

# May 2018 Survey Report for New York Bight Whale Monitoring Aerial Surveys

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May 2018

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## **ACRONYMS AND ABBREVIATIONS**

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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 May 2018 survey, representing the 15<sup>th</sup> of the 36 surveys scheduled to occur under this contract.

## 2.0 EFFORT

The May 2018 survey occurred from May 08-15, 2018. A total of seven flights were conducted, representing a total of 17.28 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 3,572.07 kilometers (km) were flown and included completion of 76% of the 15 systematic transect lines. [Figure 1](#) shows the survey lines completed. [Table 1](#) presents the flight time durations and distances by effort type. Flights were not conducted on May 9, 10, 12, and 13 due to inclement weather (i.e. fog, low ceilings, thunderstorms).

**TABLE 1. FLIGHT TIME AND DISTANCE BY EFFORT TYPE DURING THE MAY 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
May 08-15, 2018	1.19	232.17	5.02	1,164.82	9.67	1,914.38	0.66	127.33	0.74	133.37	17.28	3,572.07

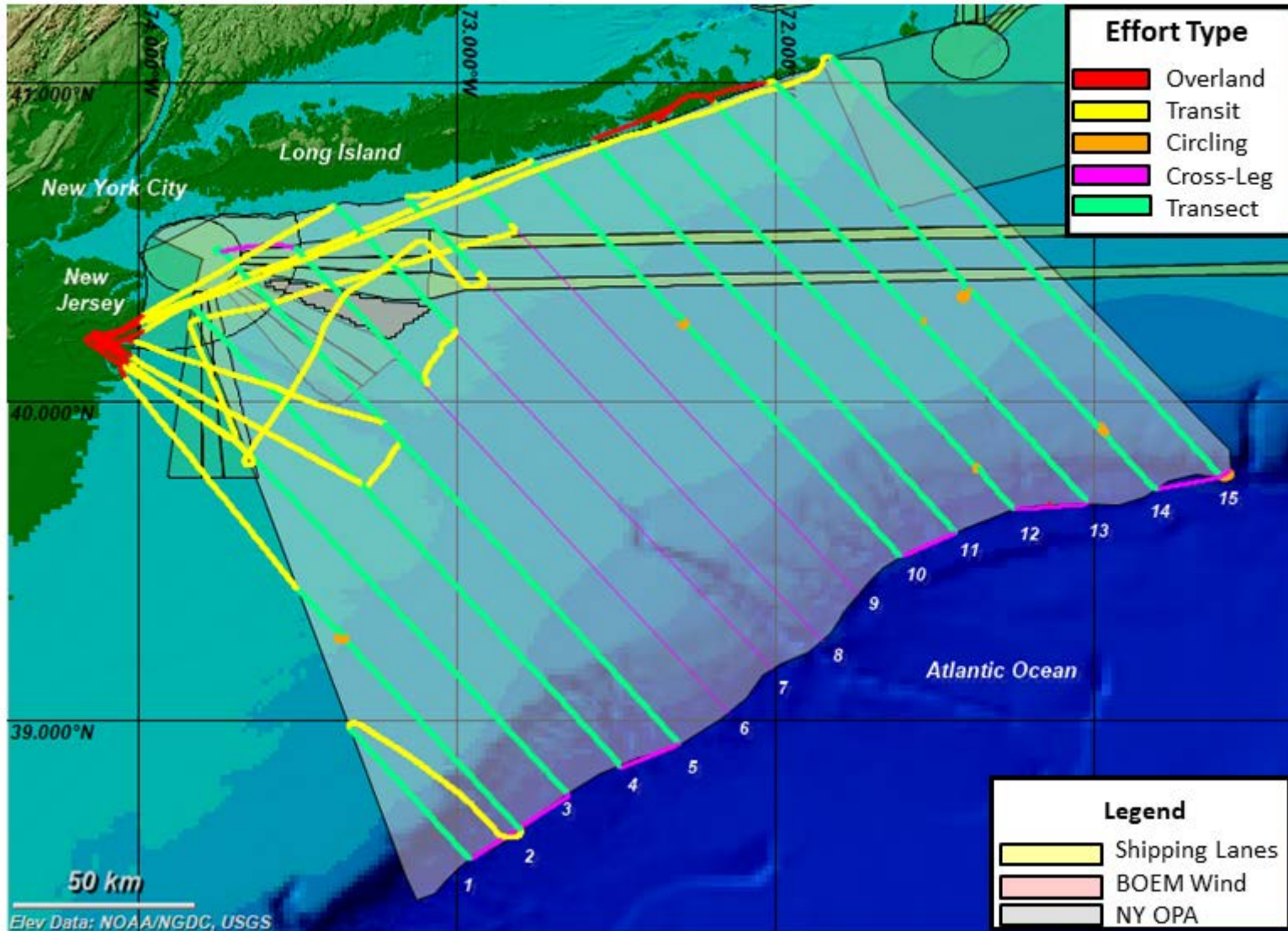


Figure 1. Survey Lines Flown by Effort Type During the May 2018 Survey

### 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.

#### 3.1 LARGE WHALE SIGHTINGS

A total of four sightings of an estimated four individual large whales were seen ([Table 2](#)). Of these sightings, three groups were identified to species. Large whale sightings included one single fin whale, two groups of single humpback whales, and one single unidentified large whale.

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

Common Name*	Scientific Name	Number of Groups	Total Number of Individuals	Mean Group Size (SE)
Blue Whale	<i>Balaenoptera musculus</i>	0	0	0
Fin Whale	<i>B. physalus</i>	1	1	1 (NA)
Humpback Whale	<i>Megaptera novaeangliae</i>	2	2	1 (NA)
North Atlantic Right Whale	<i>Eubalaena glacialis</i>	0	0	0
Sei Whale	<i>B. borealis</i>	0	0	0
Sperm Whale	<i>Physeter macrocephalus</i>	0	0	0
Unidentified Large Whale		1	1	1 (NA)
<b>Total</b>		<b>4</b>	<b>4</b>	

Notes:

\*Listed in alphabetical order

NA = not applicable; SE = standard error



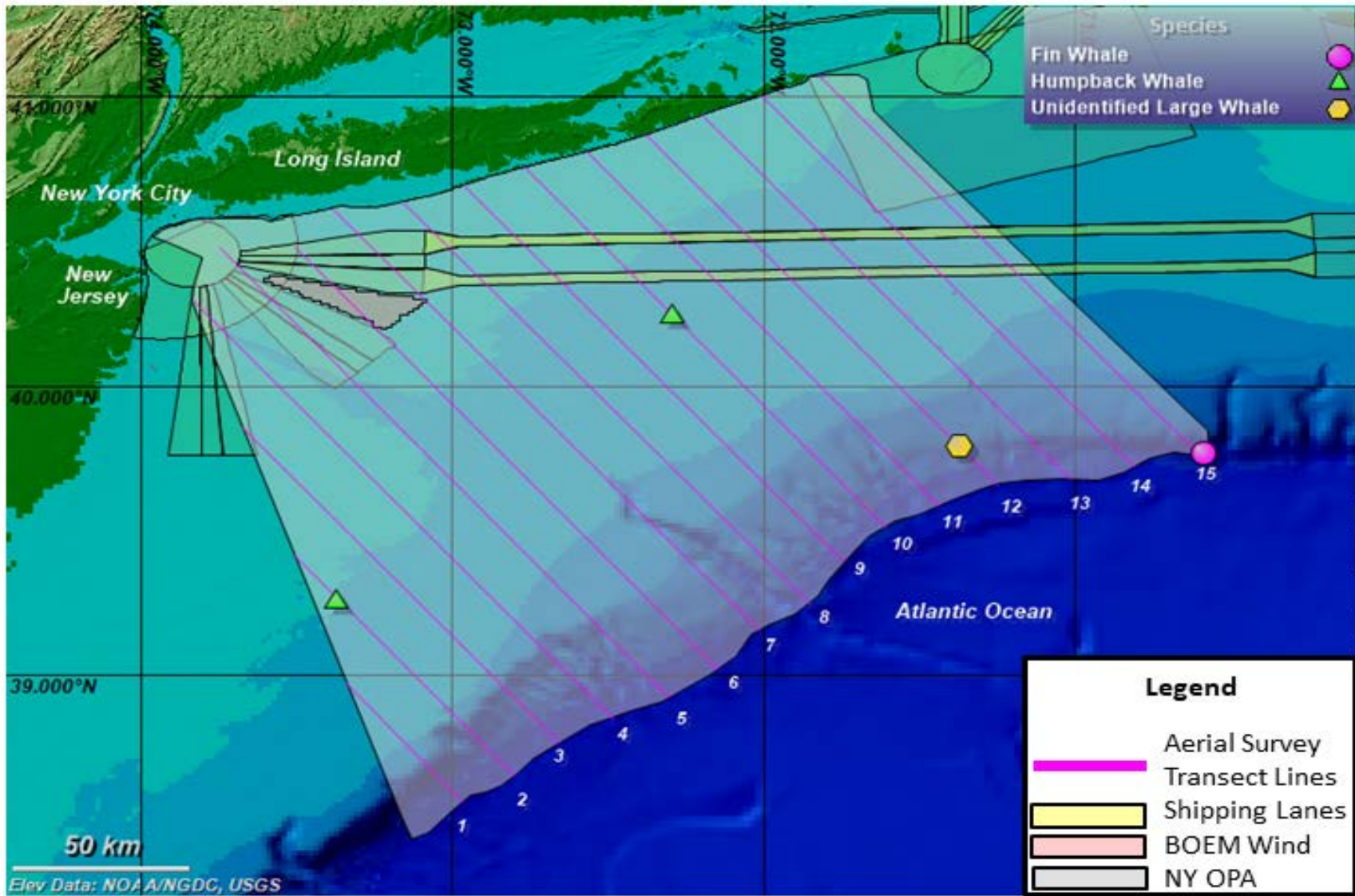


Figure 2. Locations of All Groups of Large Whales Sighted During the May 2018 Survey

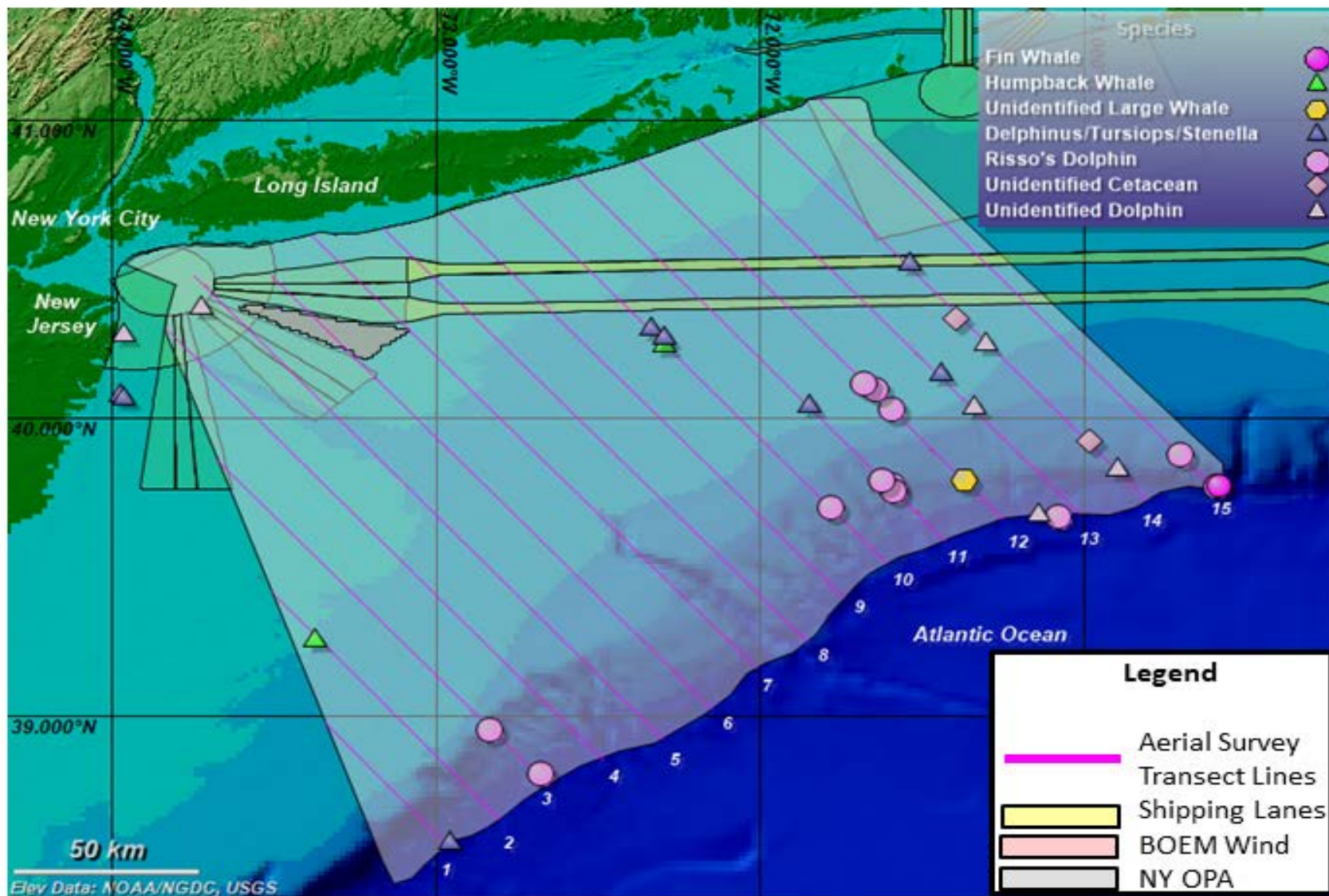


Figure 3. Locations of All Groups of Marine Mammals Sighted During the May 2018 Survey



### 3.2 OTHER MARINE MAMMAL SIGHTINGS

A minimum total of 28 sightings of an estimated 477 individual marine mammals other than the six priority whale species were observed (Table 3). This included 8 groups (estimated total 197 individuals) of *Delphinus/Tursiops/Stenella* spp., 12 groups (207 individuals) of Risso's dolphins, 2 groups (estimated total 14 individuals) of unidentified cetaceans, and 6 groups (estimated total 59 individuals) of unidentified dolphins (note, in accordance with the project scope of work, the aircraft is required to circle only to photo-identify North Atlantic right whales and to identify species and/or confirm group size/composition of large whales, as possible).

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

Common Name**	Scientific Name	Number of Groups	Total Number of Individuals	Mean Group Size (SE)
Delphinus/Tursiops/Stenella		8	197	24.6 (11.14)
Risso's Dolphin	<i>Grampus griseus</i>	12	207	17.3 (5.39)
Unidentified Cetacean		2	14	7 (5.0)
Unidentified Dolphin		6	59	9.8 (2.91)
<b>Total</b>		<b>28</b>	<b>477</b>	

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 a total of four sightings of an estimated four individual sea turtles during the May 2018 survey. Sea turtle sightings included one single leatherback sea turtle and three unidentified sea turtles as shown in Figure 4.

### 3.4 UNUSUAL OR RARE SIGHTINGS

There were no unusual or rare sightings during the May 2018 survey.

### 3.5 STRANDING AND ENTANGLEMENT REPORTS

There were no strandings or entanglements May 2018 survey.

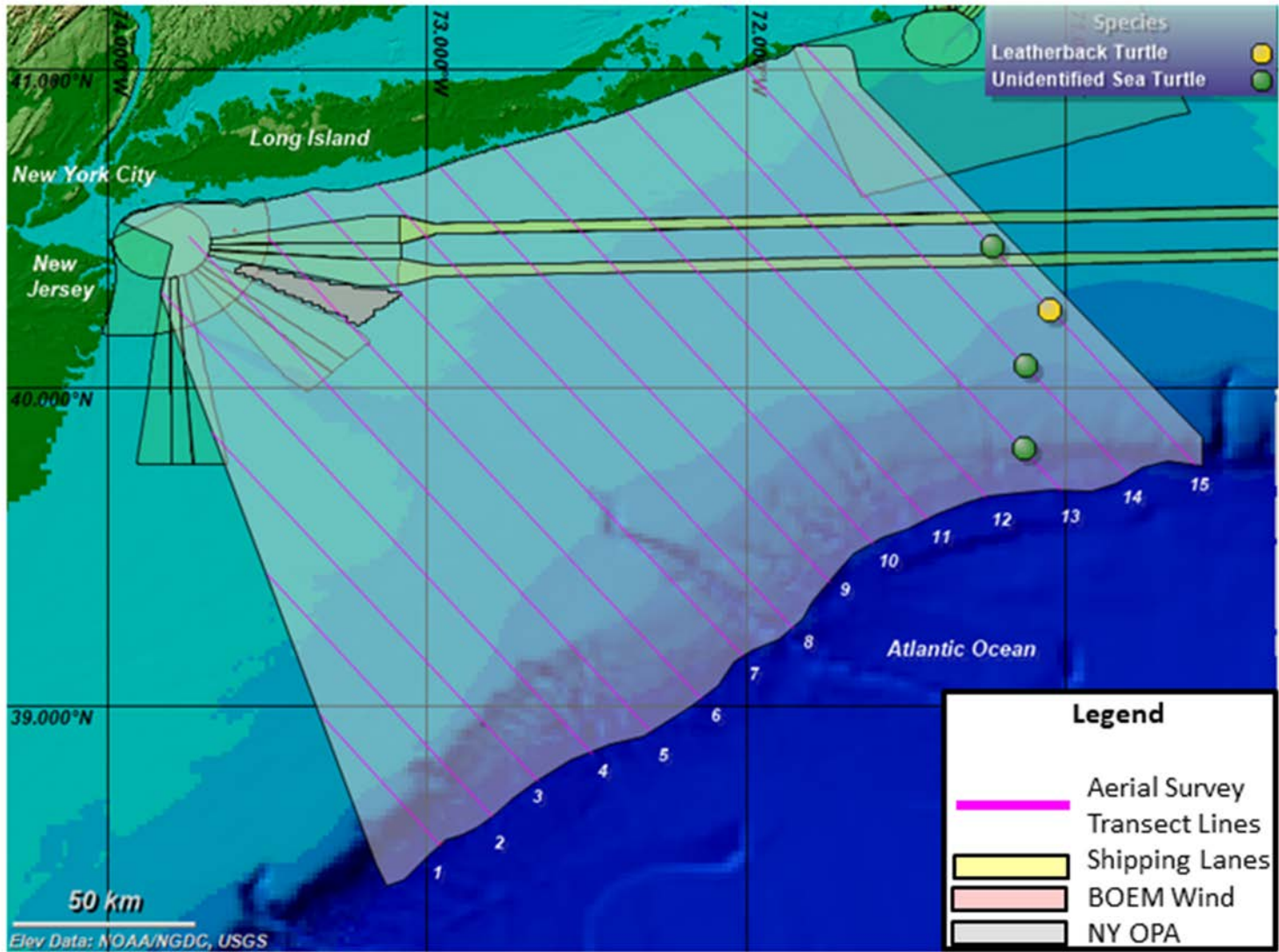


Figure 4. Locations of All Groups of Sea Turtles Sighted During the May 2018 Survey

### 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 and times 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 more fully describe these sightings.

- Minimum 50 groups (180 estimated individuals) of possible basking sharks (*Cetorhinus maximus*)
- Minimum 24 groups (26 estimated individuals) of ocean sunfish (*Mola mola*)
- Minimum 9 fish schools

### 4.0 PROBLEMS ENCOUNTERED

There were no problems encountered during the May 2018 survey.

## 5.0 PHOTOGRAPHS



**Figure 5. Humpback whale**  
**Photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)**



**Figure 6. Risso's dolphin (photographed while circling fin whale)  
Photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)**