

# **North Atlantic Right Whale Sighting Survey (NARWSS) and Right Whale Sighting Advisory System (RWSAS) 2006 Results Summary**

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This volume is part of a larger document containing five separate results summaries for five separate years. There is no analysis across the years included in this volume. This is the first publication of the collected data; future reports will be published annually in separate volumes.

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## **E. North Atlantic Right Whale Sighting Survey (NARWSS) and Right Whale Sighting Advisory System (RWSAS) 2006 Results Summary**

by Misty Niemeyer, Timothy V.N. Cole, Cynthia L. Christman, Peter Duley, Allison Glass, Misty Nelson

**Overview** – The North Atlantic Right Whale Sighting Survey (NARWSS) is a NOAA Fisheries program which locates and records the seasonal distribution of right whales off the northeastern United States. The Right Whale Sighting Advisory System (RWSAS) is designed to reduce collisions between ships and right whales by alerting mariners to the presence of the right whales via fax, email, the Internet, Broadcast Notice to Mariners (BNM), NOAA Weather Radio, and the Mandatory Ship Reporting system (MSR). These reports are obtained from a variety of sources including the NARWSS, whale research organizations, whale watch vessels, Coast Guard, fishing vessels, commercial ships, and the general public. The results from both the NARWSS and the RWSAS programs in 2006 are summarized in the following tables and figures.

**Table 1** – This table provides information on: (a) the total number of the NARWSS flight hours accomplished in each month during 2006; (b) the number of the NARWSS flights conducted in each month by survey type; and (c) the total number of right whales sighted on all the NARWSS flights during each month in 2006. There were four primary types of surveys flown: (1) broadscale; (2) focused surveys in the Great South Channel (GSC) Critical Habitat; (3) focused surveys over potential and realized Dynamic Area Management (DAM) closure zones; and (4) focused surveys in a designated Navy bombing range referred to as W-104B. Broadscale surveys were flown along systematic east-west track lines that covered all Federal waters west of the Hague Line from south of Long Island, New York, to Eastport, Maine. These surveys were flown to provide a synoptic view of the distribution of right whales off the northeastern Atlantic coast; a completed series indicates coverage of the entire area. Surveys focused in the GSC served the dual purpose of providing commercial shipping traffic with the current locations of right whale aggregations, and obtaining photographic data of individual right whales for use in vital rate models of the population. DAM confirmation flights included flights made to investigate reported sightings of right whale aggregations outside existing closures, as well as monitor the duration of residence of aggregations within established DAM zones. Focused surveys in W-104B were conducted by the NARWSS in cooperation with the Navy prior to scheduled bombing exercises to determine the presence or absence of marine mammals and sea turtles. Additional focused flights not categorized in the table were flights to relocate reported whale carcasses or entangled whales as well as provide support for disentanglement efforts.

**Figure 1** – This figure shows, by season, all the NARWSS survey track lines and right whale sighting locations for 2006. Seasonal right whale closure areas in effect during each period are shown as bold lines. The duration for each closure area is as follows: Cape Cod Bay: Jan 1 - May 15; Great South Channel: April 1 - June 30; Seasonal Area Management (SAM) West: March 1 - April 30; Seasonal Area Management (SAM) East: May 1 - July 31.

**Table 2** – This table lists the number of right whale sightings reported to the RWSAS in 2006, by reporting source, and indicates the number of unconfirmed and late reports by source.

Unconfirmed reports and duplicate reports did not produce an alert. Reports of 1-2 right whales were not broadcast if the report was received more than one day after the sighting. Late reports of greater than 2 whales did generate an alert since it was likely the location would continue to be occupied by right whales. Often sightings were combined into a single alert. A total of 101 alerts were broadcast in 2006.

**Figure 2a** – This figure depicts the total number of right whale sightings reported to the RWSAS in 2006, by month and source, in the Northeast region (i.e., from Maine through New York).

**Figure 2b** – This figure depicts the total number of right whale sightings reported to the RWSAS in 2006, by month and source, in the Mid-Atlantic region (i.e., from New Jersey through North Carolina).

**Figure 2c** – This figure depicts the total number of right whale sightings reported to the RWSAS in 2006, by month and source, in the Canada region.

**Figure 3** – This figure illustrates the locations of all right whale sightings reported to the RWSAS in 2006 in the Northeast and Canada region (excluding unconfirmed reports). The number of whales reported in each sighting is indicated via graduated symbols for each reporting source. Shipping lanes, the Hague Line and the Cape Cod Bay and Great South Channel Critical Habitat areas are included for reference.

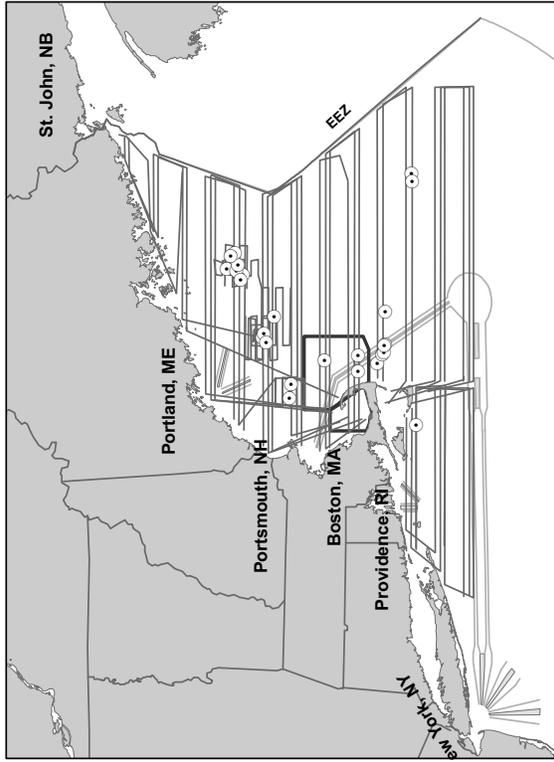
**Figure 4** – This figure illustrates the locations of all right whale sightings reported to the RWSAS in 2006 in the Mid-Atlantic region (excluding unconfirmed reports). The number of whales reported in each sighting is indicated via graduated symbols for each reporting source. The Hague Line is included for reference.

**Table 1.** Summary of the flight hours, flight types, and number of right whales seen during 2006 NARWSS flights

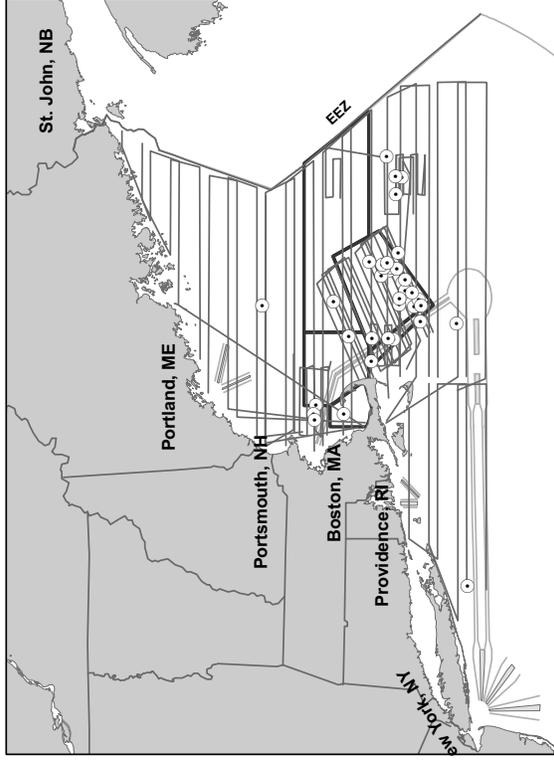
Month in 2006	Flight hours	Systematic broadscale flights *	Systematic broadscale series completed	Critical Habitat surveys	DAM surveys	Cashes Ledge (W-104B)	# Right whales sighted **
January	47	6	0	0	2	0	83
February	49	6	1	0	3	0	18
March	54	10	1	0	1	0	28
April	36	6	1	0	1	0	28
May	51	5	1	2	2	0	132
June	32	4	0	2	1	0	17
July	31	3	1	2	0	1	3
August	0	0	0	0	0	0	0
September	30	6	0	0	0	1	0
October	39	7	1	0	0	1	0
November	50	6	1	0	2	1	74
December	30	3	1	0	1	1	28
<b>Totals</b>	<b>449</b>	<b>62</b>	<b>8</b>	<b>6</b>	<b>13</b>	<b>5</b>	<b>411</b>

\* Flights that included both systematic broadscale and management survey time were counted as broadscale flights.

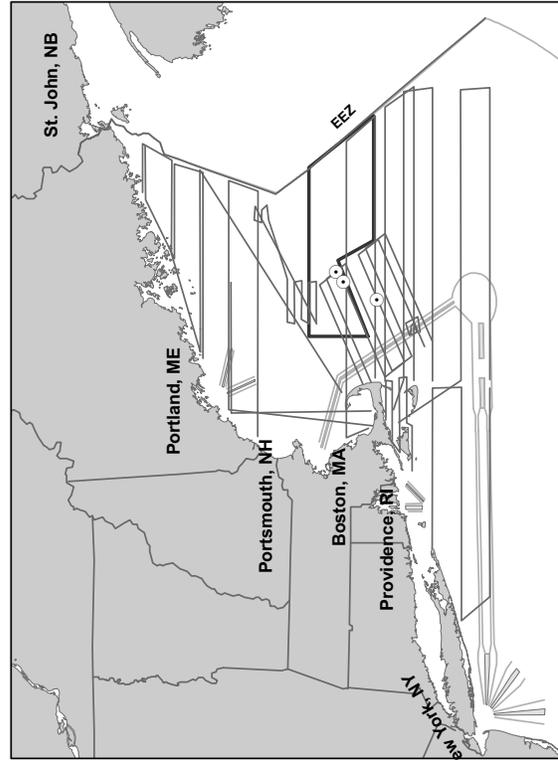
**Figure 1.** Completed track lines and right whale sighting locations for 2006 NARWSS flights, separated by season. Thin lines represent track lines and bull's eyes represent right whale sighting locations.



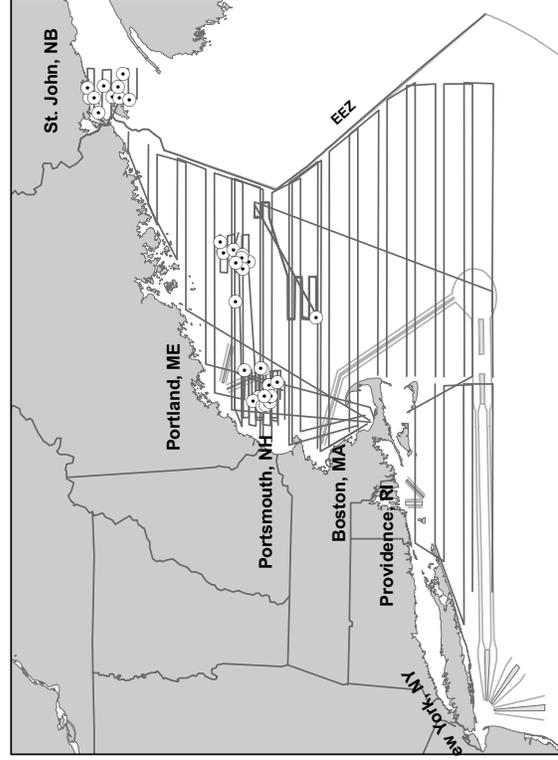
January – March 2006



April – June 2006



July – September 2006



October – December 2006

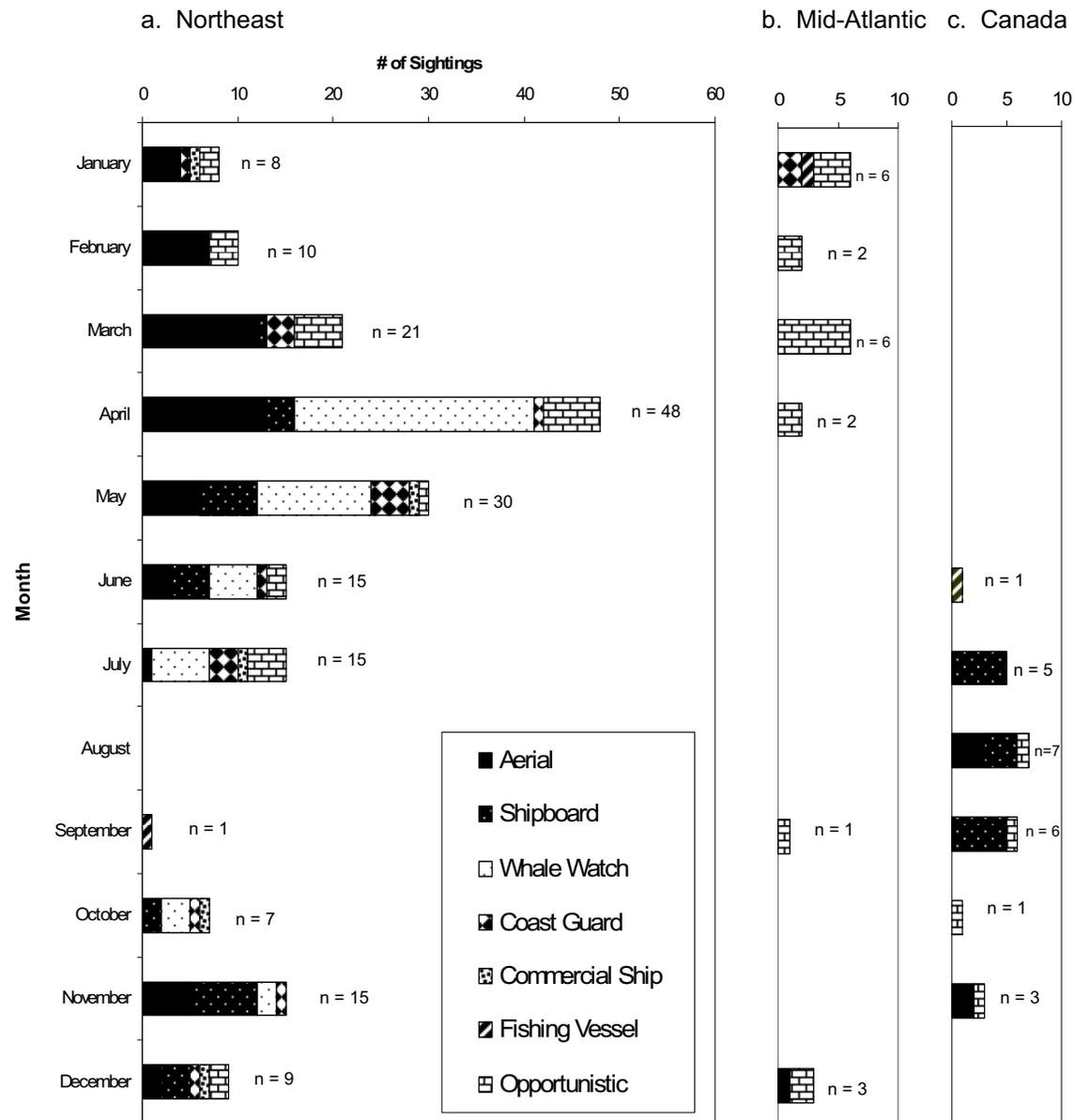
**Table 2.** Total sightings reported to the RWSAS in 2006

Source	# of Reports	Unconfirmed*	Late**
Aerial Survey	59	0	4
Shipboard Survey	39	0	18
Whale Watch	53	0	3
Coast Guard	18	2	1
Commercial Ship	5	1	0
Fishing Vessel	3	1	1
General Public	45	7	12
<b>Totals</b>	<b>222</b>	<b>11</b>	<b>39</b>

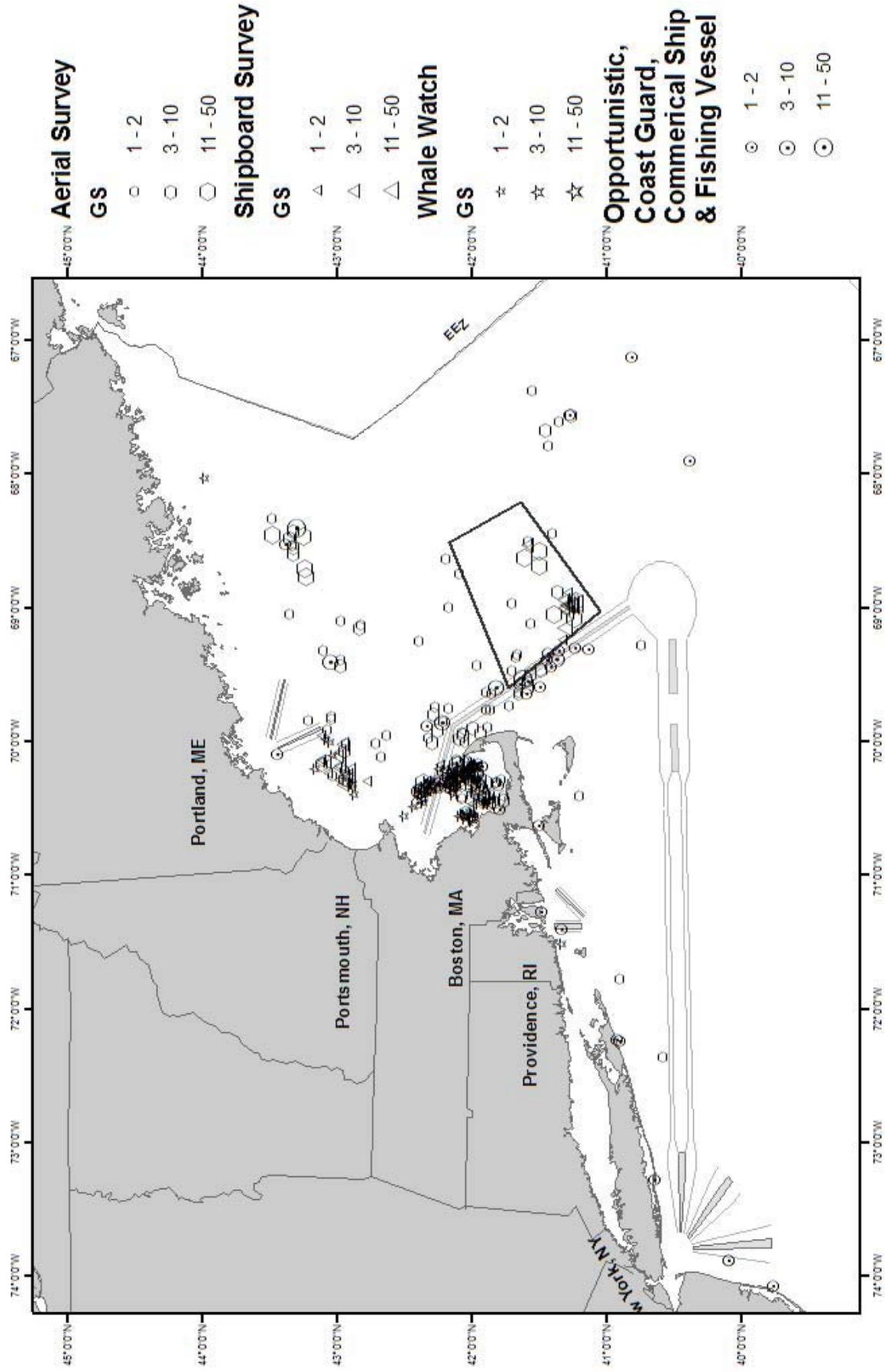
\* Alerts were not generated from unconfirmed reports.

\*\* Reports of 1-2 right whales did not generate alerts if the report was received more than one day after the sighting.

**Figure 2.** Sightings reported to the RWSAS in 2006 by source, month and region



**Figure 3.** Map of sightings reported to the RWSAS in 2006 in the Northeast region and Canadian waters



**Figure 4.** Map of sightings reported to the RWSAS in 2006 in the mid-Atlantic region

