

Digital Aerial Baseline Survey of Marine Wildlife in Support of Offshore Wind Energy

Fall 2016 Target Extraction Summary Report



NYSERDA



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Prepared for

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NYSERDA

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Introduction

Target extraction for the Fall 2016 survey for the NYSERDA Offshore Planning Area (OPA) and Wind Energy Area (WEA) was started in December 2016. All target extraction and quality control of target extraction was completed by Monday, 27 February 2017.

Overview

Data were collected for the OPA including a 300-m buffer and the WEA including a 4-km buffer. For the OPA, this buffer ensures complete coverage to the boundary of the OPA. Because of the relatively small size of the WEA, the 4-km buffer ensures that biota that may pass through the WEA are more likely to be captured and also provides a smaller scale perspective on distribution than comparing to the OPA as a whole. The vast majority of the images collected contained no evidence of living organisms. Of the 407,075 images analyzed, 402,418 were blank. Of the 40,598 (10.09%) blank images that were re-examined, 28 were determined to contain targets (living organisms) that had been missed in the initial target extraction. The overall quality rate of the initial extraction was 99.93%, well within the quality control criteria established for the project. Images found to contain organisms were transmitted to taxonomists for identification.

Total Images and Area Surveyed

Area	Total Area (km ²)	Survey Area		
		Area (km ²)	Percent Coverage ^b	Number of Images
WEA ^a	850.92	94.83	11.14%	10,996
OPA	43,745.20	3,890.58	8.89%	396,079
Total	44,596.12	3,985.41	8.94%	407,075

^a This table only represents the imagery that was processed and analysed per the scope of work. An additional 10% coverage was collected for the WEA but is being stored if needed for future processing and analysis.

^b Percent coverage of the entire OPA including the WEA imagery.

Blank Images Detected

Area	Number of Images in Survey Area	Blank Images			
		Number	Percent	Number QC'd	Percent QC'd
WEA	10,996	10,944	99.53	1,262	11.53
OPA	396,079	391,474	98.84	39,336	10.05
TOTAL	407,075	402,418	98.86	40,598	10.09

Targets Detected

Taxonomic Group	Total (OPA and WEA)	OPA	WEA
Avian	12,352	12,245	107
Large Bony Fish	198	184	14
Fixed Structures	3	3	0
Marine Mammals	1,118	1,118	0
Rays	4	4	0
Sharks	4	4	0
Turtles	40	39	1
Vessels	16	16	0
Unknown/Other	0	0	0
TOTAL	13,735	13,613	122

Quality Control Results

Number of Images for QC	Number of Images QC'd as Blank	Number of Images QC'd Not Blank	% Agreement Reached
40,598	40,569	28	99.93

Order Found in Image	Number of Individuals	Number of QC'd Images Containing Species Group
Birds	23	23
Fish	3	3
Marine Mammals	2	2
TOTAL	28	28