

February 2018 Survey Report for New York Bight Whale Monitoring Aerial Surveys

Contract No. C009926

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TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS	ii
1.0 INTRODUCTION	1
2.0 EFFORT.....	1
3.0 SIGHTINGS	4
3.1 LARGE WHALE SIGHTINGS	4
3.2 OTHER MARINE MAMMAL SIGHTINGS.....	9
3.3 SEA TURTLE SIGHTINGS.....	9
3.4 UNUSUAL OR RARE SIGHTINGS.....	9
3.5 STRANDING AND ENTANGLEMENT REPORTS.....	9
3.6 OTHER SIGHTINGS	10
4.0 PROBLEMS ENCOUNTERED.....	10
5.0 PHOTOGRAPH.....	11

FIGURES

Figure 1. Survey Lines Flown by Effort Type During the February 2018 Survey.....	3
Figure 2. Locations of All Groups of Large Whales Sighted During the February 2018 Survey ...	5
Figure 3. Locations of All Groups of Marine Mammals Sighted During the February 2018 Survey	6
Figure 4. “Zoomed-In” Map of Overlapping Sightings During the February 2018 Survey.....	7
Figure 5. “Zoomed-In” Map of Overlapping Sightings During the February 2018 Survey.....	8
Figure 6. North Atlantic right whale, photo credit: Mari Smultea (Smultea Environmental Sciences)	11

TABLES

Table 1. Flight Time and Distance by Effort Type During The February 2018 Survey.....	2
Table 2. Number of Large Whale Species Sighted During the February 2018 Survey.....	4
Table 3. Other Marine Mammal Sightings During the February 2018 Survey	9

ACRONYMS AND ABBREVIATIONS

hr	Hour
km	Kilometer
SE	Standard error

1.0 INTRODUCTION

Tetra Tech, Inc., in coordination with Smultea Environmental Sciences, LLC and Aspen Helicopters, Inc. (collectively, the “survey team”), is contracted by the New York State Department of Environmental Conservation (NYDEC), Division of Marine Resources to conduct 36 monthly line-transect aerial surveys focused on the six large whale species most likely to occur in the New York Bight. This survey report documents the survey effort and sightings from the February 2018 survey, representing the 12th of the 36 surveys scheduled to occur under this contract.

2.0 EFFORT

The February 2018 survey occurred from February 5 – 9, 2018. A total of seven flights were conducted, representing a total of 19.18 hours in the air (i.e., from wheels up on the airport tarmac to wheels down on the tarmac for each flight). A total of 4,034.9 kilometers (km) were flown and included completion of 100 percent of the 15 transect lines. Flights were not conducted on February 9 due to severe weather conditions. [Figure 1](#) shows the survey lines completed. [Table 1](#) presents the flight time durations and distances by effort type.

TABLE 1. FLIGHT TIME AND DISTANCE BY EFFORT TYPE DURING THE FEBRUARY 2018 SURVEY

Survey Dates	Hours and Kilometers (km) by Type of Flight Effort										Total	
	Overland		Transit		Transect		Circling		Cross-Leg			
	hr	km	hr	km	hr	km	hr	km	hr	km	hr	km
February 5-9, 2018	1.5	265.91	4.46	1,086.68	11.7	2,371.60	0.7	139.96	0.82	170.75	19.18	4,034.9

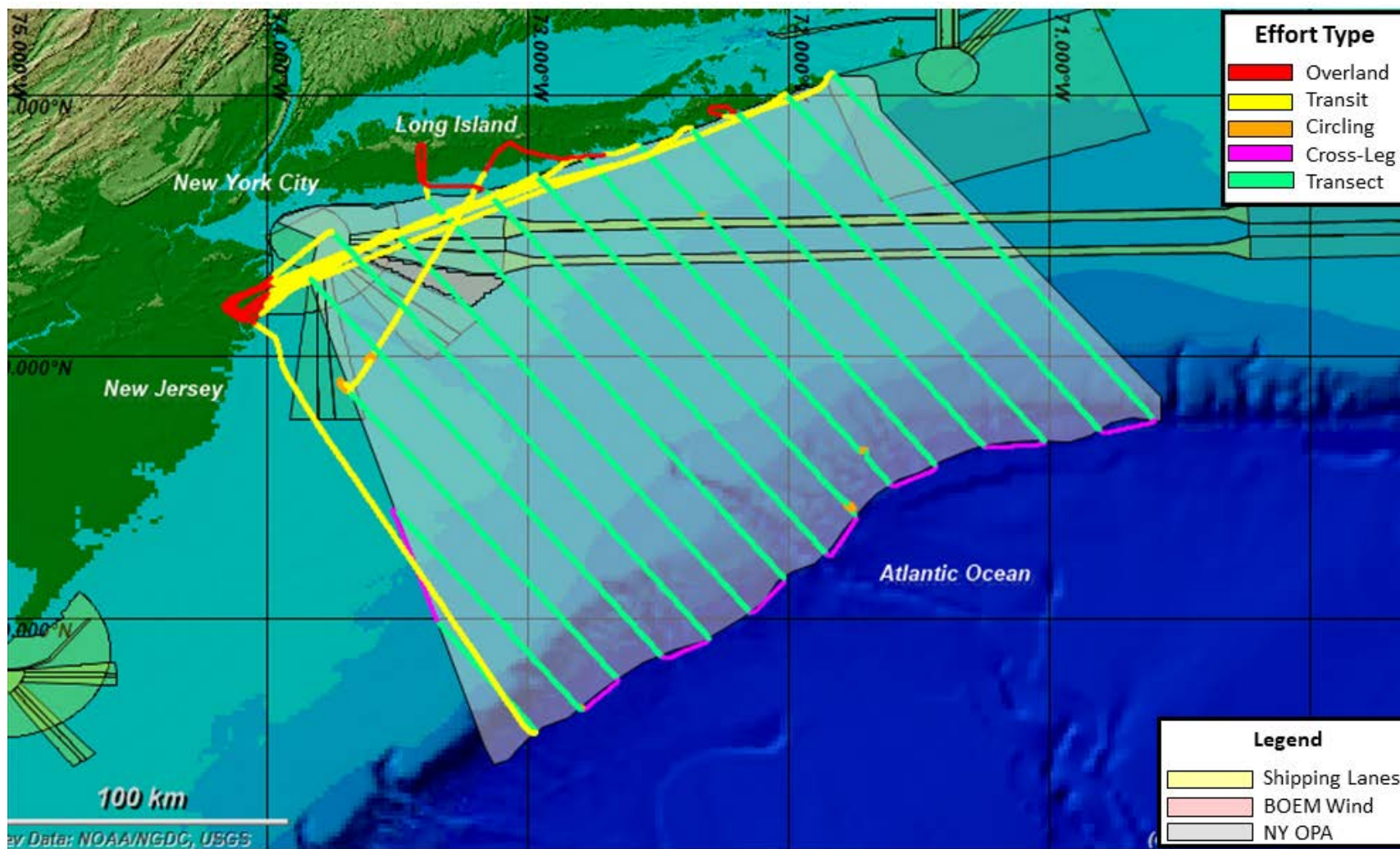


Figure 1. Survey Lines Flown by Effort Type During the February 2018 Survey

3.0 SIGHTINGS

Sightings are presented below based on the following subsections: (1) the six priority large whale species and unidentified whales, (2) other marine mammal sightings, (3) sea turtle sightings, (4) unusual or rare sightings, (5) sightings of dead, injured, stranded, or entangled marine mammals or sea turtles, and (6) other species/object sightings. [Figure 2](#) is a map of all large whale sighting locations, [Figure 3](#) is a map of all marine mammal sighting locations. [Figure 4](#) and [Figure 5](#) provide “zoomed in” views of the two locations where overlapping sightings occurred and which were difficult to discern in [Figure 3](#).

3.1 LARGE WHALE SIGHTINGS

A total of 10 sightings of an estimated 17 individual large whales were seen ([Table 2](#)). Seven of these sightings were identified to species and three were unidentified. Large whale sightings included one single blue whale, two groups (two individuals) of fin whales, two groups (nine individuals) of humpback whales, one single North Atlantic right whale, and one single minke whale. The North Atlantic right whale sighting was reported to the New England Right Whale Hotline by telephone after completion of the flight (i.e. within 24 hr).

TABLE 2. NUMBER OF LARGE WHALE SPECIES SIGHTED DURING THE FEBRUARY 2018 SURVEY

Common Name*	Scientific Name	Number of Groups	Total Number of Individuals	Mean Group Size (SE)
Blue Whale	<i>Balaenoptera musculus</i>	1	1	1 (NA)
Fin Whale	<i>B. physalus</i>	2	2	1 (NA)
Humpback Whale	<i>Megaptera novaeangliae</i>	2	9	4.5 (3.5)
Minke Whale	<i>B. acutorostrata</i>	1	1	1 (NA)
North Atlantic Right Whale	<i>Eubalaena glacialis</i>	1	1	1 (NA)
Sei Whale	<i>B. borealis</i>	0	0	0
Sperm Whale	<i>Physeter macrocephalus</i>	0	0	0
Unidentified Large Whale		3	3	1 (NA)
Total		10	17	

Notes:

*Listed in alphabetical order

NA = not applicable; SE = standard error

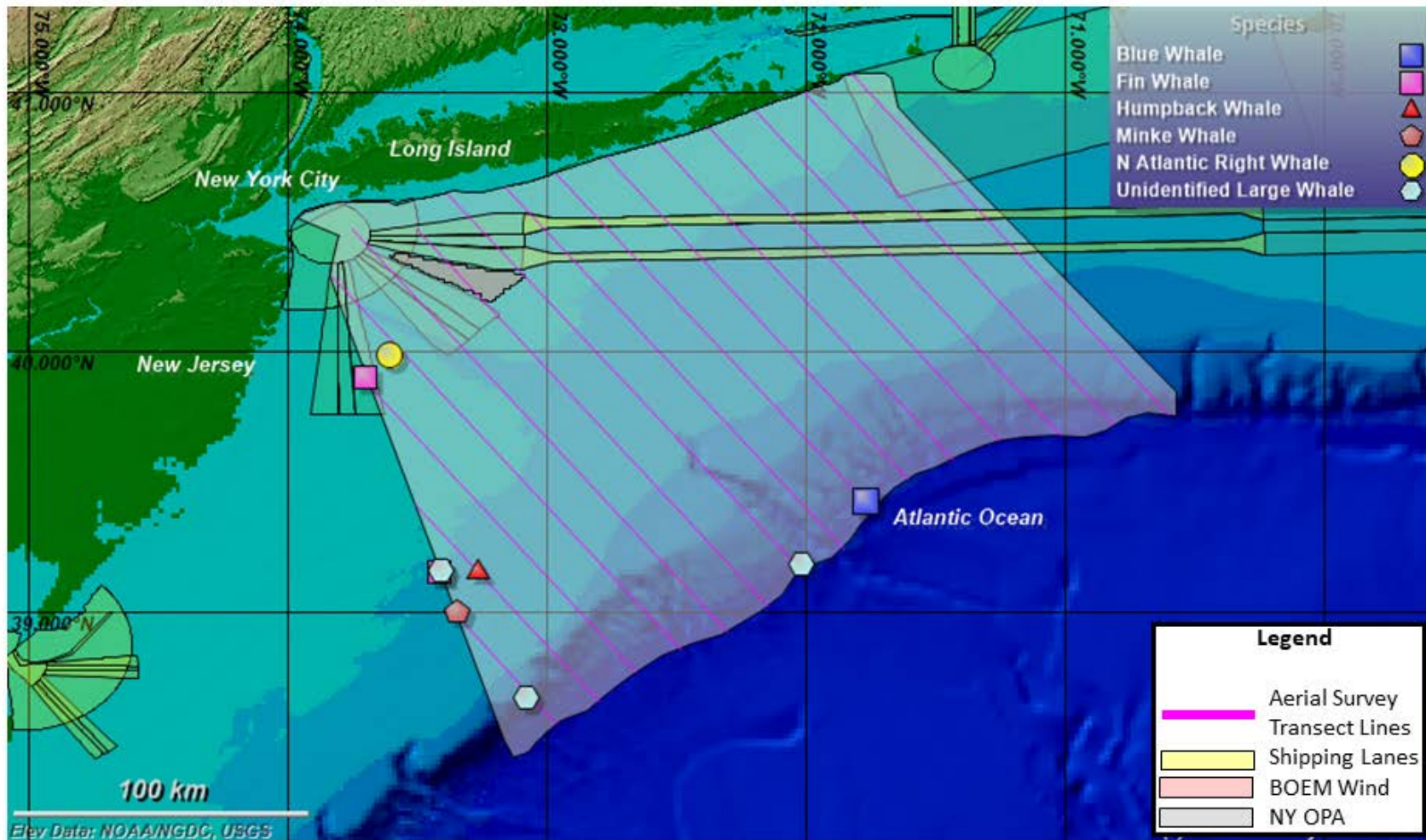


Figure 2. Locations of All Groups of Large Whales Sighted During the February 2018 Survey

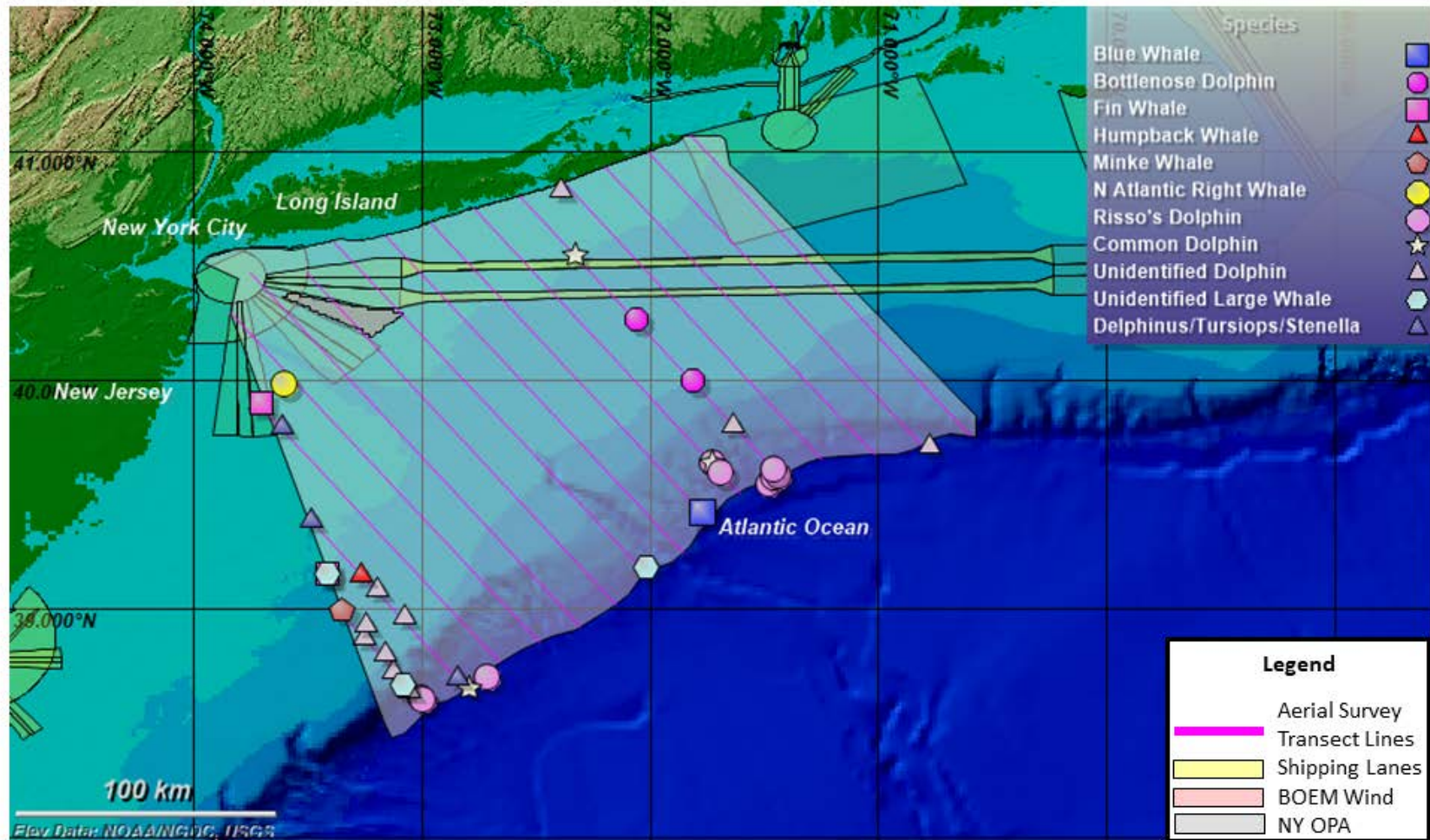


Figure 3. Locations of All Groups of Marine Mammals Sighted During the February 2018 Survey

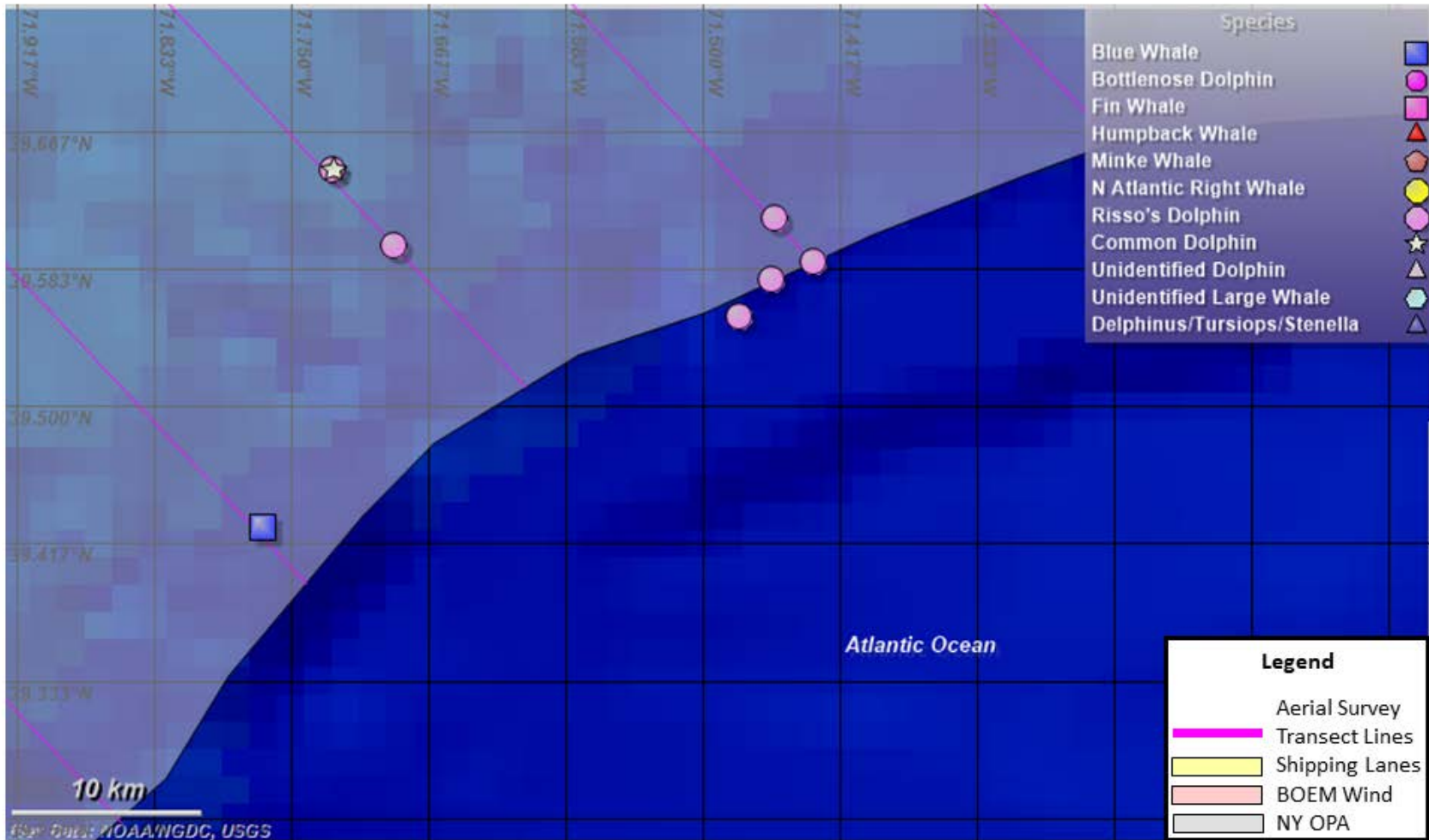


Figure 4. “Zoomed-In” Map of Overlapping Sightings During the February 2018 Survey

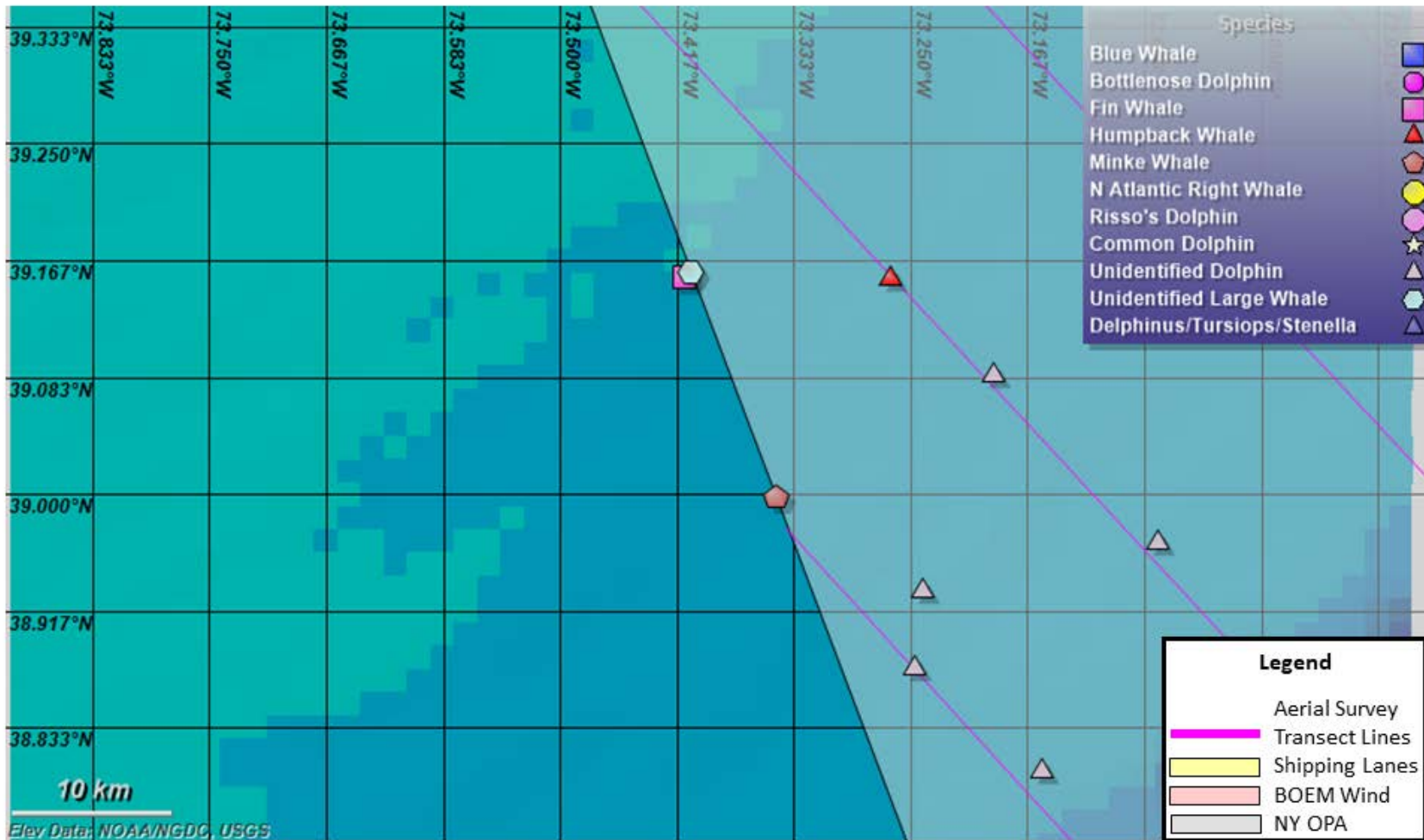


Figure 5. “Zoomed-In” Map of Overlapping Sightings During the February 2018 Survey

3.2 OTHER MARINE MAMMAL SIGHTINGS

A minimum total of 27 sightings of an estimated 378 individual marine mammals other than the six priority whale species were observed (Table 3). This included two groups (estimated nine individuals) of bottlenose dolphin, three groups (estimated 78 individuals) of common dolphin, three groups (estimated 85 individuals) of Delphinus/Tursiops/Stenella sp., nine groups (estimated 30 individuals) of Risso's dolphin, and ten groups (estimated 176 individuals) of unidentified dolphins (note, in accordance with the project scope of work, dolphins were not circled routinely to confirm species).

TABLE 3. OTHER MARINE MAMMAL SIGHTINGS DURING THE FEBRUARY 2018 SURVEY*

Common Name**	Scientific Name	Number of Groups	Total Number of Individuals	Mean Group Size (SE)
Bottlenose Dolphin	<i>Tursiops truncatus</i>	2	9	4.5 (3.5)
Common Dolphin	<i>Delphinus Sp.</i>	3	78	26 (9.45)
Delphinus/Tursiops/Stenella		3	85	28.3 (18.37)
Risso's Dolphin	<i>Grampus griseus</i>	9	30	3.3 (0.99)
Unidentified Dolphin		10	176	17.6 (6.31)
Total		27	378	

Notes:

*Some species identifications are preliminary and not certain due to not routinely circling/photographing

**Listed in alphabetical order

NA = not applicable; SE = standard error

3.3 SEA TURTLE SIGHTINGS

There were no sea turtles observed during this survey.

3.4 UNUSUAL OR RARE SIGHTINGS

There were no unusual or rare sightings.

3.5 STRANDING AND ENTANGLEMENT REPORTS

There were no sightings of dead, injured, stranded, or entangled marine mammals or sea turtles during this survey.

3.6 OTHER SIGHTINGS

In addition to those described above, there were other types of non-marine mammal sightings. To focus observation efforts on searching for large priority whale species, only the sighting type, time, and general location of these other sightings were recorded opportunistically as feasible, with additional details recorded into the voice recordings (e.g., estimated body length and coloration, behavior, and group size). We used hot keys on the laptop running the software Mysticetus to mark the locations of these sightings when doing so would not interfere significantly with priority observation efforts (e.g., in areas where all sightings were relatively low). The sightings below consist of those for which general locations were noted using the computer in the field; thus, they should be considered *minimum numbers* of sightings. Review of the voice recorder data would be required to fully enumerate these sightings (e.g., we orally recorded the time of these sightings, which could be merged with GPS in the future to determine locations).

- Minimum two fish schools

4.0 PROBLEMS ENCOUNTERED

There were no problems encountered during the February 2018 survey.

5.0 PHOTOGRAPH

The following photograph of a North Atlantic right whale was taken during this survey. Additional photographs will be included in the data deliverable.



Figure 6. North Atlantic right whale, photo credit: Mari Smultea (Smultea Environmental Sciences)