

Update on the United States' Actions to Reduce the Threat of Ship Collisions with Large Whales

**Submitted by the Government of the United States to the Conservation Committee
62nd Annual Meeting of the International Whaling Commission
June 2010**

The United States continues to take steps to reduce ship strikes, including operational measures for vessels, education and outreach programs, technological research, and research and monitoring activities. For background information on previous and ongoing activities, please refer to the 2008 and 2009 update reports submitted to the IWC Conservation Committee.

Ship Speed Regulations: In October 2008, the National Oceanic and Atmospheric Administration (NOAA) Fisheries Service issued new regulations, effective December 2008, to reduce the likelihood of ship collisions with right whales (73 FR 60173). The regulations implement speed restrictions of 10 knots or less for certain vessels (65 ft or greater) in certain times and areas (e.g., key port entrances) along the U.S. Atlantic seaboard that correspond to right whale occurrence. Exempted from the rule are U.S. government vessels that are expected to adhere to guidance provided under Endangered Species Act Section 7 consultations and State law enforcement vessels engaged in search and rescue or law enforcement activities. The rule also contains a provision exempting vessels from speed restrictions when oceanographic conditions require ship speeds in excess of 10 knots for purposes of vessel safety and when those reasons are documented in the ships' logs.

The rule also provides for establishment of temporary, voluntary "dynamic management areas" (DMAs) in times and/or areas where the seasonal management measures are not in effect, and where whales occur. In these locations, mariners have the option to cross through the DMA at a speed no greater than 10 knots or route around the area.

The regulations are in effect for five years after implementation. During this time, NOAA is conducting additional research on whale distribution, mariner behavior and compliance, and the effectiveness of the rule. Additional information on the regulation can be found at: <http://www.nmfs.noaa.gov/pr/shipstrike/>.

The Stellwagen Bank National Marine Sanctuary, in conjunction with NOAA Fisheries Service, has completed a modeling exercise for sanctuary waters to investigate the reduction from status quo in the probability of whale mortality resulting from collision with ships under various speed restriction scenarios. Results were 16 kts; -2.5%, 14 kts; -7.3%, 12 kts; -19.7%, and 10 kts; -38%. The exercise used data derived from the Automatic Identification System (AIS), operated by the United States Coast Guard, to identify status quo ship speeds and probability of mortality in the sanctuary.

The Stellwagen Bank National Marine Sanctuary, in conjunction with NOAA Fisheries Service, has also completed an analysis of vessel compliance with the 10 knots or less speed restriction for AIS carriage vessels that operated in the Cape Cod Bay and Off Race Point Seasonal Management Areas (SMA) for the year 2009. These SMAs overlap the sanctuary boundary. Educational letters are being sent to all ships using the areas. Each letter includes (1) a map of all vessel transits made by the letter receiver's ship, (2) a breakdown of compliant and non-compliant speeds, by transit, for that ship, and (3) an analysis of how much time would be lost if the ship were to transit at compliant speeds. For the majority of ships, compliance would increase transit times by less than 15 minutes.

Vessel Routing Activities: On June 1, 2009, two vessel routing measures, endorsed by the International Maritime Organization (IMO), became effective.

One measure is the establishment of a recommended, seasonal area to be avoided (ATBA) in the Great South Channel off Massachusetts (see Figure 1). The ATBA affects ships of 300 gross tons and above and is in effect each year from April 1 to July 31, a time and location of significant right whale aggregation. Information on these actions can be found at: <http://www.nmfs.noaa.gov/pr/shipstrike/>.

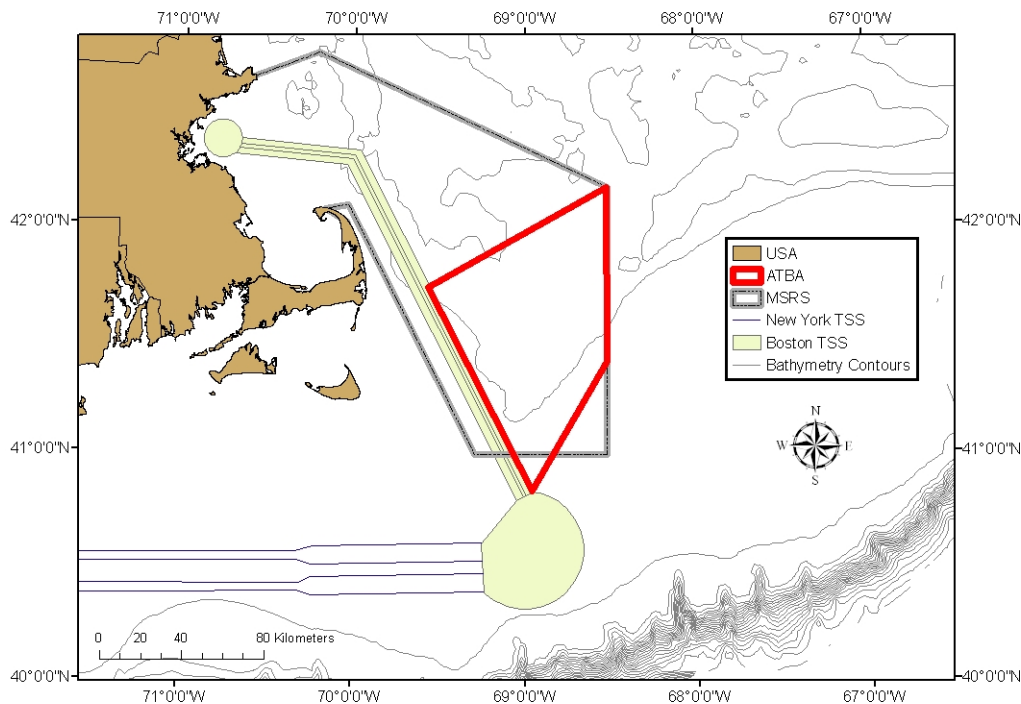


Figure 1. Chartlet of Great South Channel Area to be Avoided.

The other measure is a modification of the north-south leg of the IMO-adopted traffic separation scheme (TSS) “In the approach to Boston, Massachusetts” by narrowing the width of each of the lanes from two miles to a mile and a half, leaving the western boundary of the TSS and the width of the mile separation zone unchanged. This amendment moves ships away from the greatest density of right whales and minimizes the overlap between whales and ships, while making the width of the north-south lanes of the Boston TSS consistent with the width of the east-west lanes.

Federal Vessel Protective Measures: In order to reduce the risk of ship strikes, the U.S. Navy has instituted North Atlantic right whale protective measures that cover vessels operating all along the Atlantic coast. Standing protective measures and annual guidance have been in place for ships in the vicinity of the right whale critical habitat off the Southeast coast since 1997. The Navy has coordinated with NOAA Fisheries Service for identification of seasonal right whale occurrence patterns in six major sections of the mid-Atlantic coast, with particular attention to port and coastal areas of key interest for vessel traffic management. The Navy’s resulting guidance calls for extreme caution and operation at a slow, safe speed within 20 nautical mile arcs of specified coastal and port reference points. For ship trials in the Gulf of Maine the Navy uses an innovative approach to consider the variability inherent in whale distributions over time. Rather than consulting with the NOAA Fisheries Service on a fixed course for a proposed ship trial, collaboration with NOAA Fisheries Service has allowed flexibility in location planning, considering the latest right whale sightings, even after the ship is underway to reduce the risk of encounter.

Blue Whales in Waters off California: Between September 1 and December 1, 2007, 5-6 blue whale carcasses (one possibly being a re-sight) were reported in California in Long Beach Harbor, the Santa Barbara Channel area, and offshore San Clemente Island. Two carcasses, initially discovered floating in the Santa Barbara Channel, and one carcass discovered on San Miguel Island, were examined and exhibited blunt force trauma or other wounds consistent with injuries sustained in a collision with a large vessel. A fourth carcass was that of a blue whale fetus found in the vicinity of the carcass on the island, possibly expelled by the female during the decomposition process. The carcass in Long Beach Harbor was assumed to have been transported into the harbor on the bow of a commercial vessel with the strike most likely occurring in the Santa Barbara Channel area. It is also assumed that the carcass that was floating offshore of San Clemente Island was a re-sight of the animal that was towed out of Long Beach Harbor.

Following the blue whale National Marine Fisheries Service-designated “Unusual Mortality Event” in 2007 and several subsequent fin and gray whale ship strike mortalities off the U.S. west coast, NOAA Fisheries Service partnered with several groups to attempt to understand, mitigate, and potentially reduce large whale ship strikes in coastal waters. NOAA Fisheries Service worked with NOAA’s Channel Islands National Marine Sanctuary and Sanctuary Advisory Council to draft a response plan for large whale ship strikes in the Santa Barbara Channel. The plan outlines several stages of response, including language for two notices to mariners issued by the US Coast Guard. The first is issued when large whales have been consistently sighted in the greater Channel, and serves as a “heads-up” to mariners to be aware of the presence of whales. The second notice is issued when aggregations of 5 or more animals have been persistently observed in the shipping lanes or within 1 mile of the shipping lanes. This notice includes a recommendation of a speed reduction to 10 knots. The plan also includes general provisions for emergency response, such as when a dead whale is discovered in the Channel.

The California Marine Mammal Stranding Network, administered by NOAA Fisheries Service, continues to work to improve readiness for large whale stranding events and necropsies. Through partnerships with researchers, NOAA Fisheries Service is endeavoring to better understand the ecology of large whales in the waters off California, particularly in and around shipping lanes.

Mandatory Ocean Awareness Training in Hawaii: NOAA’s Hawaiian Islands Humpback Whale National Marine Sanctuary, in collaboration with Maui County and State agencies, is now providing education about vessel collisions, and how to avoid them, to all commercial vessel operators in the County (the area with the highest number of collision reports). This is part of the overall training that is mandatory to all commercial operators. In addition, HIHWMS improved and added to its educational materials on this topic for all Ocean users (commercial and recreational) through the development of waterproof flyers and wheelhouse cards. These are made available through its ongoing outreach efforts on this topic.

Right Whale Festival: The inaugural Right Whale Festival was held on December 5, 2009 in Jacksonville Beach, Florida. An estimated 750 people attended the festival. The mission was to celebrate North Atlantic right whales and their seasonal return to the waters off Florida and Georgia, which is the only known right whale calving area in the North Atlantic. This outreach event was intended to educate the public about right whale management and protection measures, how to recognize and avoid disturbing mother-calf pairs, and the importance of reducing vessel speed when whales are present.

Ongoing Activities

Aircraft Surveys and Right Whale Alerts: Federal and state agencies support or conduct extensive aircraft surveys for right whales. NOAA Fisheries Service continues to assemble reports, and “alerts” are disseminated to mariners via e-mail, web pages, U.S. Coast Guard Broadcast Notices to Mariners, NOAA Weather Radio, NAVTEX, NOAA Weather Buoys, shipping agents, pilots and port authorities. Off the Southeast coast, the U.S. Navy serves as the hub for coordinating and disseminating right whale sighting data to its ships as well as the Coast Guard and commercial vessels.

Mariner and boater education and outreach programs:

- Distribution of compliance guides for the right whale ship strike reduction rule (available at http://www.nmfs.noaa.gov/pr/pdfs/shipstrike/compliance_guide.pdf).
- Continued distribution of placards, brochures, and videos to mariners on ways to reduce ship strikes.
- NOAA maintains two websites specifically devoted to right whale ship strike reduction.
- NOAA navigational charts are routinely updated as they are reprinted to include right whale advisories.
- Current information on right whales is provided throughout the U.S. eastern seaboard *Coast Pilot* guides, National Geospatial Intelligence Agency’s *Notice to Mariners* and *Sailing Directions*, and to the United Kingdom’s *Admiralty Publications*.
- NOAA has developed, in collaboration with a number of partners, a multi-media CD entitled “The Prudent Mariner’s Guide to Right Whale Protection”. The CD was updated in 2009 with current information. This CD is intended for professional mariners operating along the U.S. East Coast, and is available at: <http://www.nero.noaa.gov/shipstrike/doc/mtr.html>.

Auto-Detection Buoys in the Boston Traffic Separation Scheme: In spring 2007, a program was implemented to reduce the threat of ship strikes to endangered large whales that could result from transport of Liquefied Natural Gas (LNG) in waters off New England. The program established three passive acoustic arrays for detecting calling whales. Two of the arrays include real-time auto detection buoys, first at the site of port and pipeline construction, and later within the Boston shipping lanes. The buoys automatically detect northern right

whale contact calls and transmit alerts in real-time via Iridium satellite data. Detections are confirmed in real time by trained acousticians at Cornell University's Bioacoustics Research Program before triggering management decisions (see www.listenforwhales.org). Confirmed detections communicated to LNG vessels via phone trigger 24 hour time periods in which transiting LNG vessels are mandated to slow their speeds to 10 knots or less anywhere within 5 nautical miles of the detecting buoy and heighten their visual awareness. The use of the arrays is mandated for the life of both ports (each estimated to be 25-40 years).

Although only vessels calling on the new LNG ports are mandated to travel at certain speeds in response to real-time whale detection information, NOAA's Northeast Fisheries Science Center began including acoustic detections in the Boston TSS in their Sighting Advisory System (SAS) in February 2008. The SAS provides information to mariners entering the area regarding the locations of right whales that have been seen, and, now, heard, in Northeast waters and provides guidance for avoiding collisions.

The Stellwagen Bank National Marine Sanctuary, NOAA Fisheries, Cornell University, University of New Hampshire, and the US Coast Guard Research and Development Center are currently working to demonstrate a Right Whale Location Broadcast capability. This project will send right whale detections from the above-mentioned acoustic network directly to a ship's bridge using AIS transmission. An extremely successful pilot project was completed in 2009 and all LNG ships will begin receiving the message via AIS in 2010. Attempts will be made to expand the program in 2010.

Limiting Vessel Numbers and Speeds to Protect Humpback Whales in Glacier Bay, Southeast Alaska:

Glacier Bay National Park and Preserve is used by a feeding aggregation of humpback whales in summer (n=176 in 2009). Glacier Bay is also a destination for large cruise ships and other recreational vessels. Given the increasingly high density of whales in a relatively confined area, encounters between vessels and whales are common. Park regulations since 1979 limit the number of vessels and restrict vessel behavior (36 C.F.R. Part 13, Subpart N). Systematic whale population surveys, conducted annually since 1985, identify whale aggregations that warrant protection by vessel course and speed restrictions. In 2009, vessel speed restrictions were implemented in portions of Park waters for a total of 173 days (May 15-November 3, 2009).

At present, 153 of the maximum of 184 cruise ship entries allowed under Park regulations have been authorized. No increases are currently proposed, and the decision to change the number of ship entries is pending the outcome of scientific studies of the effects of the ships on whales and other Park resources. In December 2009, the National Park Service convened a multi-disciplinary symposium to review the findings of studies relevant to cruise ship quotas and operations in Glacier Bay. One pertinent outcome of this meeting was the decision to write a comprehensive "ship strike standard operating procedure" for the Park to use in the event of a whale-ship collision. Park staff is currently preparing this document. The Park's research using shipboard observers to document whale-ship encounters, underway since 2006, is slated to continue in 2010. Although the main purpose of the observer program is to study the frequency and circumstances around whale-ship encounters at various distances, these observers are poised to record and report any strikes that may occur.