

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

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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 April 2018 survey, representing the 14th of the 36 surveys scheduled to occur under this contract.

2.0 EFFORT

The April 2018 survey occurred from April 09 - 11, 2018. A total of seven flights were conducted, representing a total of 19.95 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 3,993.8 kilometers (km) were flown and included completion of 100 percent of the 15 transect lines. [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 APRIL 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
April 09-11, 2018	1.13	227.0	3.35	749.6	12.58	2,503.8	2.29	398.1	0.60	115.3	19.95	3,993.8

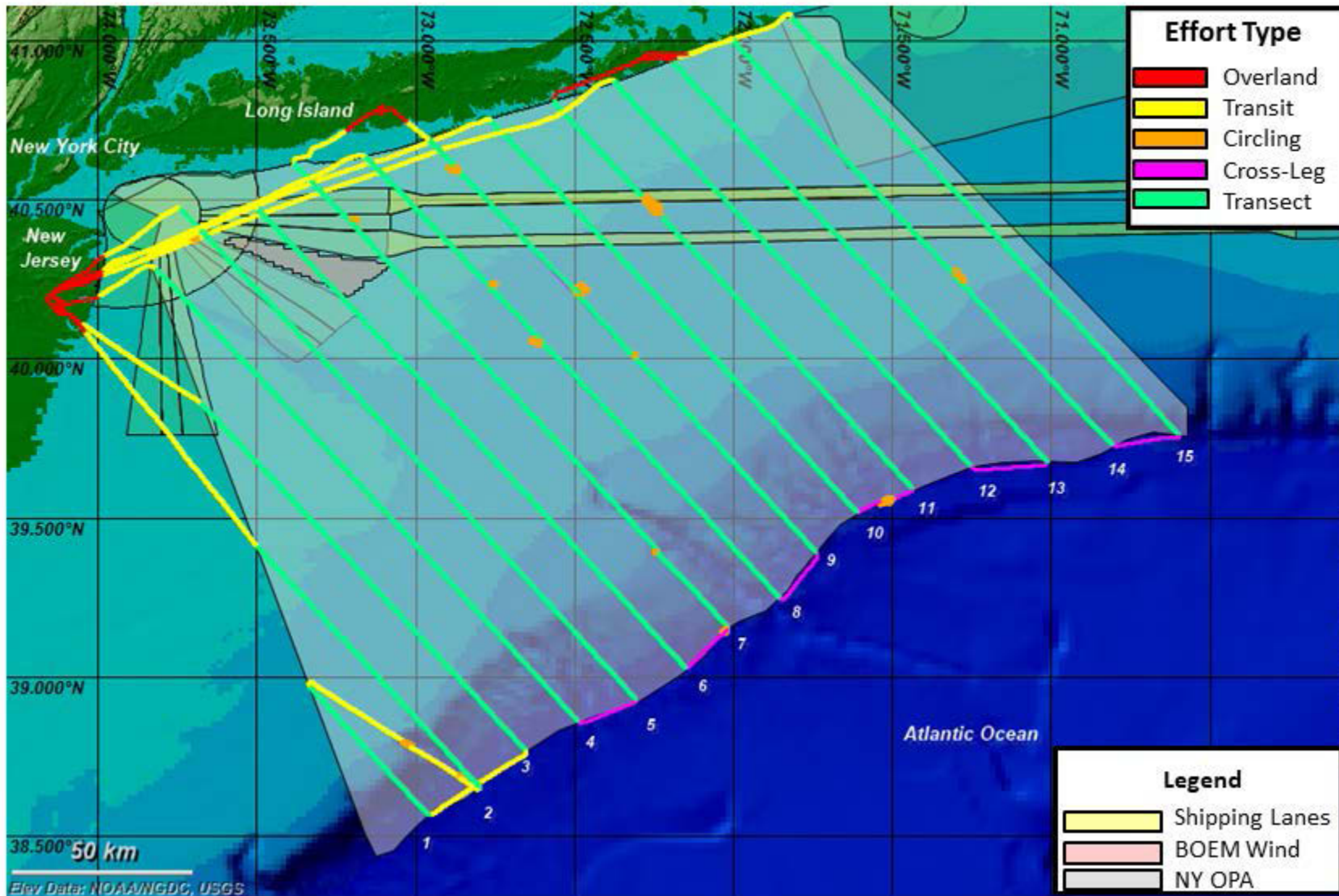


Figure 1. Survey Lines Flown by Effort Type During the April 2018 Survey

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 nine sightings of an estimated 16 individual large whales were seen ([Table 2](#)). Of these sightings, seven groups were identified to species. Large whale sightings included three groups (five individuals) of fin whales including one mother/calf pair, one single humpback whale, one single North Atlantic right whale, one single sei whale, and one group (five individuals) of sperm whales. 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 APRIL 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>	3	5	1.7 (0.33)
Humpback Whale	<i>Megaptera novaeangliae</i>	1	1	1 (NA)
North Atlantic Right Whale	<i>Eubalaena glacialis</i>	1	1	1 (NA)
Sei Whale	<i>B. borealis</i>	1	1	1 (NA)
Sperm Whale	<i>Physeter macrocephalus</i>	1	5	5 (NA)
Unidentified Large Whale		2	3	1.5 (0.5)
Total		9	16	

Notes:

*Listed in alphabetical order

NA = not applicable; SE = standard error

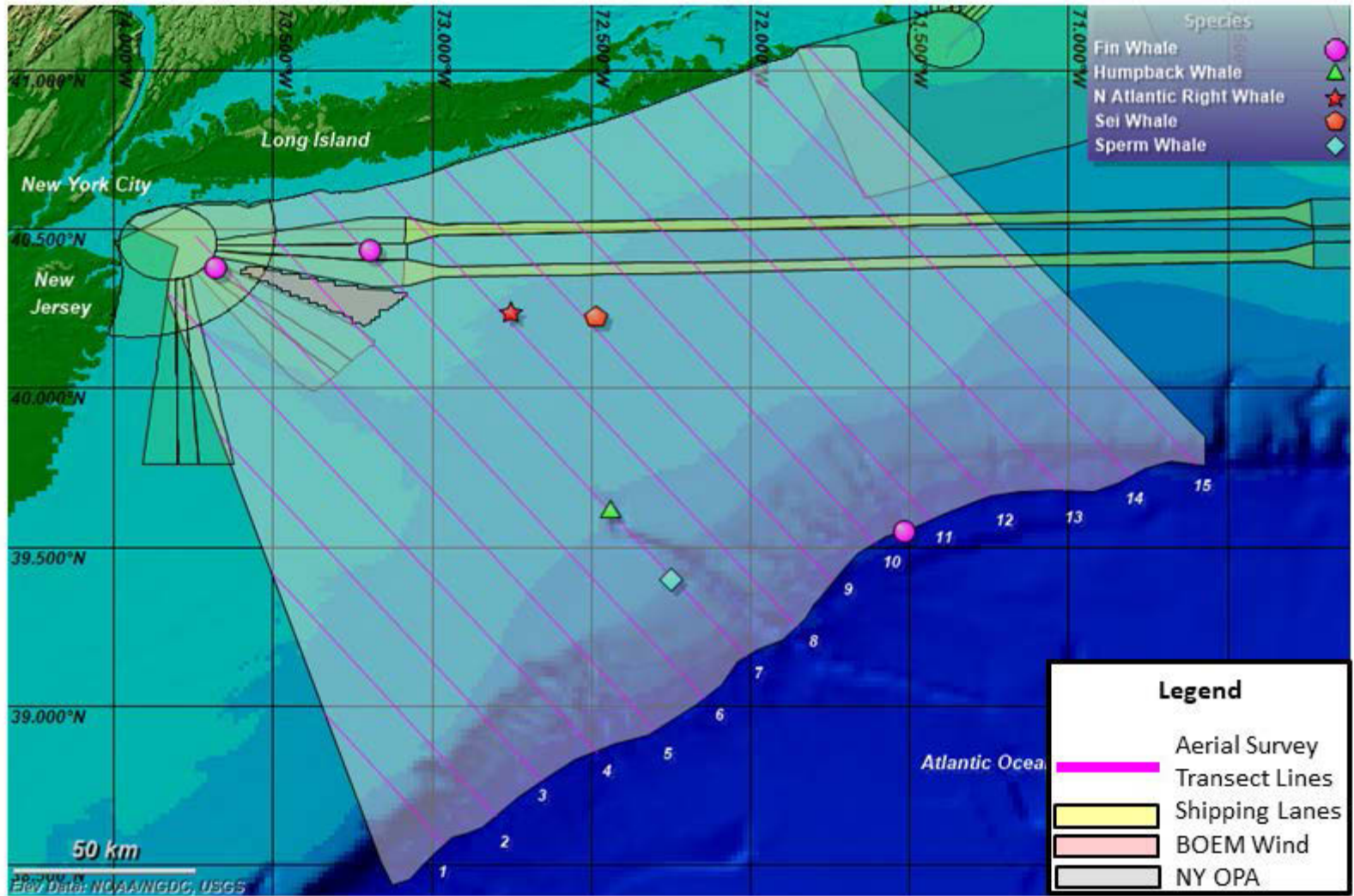


Figure 2. Locations of All Groups of Large Whales Sighted During the April 2018 Survey

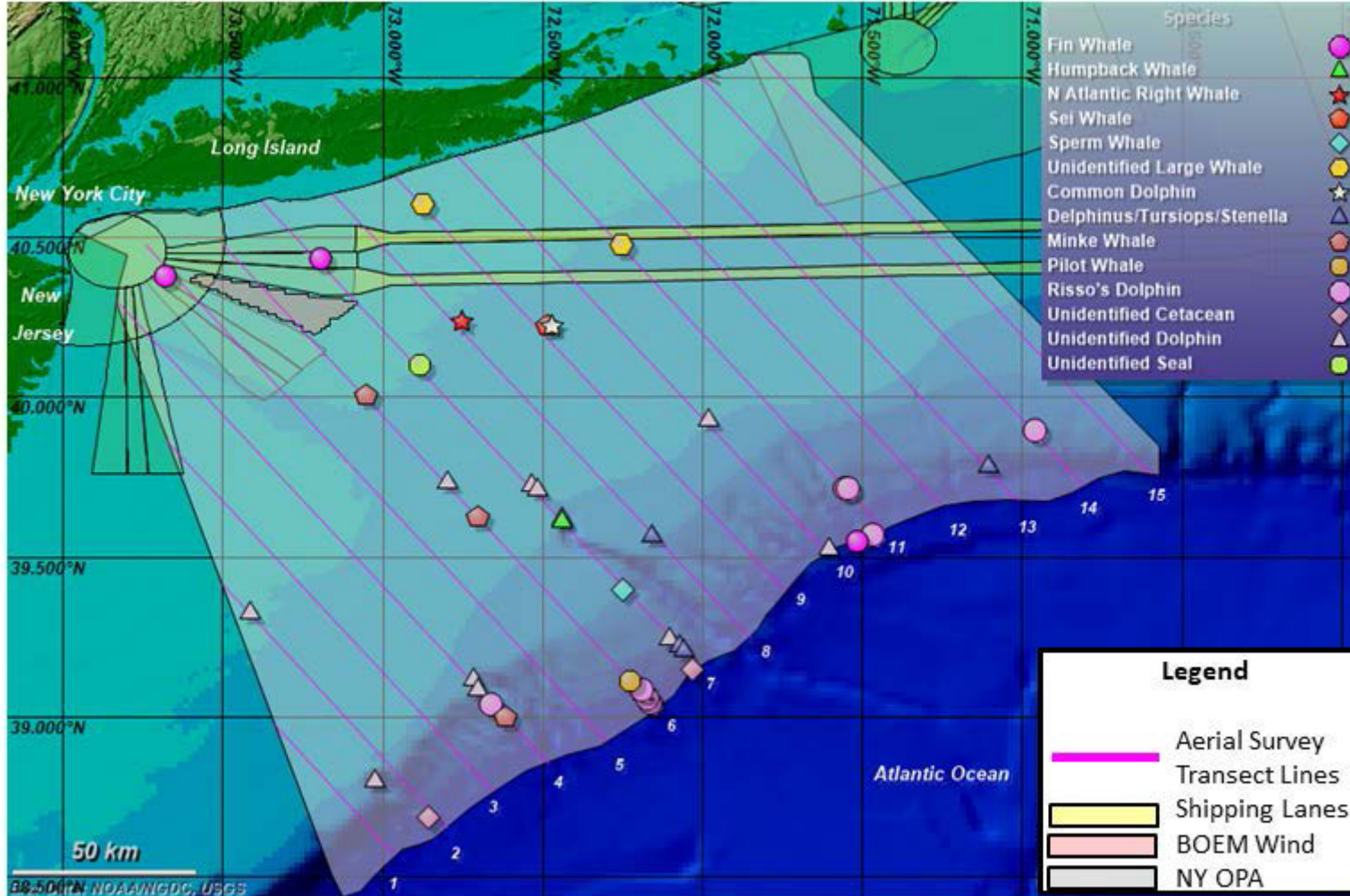


Figure 3. Locations of All Groups of Marine Mammals Sighted During the April 2018 Survey

3.2 OTHER MARINE MAMMAL SIGHTINGS

A minimum total of 32 sightings of an estimated 336 individual marine mammals other than the six priority whale species were observed (Table 3). This included 4 groups (estimated total 114 individuals) of *Delphinus/Tursiops/Stenella* spp., 1 group (2 individuals) of common dolphins, 3 single minke whales, 1 group (2 individuals) of pilot whales, 8 groups (60 individuals) of Risso's dolphins, 2 groups (estimated total 31 individuals) of unidentified cetaceans, 12 groups (estimated total 123 individuals) of unidentified dolphins, and 1 unidentified seal (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 APRIL 2018 SURVEY*

Common Name**	Scientific Name	Number of Groups	Total Number of Individuals	Mean Group Size (SE)
Common Dolphin	<i>Delphinus spp.</i>	1	2	2 (NA)
Delphinus/Tursiops/Stenella		4	114	28.5 (3.8)
Minke Whale	<i>B. acutorostrata</i>	3	3	1 (NA)
Pilot whale	<i>Globicephala spp.</i>	1	2	2 (NA)
Risso's Dolphin	<i>Grampus griseus</i>	8	60	7.5 (1.7)
Unidentified Cetacean		2	31	15.5 (8.5)
Unidentified Dolphin		12	123	10.25 (2.5)
Unidentified Seal		1	1	1 (NA)
Total		32	336	

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 the April 2018 survey.

3.4 UNUSUAL OR RARE SIGHTINGS

There were no unusual or rare sightings during the April 2018.

3.5 STRANDING AND ENTANGLEMENT REPORTS

There was one sighting of a dead dolphin during the April 2018 survey. On April 4, 2018 at 18:42:46 EDT a carcass was observed while transiting between Lines 1 and 2 on the offshore (southern) end of the lines. The sighting was cued based on the presence of birds near the carcass. The position of the sighting was 38.787°N 73.018°W. The survey team circled the carcass to confirm species and for photographs. Based on review of the photographs the carcass appeared to be recently deceased with minimal decomposition. Although the approximate age is unknown, the dolphin appeared to be an adult (i.e. not juvenile or calf per photos). The sex of the carcass is unknown. Photographs were sent to a delphinid identification expert and was identified as either *Tursiops truncatus* or *Lagenorhynchus sp.* Photographs of the carcass are shown below. The event was reported to the National Oceanic and Atmospheric Administration (NOAA) Northeast Fisheries Science Center (NEFCS) Stranding Hotline by Ann Zoidis/TetraTech on April 4, 2018 at 19:00 EDT.



Figure 4. Dead dolphin, photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)



Figure 5. Dead dolphin, photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)

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 8 groups (12 estimated individuals) of possible basking sharks (*Cetorhinus maximus*)
- Minimum 1 single possible great white shark (*Carcharodon carcharias*)
- Minimum 4 groups (5 estimated individuals) of ocean sunfish (*Mola mola*)
- Minimum 4 groups (5 estimated individuals) of unidentified sharks

4.0 PROBLEMS ENCOUNTERED

There were no problems encountered during the April 2018 survey.

5.0 PHOTOGRAPHS

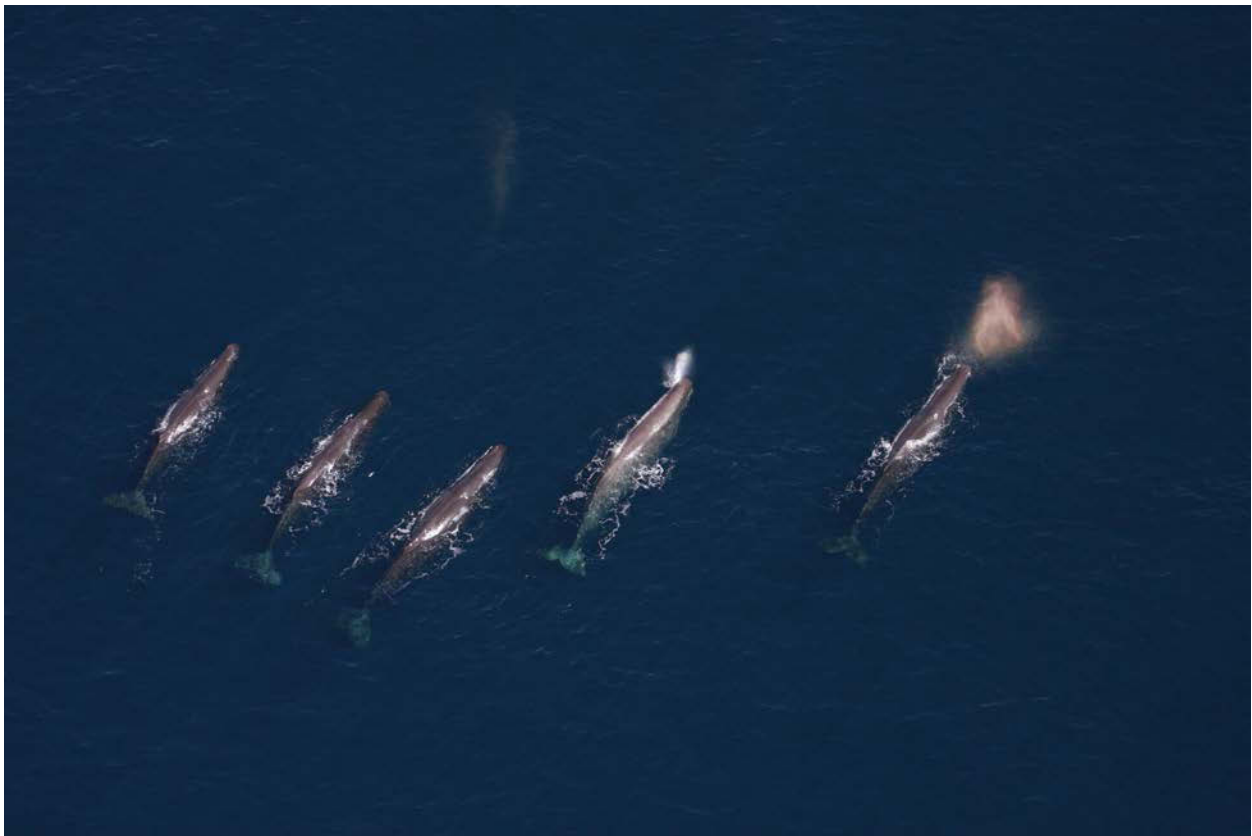


Figure 6. Sperm whales, photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)



Figure 7. Sperm whales, photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)



Figure 8. Fin whales (mom/calf pair), photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)



Figure 9. North Atlantic right whale, photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)



Figure 10. Sei whale with common dolphin, photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)



Figure 11. Sei whale (sub-surface), photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)