Environmental Studies Program: Ongoing Study

Title	Ecological Baselines Studies of U.S. Outer Continental Shelf (AT 15-05)
Administered by	Office of Renewable Energy Programs
BOEM Contact(s)	David Bigger (david.bigger@boem.gov)
Principal Investigators(s)	Name and e-mail
Conducting Organizations(s)	Biodiversity Research Institute; LGL Ecological Associates, Inc.; and Normandeau, Inc.
Total BOEM Cost	$3,890,736 (Task 1)
Performance Period	FY 2017-2021
Final Report Due	Task Order 1: February 2020
Date Revised	February 5, 2020
PICOC Summary	
Problem	Baseline ecological data of wildlife species on the OCS are limited. Collection of these data are essential in order to understand the potential effects of BOEM-related activities on wildlife species.
Intervention	Conduct high-resolution aerial surveys, boat-based wildlife surveys, and passive acoustic monitoring to collect ecological data.
Comparison	These data will help form a baseline for future comparisons.
Outcome	Baseline line data to estimate density and distribution of wildlife of marine mammals, sea turtles, and seabirds on the OCS species.
Context	All BOEM regions on the OCS.

BOEM Information Need(s): Baseline information is needed on the distribution and abundance of marine mammal, bird, and turtle species to assist in the environmental review of sites for potential energy development on the OCS. The data collected from this effort will be used to inform NEPA analysis, region specific environmental assessments, review of applications for permits, and ESA consultations.

Background: Given the vastness of the United States OCS and variability in marine wildlife distributions, comprehensive baseline surveys like the ones conducted in the Mid-Atlantic for the Department of Energy (DOE) (http://www.briloon.org/MABS) and in BOEM's regional efforts (e.g., AMAPPS and GoMMAPPS) are critical to improving our understanding of seabird, marine mammal, and turtle distributions on the OCS. The following are the types of survey work a Contractor may be required to perform under a task order:

High-Resolution Aerial and Boat-based Wildlife Surveys: The Contractor will develop a field plan and conduct surveys for wildlife and to develop spatially explicit density estimates. The surveys may include BOEM Wind Energy Areas, BOEM lease areas, BOEM "Call Areas" (potential Wind Energy Area) and areas of biological interest. The

approach shall be consistent with BOEM's Survey Guidelines (http://www.boem.gov/Survey-Guidelines/).

Acoustic Monitoring for Marine Mammals: The Contractor will develop a field plan to conduct acoustic monitoring of delphinoid and baleen whales using a boat or drone towed hydrophone array and/or a fixed recording array. The surveys may include BOEM Wind Energy Areas, BOEM lease areas, BOEM "Call Areas" (potential Wind Energy Area) and areas of biological interest.

Objectives: The objective of this study is to obtain contractor support to design and conduct multi-season boat-based and aerial-digital marine wildlife surveys and to establish an ecological baseline describing the distribution and abundance of marine seabirds, mammals and turtles on the United States OCS.

Methods: The methods used will be dependent on the type of analyses to be preformed and defined within each task order.

Task Order 1: The objectives of this task order are to develop a field plan and to conduct multi-season aerial-digital surveys for seabirds, marine mammals and sea turtles and determine their distribution and abundance from the Virginia-North Carolina border to the South Carolina-Georgia border. The surveys cover an area from the federal-state boundary (3 nautical miles) to the 30 meter isobath. The aim is to enhance (but not duplicate) existing efforts –like AMAPPS which uses conventional aerial surveys. The effort coordinates with USFWS and others doing similar and aim to include data from outside sources. Data collected from baseline surveys will be added into databases like the Compendium of Avian Occurrence Information database and the Ocean Biogeographic Information System Spatial Ecological Analysis of Megavertebrate Populations (OBIS-SEAMAP). Ultimately, baseline data could then be used to update avian and other wildlife distributional maps like those developed through BOEM's interagency agreement with NOAA (Modeling At-Sea Density of Marine Birds to Support Atlantic Marine Renewable Energy Planning Appendix A; Appendix B; Appendix C; Appendix D) and distributed to the regional planning bodies (e.g., http://midatlanticocean.org/ and http://devel.northeastoceandata.org/) and http://marinecadastre.gov/.

Specific Research Question(s): How are wildlife species within each region using the OCS?

Current Status: Normandeau was awarded the first Task Order on September 27, 2017. The award kickoff meeting was held on October 20, 2017, and the field survey plan was finalized on January 8, 2018. Four seasonal surveys completed in 2018. In 2019, BOEM exercised the option for an additional year of seasonal surveys. The last of the surveys was flown in February 2020. Preliminary results can be viewed online.

Publications Completed: None to date.

Affiliated WWW Sites: https://remote.normandeau.com/boem_overview.php

References: None to date.