

Surveying all avian and marine wildlife over a vast area in a single effort using high-resolution aerial imagery

Ann Pembroke, Julia Robinson Willmott and Stephanie McGovern.

How does one efficiently document the distribution of a wide range of wildlife – birds, marine mammals, sea turtles, fishes – in a 16,000 square mile area to support marine spatial planning for offshore energy? The world's largest and most detailed digital aerial surveys of offshore wildlife are currently being carried out off the coast of New York state and have already captured remarkable images of dozens of species. By the end of the seasonal survey we will have captured almost four million ultra-high resolution images.

The three-year study is being carried out by Normandeau Associates and APEM Ltd on behalf of the New York State Energy Research and Development Authority (NYSERDA) as part of the recently launched *New York State Offshore Wind Blueprint* that lays out the approach to the Offshore Wind Master Plan. This study will provide baseline data as the state pursues ambitious plans to secure 50 per cent of its electricity supply from renewable sources by 2030.

As well as being the largest offshore digital wildlife surveys ever undertaken, the surveys are also gathering the highest resolution images ever for a project of this scale. Stunning images captured to date include sharks circling large shoals of fish, pods of dolphins, some with calves, dense shoals of rays from which four species have been identified, four species of sea turtle and large numbers of individual sharks representing 13 species. Also identified have been four species of whales, and 26 bird species including petrels and shearwaters, bald eagle, gulls and terns.

This presentation will outline the methods being used for data collection, analyses and mapping, and provide the latest information on animal presence in the area, particularly of threatened and endangered species and other fauna of interest.

ACKNOWLEDGEMENTS

This poster was prepared in the course of performing work contracted for and sponsored by NYSERDA. The opinions expressed herein do not necessarily reflect those of the State of New York.