

North Atlantic Right Whale Report Card
November 2006 - October 2007

North Atlantic Right Whale Consortium members agreed in 2004 that an annual “report card” on the status of right whales would be useful. This report card will include updates on the status of the population, mortalities and entanglement events, and a summary of current management and research efforts.

Population Status: 2006 *(see detailed explanation of calculation at end of report)*

<p>Low: 176 individuals 176 Cataloged whales seen in 2006</p> <p>Middle: 393 individuals 354 Cataloged whales presumed alive 18 Intermatch whales likely to be added to Catalog 21 Calves from 2005 and 2006 likely to be added to Catalog</p> <p>High: 579 individuals 483 All Cataloged whale minus those known dead 54 All active intermatch codes without calves 42 All 2005 and 2006 calves minus dead</p>
--

Analysis 10/12/07

Reproduction: 2007

22 calves born this year
Average calving interval of 2007 moms was 3.6 years
10 first time moms

Mortalities

Between the 2006 and 2007 Annual Consortium Meetings, 4 right whale mortalities were documented. Two of these 4 mortalities were calves (both male). The final 2 documented mortalities were male.

Documented right whale mortalities November 2006-October 2007

EGNO	Date	Sex	Age	Necropsy	Cause of Death	Comments
3508	12/30/06	Male	2	Moore	Shipstrike	
--	1/25/07	Male	Calf	McLellan	Dystokia	
1424	3/25/07	Male	Adult	No	Unknown, possibly entanglement?	Carcass not recovered Previously entangled, gear still wrapped around rostrum
--	3/31/07	Male	Calf	McLellan	Entanglement	

As highlighted in the 2005 Report, the Consortium Board recognizes necropsies as significant data collection events that provide valuable information on which management and conservation measures can be (and have

been) made. The Board views consistent necropsy response and support (both financial and personnel) as integral to right whale recovery.

Non-Fatal Entanglements and Ship Strikes

These cases are classified as non-fatal only in so far as the animals were alive when last seen.

New right whale entanglements November 2006 - October 2007

EGNO	Date	Location	Sex	Age	Comments
2029	09 March 2007	20 miles SE Chatham, MA	Female	17	Partially disentangled
3260	08 May 2007	Great South Channel	Female	Unknown	Non life-threatening entanglement

2 additional shipstrikes were reported:

New right whale non-fatal shipstrikes November 2006 - October 2007

EGNO	Date	Location	Sex	Age	Comments
3503	3/12/07	Cape Cod Bay	Female	2	Do not know where strike occurred
2006 calf of 1503	8/5/07	Bay of Fundy	Unknown	1	Do not know where strike occurred

Research Efforts 2007 (*sighting information through October 2007- not all data entered- totals may change*)

Surveys:

Southeast United States (830 sightings; NEAq, FWRI, Wildlife Trust, GDNR)

- Aerial surveys November 06 through March 07
- Biopsy darting January through mid March.

New England (552 sightings; PCCS)

- Aerial surveys and habitat sampling February through May

Jeffreys Ledge (90 sightings; PCCS, WCNE)

- Aerial and vessel surveys November 06 – February 07

Great South Channel (211 sightings; NEFSC, PCCS)

- Aerial and vessel surveys February - April

Gulf of Maine (69 sightings; NEFSC, DFO, WHOI)

- Aerial and limited vessel surveys

Bay of Fundy (650 sightings; NEAq)

- Aerial surveys November 06
- Vessel surveys August-September

Mid-Atlantic (25 sightings; UNCW, Wildlife Trust, PCCS, USCG)

- Aerial surveys January – April

Gulf of St. Lawrence (0 sightings; NEAq)
- vessel survey

Other Research Activities:

Investigating physical forces encountered by right whales

- Fecal DNA genotyping for identifications
- Environmental impact analyses for LNG in BOF
- Shipstrike modeling
- Population modeling
- Investigating whalewatch vessels as platform for Eg sightings
- Spatial modeling of right whales in BOF correlated to copepods and chl. a
- Tidal influence of right whale movements in BOF
- GIS support tool to assist in species at risk management and sustainable development within BOF and surrounding waterways
- GIS modeling of right whale movement
- Lethality of shipstrikes
- Modeling right whale population growth
- Right whale response to regional-scale average zooplankton abundance
- Updating recent genetic data for error rates, paternity analyses, and demography
- Estimating minimum number right whales alive
- Calf mortality: a description of documented mortalities and an investigation into the possible causes for unknown deaths.
- Investigating right whale digestion of lipids

Opportunistic sightings:

- SEUS -MIDA - Bay of Fundy
- Jeffreys Ledge - New England

Management Activities 2007

- In November 2006, NOAA and the USCG implemented recommended two-way routes in Cape Cod Bay, MA and the approaches to Brunswick, GA, Fernandina, FL, and Jacksonville, FL. A Recommended Lanes Fact Sheet, a publication that provides mariners with information about the recommended two-way routes in SE and NE was also published.
- In December 2006, the NMFS completed and published a comprehensive Status Review of Right Whales in the North Atlantic and North Pacific Oceans.
- On December 2006 NMFS published proposed listing determinations to list the North Atlantic right whale and North Pacific right whale as a separate endangered species under the Endangered Species Act (ESA). NMFS is currently preparing final listing determinations for the North Atlantic right whale and North Pacific right whale.
- Emergency rule to prohibit gillnet fishing in the Southeast U.S. restricted area from November 15, 2006, through April 15, 2007.
- On numerous occasions, NMFS implemented the ALWTRP Dynamic Area Management Program to protect unexpected aggregations of right whales north of 40° 00' N. lat.

Pettis HM, Hamilton PK. (2007) North Atlantic Right Whale Consortium 2007 annual report card. Report to the North Atlantic Right Whale Consortium, November 2007.

- Proposed and Final rule to expand the Southeast U.S. restricted area, to modify the restricted period, and to prohibit gillnet fishing in the restricted area and during the restricted period annually, with limited exceptions.
- In July 2007, NOAA and the USCG implemented a shift in the Boston Traffic Separation Scheme (TSS).
- NMFS amended the entire ALWTRP regulations through a final rule through broad-based gear modifications to replace the current Dynamic Area Management (DAM) and Seasonal Area Management (SAM) programs.
- NMFS is currently working on a proposed rule to revise critical habitat for the North Atlantic right whale.
- NMFS proposed rule developed to restrict speeds of vessels at various locations along the eastern sea board. A final rule, and accompanying economic analysis and NEPA documents, prepared based on comments, and provided for interagency review and clearance in February 2007. Final rule still in review.
- NMFS has undertaken numerous outreach and education initiatives to address commercial fisheries and whales interactions, as well as ship strike mitigation. For example, updated and distributed ALWTRP outreach materials to fishermen to inform them of their requirements; produced an animated video depicting possible entanglement scenarios and gear modification roles in reducing interactions; and developed A Prudent Mariners Guide to Right Whale Protection CD, Right Whale Shipboard Management Notebooks, Right Whale Radio PSA, and Right Whale Print PSA.
- EIS for NAVSTA activities in Mayport, FL
- NOAA's National Marine Fisheries Service (NMFS) published a final rule to amend the regulations implementing the Atlantic Large Whale Take Reduction Plan (ALWTRP). The final rule implements broad-based gear modifications (e.g., expanded weak link and sinking and/or neutrally buoyant groundline requirements) in specific times and areas that would replace the Seasonal Area Management [SAM] and Dynamic Area Management [DAM] programs, folds in additional trap/pot and gillnet fisheries under the ALWTRP regulations, expands exempted waters, requires additional gear marking requirements, and includes other regulatory changes for the purposes of clarification and consistency.
- The Maritime Safety Committee of adopted in accordance with Resolution A.858(20) item 2.1.19 "the proposed new recommended seasonal Area to be Avoided 'In Roseway Basin, south of Nova Scotia'". This new measure is to come into force in 6 months, precisely at 0000 Coordinated UZT at May 1st, 2008.
- The Permits, Conservation and Education Division, Office of Protected Resources, NMFS, is considering proposing changes to its implementing regulations and criteria governing the issuance of permits for scientific research and enhancement activities under Section 104 of the Marine Mammal Protection Act (MMPA). We have published an Advanced Notice of Proposed Rulemaking (ANPR) in the *Federal Register* and are soliciting review and comment to better inform the process. The ANPR and MMPA implementing regulations (50 CFR part 216) can be found at http://www.nmfs.noaa.gov/pr/permits/mmpa_anpr.htm.
- Mitigation Strategy: Right Whale / Lobster Fishing Gear Interactions, Lobster Fishing Areas 36, 37 & 38, western Bay of Fundy. A DFO, industry, conservation group initiative including aerial surveys before and during the lobster season.
- Voluntary Code of Conduct established for Fishermen working in the vicinity of right whales and other large whales (in Canada)

Essential Population Monitoring

- Photographic Identification and cataloging in SE United States, Cape Cod Bay, Great South Channel, Bay of Fundy, Scotian Shelf, and Jeffreys Ledge
- Monitoring of body condition using aerial photogrammetry
- Monitoring of scarring and visual skin health
- Examination of all mortalities – ashore if practical or aerial and underwater video at sea at least.
- Fecal analysis of reproductive hormonal status, parasitism and other disease indicators

Suggested Research and Management Activities cont'd

Applied Research

- Analysis of foraging ecology to focus on where and at what depths entanglements occur most commonly to better target mitigation efforts
- Modeling of ship-whale collisions to better understand failure of avoidance and lethal mass and speed cut off points
- Aggressive large scale gear research program on vertical lines
- Continued passive acoustic monitoring

Management

- Establishment of a program that recognizes that entanglement avoidance has to include targeted fishery efficiency improvement, as well as gear modification. For instance if lobsters were only caught once in areas of high entanglement risk, the entanglement risk would reduce by about 10 fold. (i.e. actual removal of rope from the water column as opposed to softening its ends by poorly evaluated gear modifications.)
- Completion of speed reduction process to actually achieve fewer ship trauma mortalities.
- Evaluate whether the existence of disentanglement programs have the effect of creating a false sense of security regarding present fishing practices, leading to reduced effort to develop new management methods and hence increased entanglement rates.
- Experimental fishing zones where no whale-killing vertical lines are allowed, to provide incentives to fishermen for the development of whale-safe gear

Population Estimate Calculation

We have developed standardized criteria that can be applied each year to get a low, middle (best estimate) and upper number of whales in the population as determined from Catalog data. One term needs to be explained to understand these numbers. Whales are given temporary intermatch codes if 1) two or more sightings match each other, and 2) neither have been matched to a catalog whale. Some of these whales will eventually be matched to existing cataloged whales and others will be determined to be “new” to the Catalog and assigned a number. Once an intermatch whale is given a Catalog number, or matched to another intermatch code whale, the intermatch code is made inactive.

Lower

To determine the lower bound, we simply count the number of unique cataloged whales identified the year before. Because of delays in processing data, this number is lower than the eventual total number of whales seen alive in that year.

Middle

The middle bound is determined by summing three categories:

- 1) All whales presumed to be alive in that year (i.e. seen in the last six years),
- 2) Intermatch whales that are likely to be added to the Catalog. This is calculated by first finding all intermatch codes that span two or more years, removing 1) some calves (those that were born in the last two years which are dealt with below or those whose two year sighting span were actually a single calving season and their lack of re-sightings suggests that they will never be cataloged (if they survived, these animals would likely be counted elsewhere as intermatch whales) and 2) other SEUS whales whose sightings span two years because they are seen in December and January of the same field season). Then, we determine which of those intermatch whales have Catalog numbers and what percent of those were new to the catalog (i.e. had not been matched to an existing cataloged whale). The remaining intermatch whales are then multiplied by that fraction to determine how many are likely new to the Catalog.
- 3) Calves from the last two years that have not been cataloged. We make an assessment of whether there is enough photographic information to match them to future sightings and thus assign them a Catalog number. We then sum those that will likely be cataloged.

Upper

The upper bound is also the sum of three categories:

- 1) All Cataloged whales minus those whose carcasses were identified,
- 2) All active intermatch whales minus calves
- 3) All calves from the last two years minus those known to be dead.