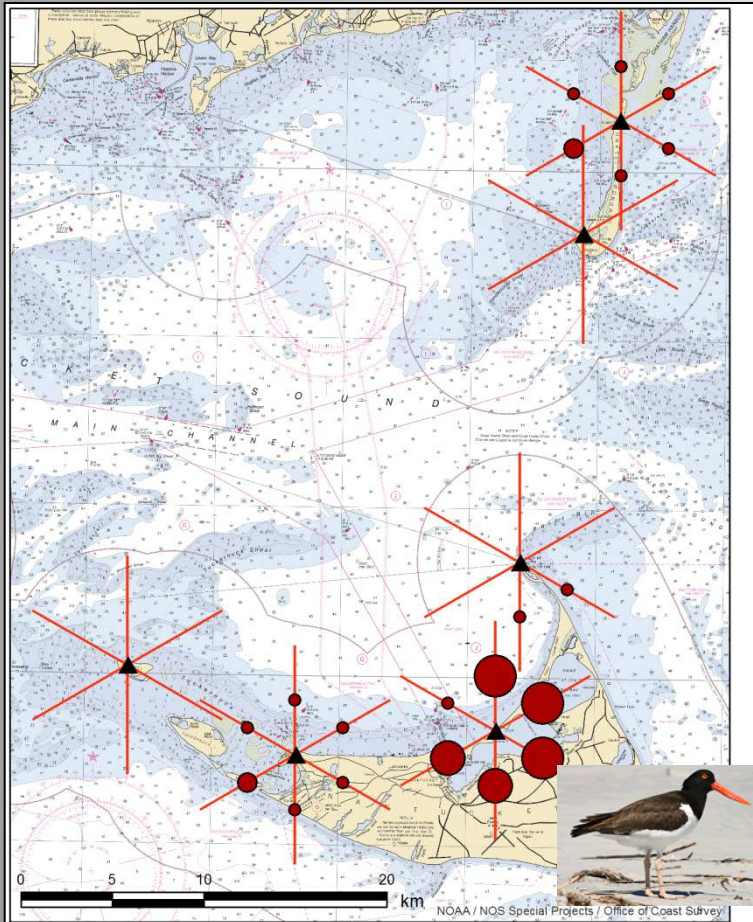
- Interagency agreement with USFWS in collaboration with MDFW and UMass Amherst
- **Objectives**
 - Describe fine scale movements in and near Nantucket Sound during breeding, staging, and migration periods.
 - Refine Nanotag technology use with automated tracking arrays.
 - Develop the safest and most effective methods for roseate terns and piping plovers.

Atlantic Region

- Captured birds and attached Nanotags
- Monitored productivity
- Tracked movements on land, boat, and aerial platforms.

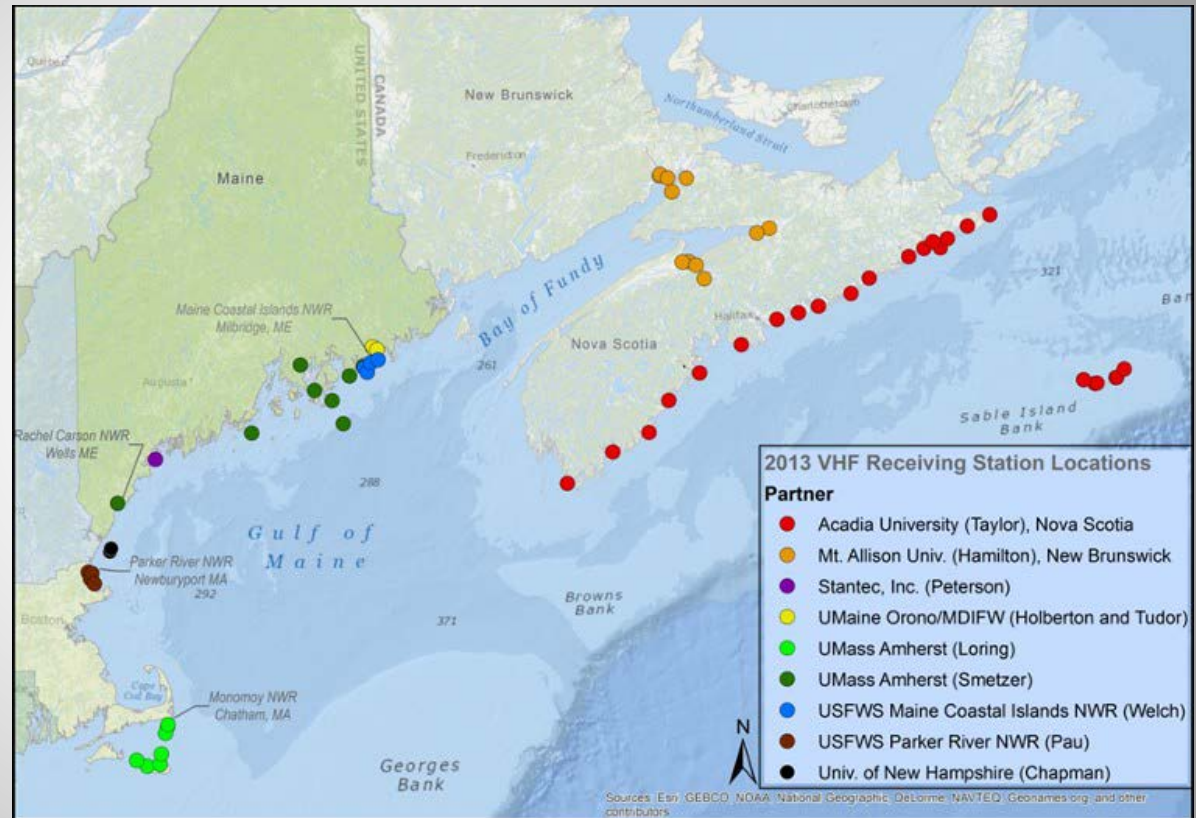


Atlantic Region



Stations were tuned to detect tagged birds from other telemetry studies

- semipalmated plovers
- black-bellied plovers
- piping plovers
- red knots
- black-poll warblers
- red-eyed vireos
- saltmarsh sparrows
- Ipswich sparrows



Atlantic Region

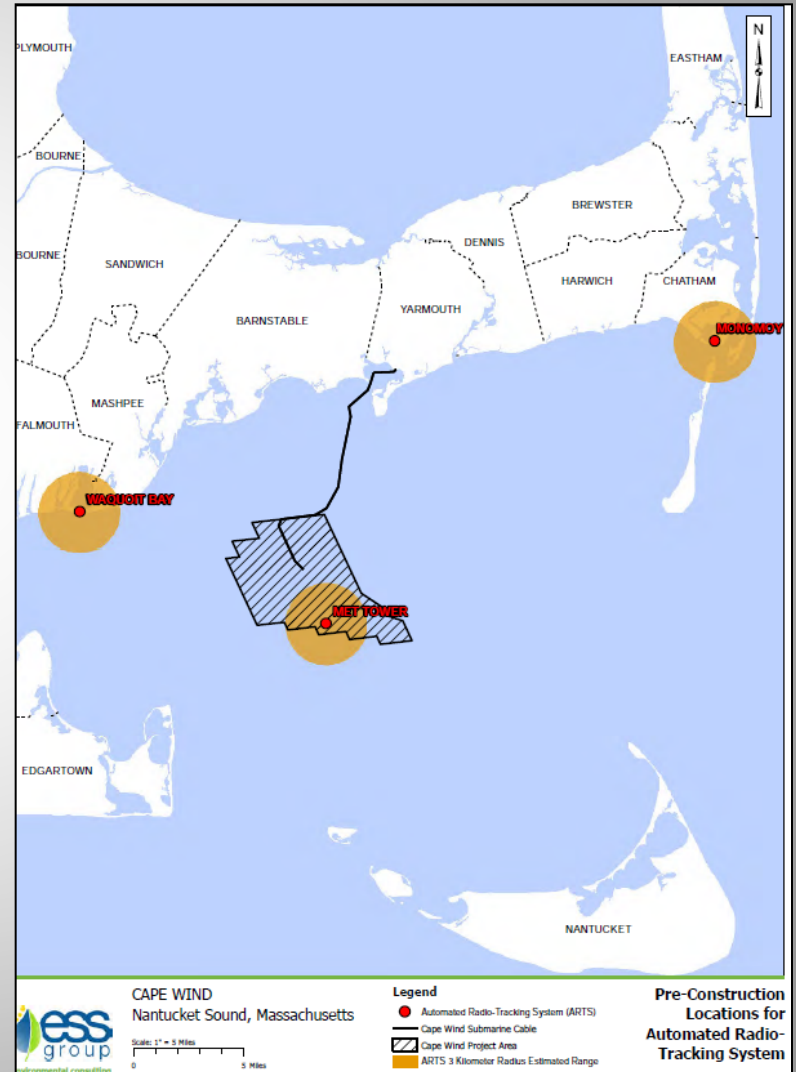
Cape Wind Avian Bat Monitoring Plan

Pre-construction telemetry study

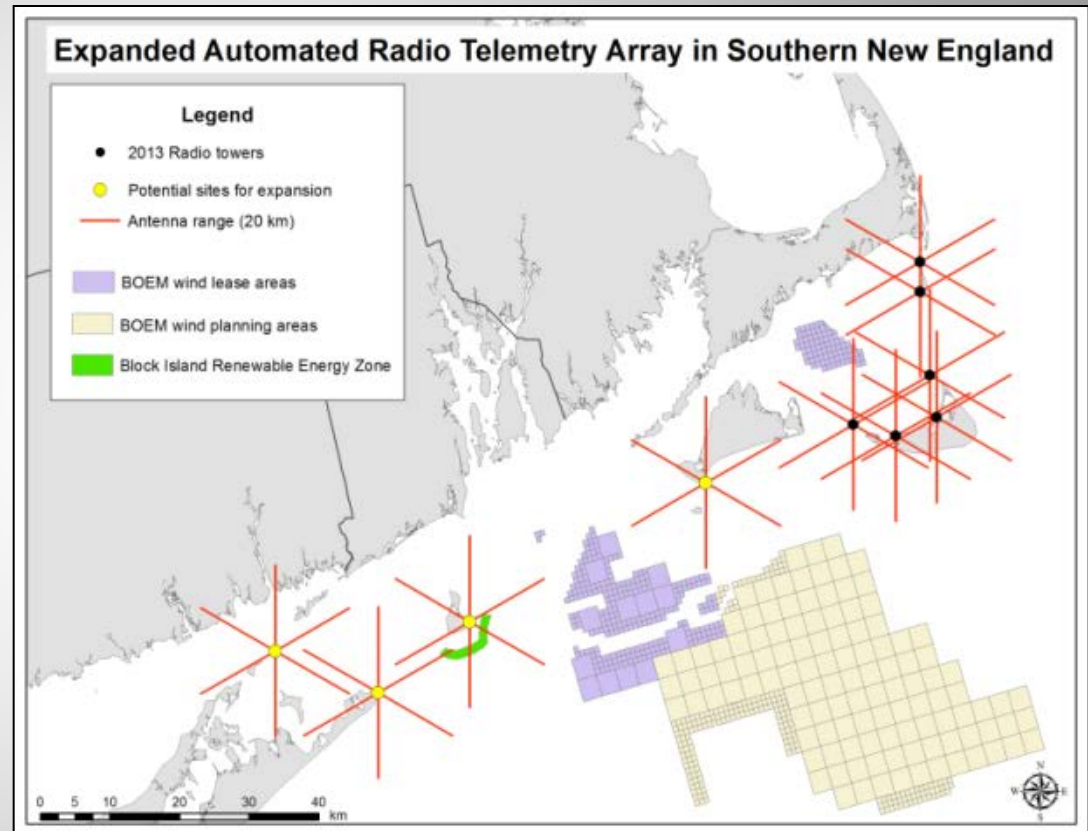
- Nanotags on 12 common terns and 12 semipalmated plovers
- 3 automated tracking stations and aerial surveys

http://www.boem.gov/uploadedFiles/BOEM/Renewable_Energy_Program/Studies/Cape%20Wind%20ABMP.pdf

Atlantic Region



- Tag 150 common terns
- Monitor productivity
- Deploy additional tracking stations
- Develop movement models to estimate proportion of tagged birds on the OCS and duration



Atlantic Region

Study's Objectives:

Describe movement within the planning area during the breeding, staging and migration periods.

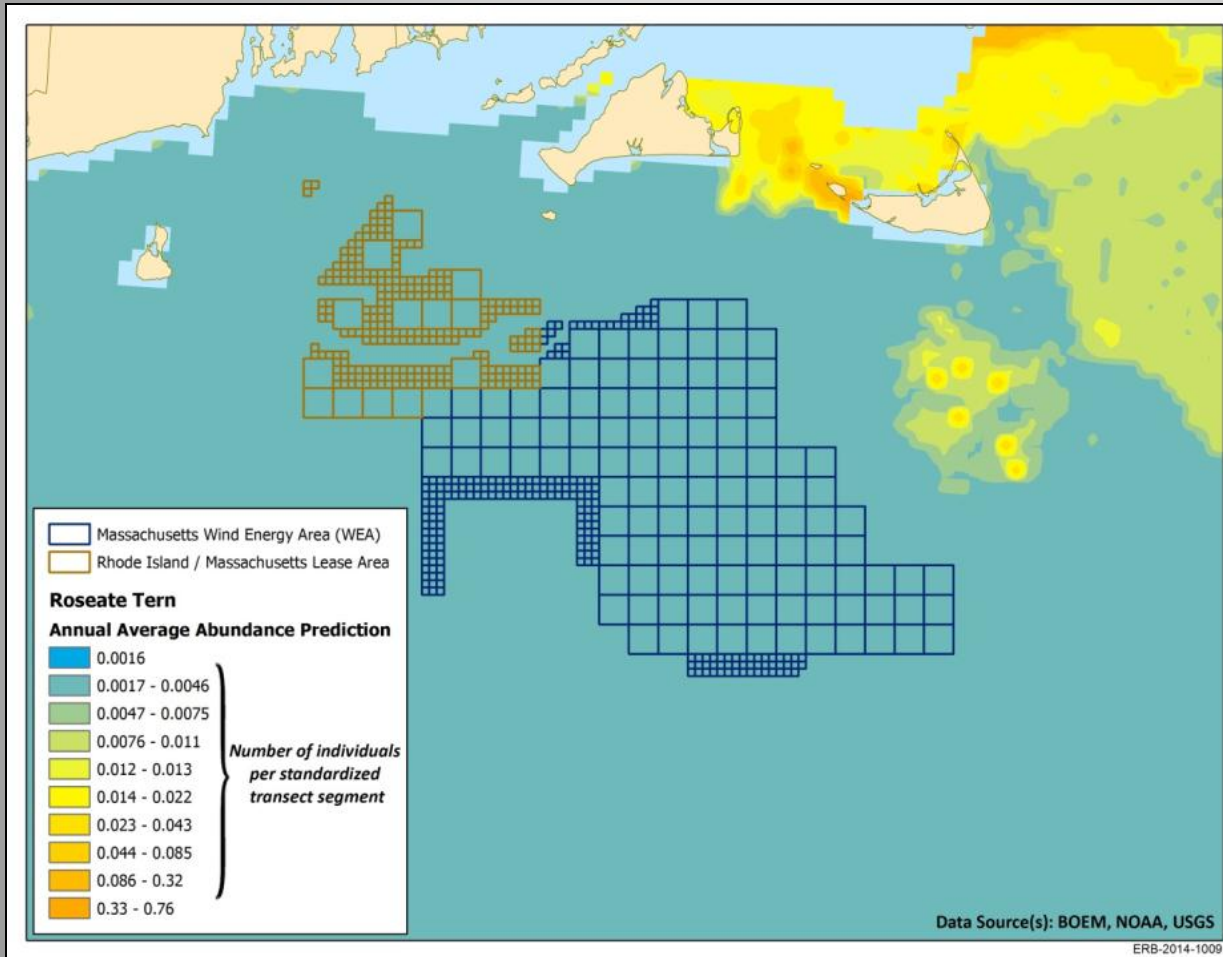


Study's Methods:

- Continue collaboration, use existing infrastructure & similar methods.
- 50-100 common terns (control), 50-100 roseate terns & 25-50 piping plovers.



Atlantic Region



[Compendium of Avian Information: Part 2](#)

- Kinlan, B.P., R. Rankin, A. Winship, and C. Caldow. 2013. In press. Modeling At-Sea Occurrence and Abundance of Marine Birds to Support Mid-Atlantic Marine Renewable Energy Planning. U.S. Department of the Interior, Bureau of Ocean Energy Management, Herndon, VA.

Atlantic Region