

---

# 1 PURPOSE AND NEED

---

## Introduction

The National Oceanic and Atmospheric Administration’s (NOAA) National Marine Fisheries Service (NMFS) proposes to implement a set of vessel operational measures to reduce ship strikes of North Atlantic right whales, an endangered species under the Endangered Species Act (ESA). North Atlantic right whales are also designated as depleted under the Marine Mammal Protection Act (MMPA). The vessel operational measures are part of a larger set of measures NMFS is proposing to reduce ship strikes to right whales. This final environmental impact statement (FEIS) analyzes the potential environmental impacts of implementing the vessel operational measures only. Other proposed ship-strike reduction measures are not addressed. This FEIS has been prepared pursuant to the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality’s Regulations for Implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and the NOAA environmental review procedures (NOAA Administrative Order 216-6) (NOAA, 1999).

---

### 1.1 Background: The Western North Atlantic Right Whale

The western North Atlantic right whale (*Eubalaena glacialis*), whose habitat generally extends from waters off the coasts of southern Canada to the mid-coast of Florida, is a critically endangered large whale species. This species was overharvested by aboriginal and commercial whaling operations from the 16<sup>th</sup> to 19<sup>th</sup> centuries. Right whales were easy targets because they are slow swimmers and their high body fat content causes them to float after death. Hence their common name: they were the “right” whales to hunt.

#### Right Whales

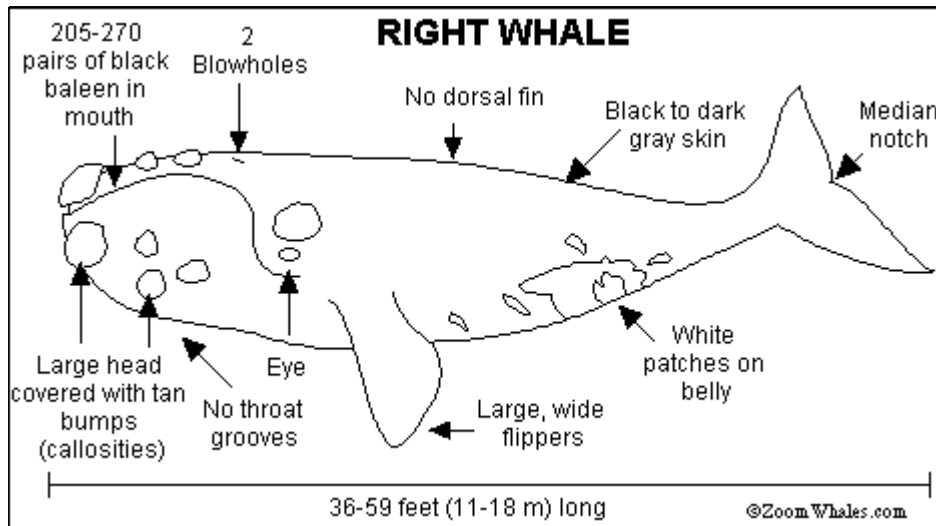
Right whales are found in three general regions: the North Pacific, the Southern Hemisphere, and the North Atlantic.

The **North Pacific right whale** (*Eubalaena japonica*) was considered until recently to be the same species as the North Atlantic right whale. Based on genetic studies that provided evidence that they are in fact different species, NMFS published a final rule to list them as separate species under the ESA on March 6, 2008 (73 FR 12024). The current population size of the north Pacific right whale is unknown (Brownell *et al.*, 2001). It is classified as endangered in the World Conservation Union (IUCN) Red List.

The **Southern right whale** (*Eubalaena australis*) is a distinct species of right whale that occurs only in the Southern Hemisphere off the coasts of South America, Australia, New Zealand, and South Africa. Although it is classified as lower risk/conservation dependent in the IUCN Red List, and is listed under Australia’s endangered species legislation, the Southern right whale population is recovering (estimated at over 10,000 animals with a 7.2 percent annual growth rate [Best *et al.*, 2001]).

Additionally, there are two distinct populations of **North Atlantic right whales** (*Eubalaena glacialis*): the eastern population, once found from northern Europe to the northwest coast of Africa, which now appears to be nearly extinct; and the western population. Unless otherwise specified, **all references to “right whales” in this FEIS are to the western North Atlantic right whale**. The North Atlantic right whale is classified as endangered on the IUCN Red List.

Right whales belong to the family of baleen whales, also referred to as mysticetes (Sub-order *Mysticeti*). Adults are generally between 45 and 55 feet (ft) (14 and 17 meters [m]) long and can weigh up to 70 tons, with females being somewhat larger than males; calves are 18 to 20 ft (5.5 to 6 m) long at birth. Distinguishing features of right whales include a stocky body, a generally black coloration (although some individuals have white patches on their undersides), a lack of a dorsal fin, a large head (about one quarter of the body length), a strongly bowed margin of the lower lip, and callosities (raised patches of roughened skin) about the head. Two rows of long (up to 8 ft [2.4 m]), dark baleen plates hang from the upper jaw, with an average of 225 plates on each side. The tail is broad, deeply notched, and all black with a smooth trailing edge.<sup>1</sup>



### 1.1.1 Right Whale Population Status

International protection for the right whale began in 1935 when the Convention for the Regulation of Whaling banned commercial whaling for certain species.<sup>2</sup> Prior to the ban, and primarily in the 16<sup>th</sup>, 17<sup>th</sup>, and 18<sup>th</sup> centuries, right whales were severely overharvested. The Northern right whale has been listed as endangered under the ESA since the passage of the act in 1973. The North Atlantic and North Pacific right whales were originally listed as one species, the northern right whale, on the Federal list of threatened and endangered animals and plants maintained by the US Fish and Wildlife Service (USFWS). However, after a status review, NMFS concluded that these are two separate species and, on March 6, 2008, published a final rule to list these species separately (71 FR 77704). Despite protective measures, right whale populations in the Northern Hemisphere continue to be depleted.

The best estimate of the size of the North Atlantic right whale population is a range of 300 to 350 animals. Although other population size estimates are available, the most recent Stock Assessment Report (SAR) (Waring *et al.*, 2007) providing a peer-reviewed estimate indicates that the best estimate of minimum population size for the species is 313 individually-recognized whales known to be alive in 2002. Models indicate that this population is likely declining rather than remaining static or increasing (Caswell *et al.*, 1999). The number of catalogued whales in

<sup>1</sup> [www.nmfs.noaa.gov/pr/species/mammals/cetaceans/right\\_whales.doc](http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/right_whales.doc)

<sup>2</sup> The International Whaling Commission did not impose a worldwide ban on all commercial whaling until 1985.

the right whale sighting database represents the minimum number of right whales that NOAA knows are alive. That number fluctuated between years and slightly increased from 284 in 1995 to 313 in 2002 (Waring *et al.*, *in review*). Between 1993 and 2007, NOAA observed 234 calves born. Of these 13 calves are known to have died (Waring *et al.*, *in review*). Furthermore, 26 adult right whales are known to have died in 1993-2006. Thus, even though multiple factors affect the minimum population number, NOAA believes that the number of whales in the minimum population is lower than might be expected because observed mortality is lower than total mortality as not all carcasses are found (Waring *et al.*, *in review*). While the life span of the right whale is relatively long and complete extinction is unlikely in the immediate future, studies have shown that if current conditions (i.e., high death rates due to human activities) continue, extinction is probable in less than 200 years (Caswell *et al.*, 1999; Fujiwara and Caswell, 2001).

Today, the right whale population is sufficiently fragile for the early death of a single mature female to make recovery of the species likely unattainable (for biological reasons, the number of reproductive-age females is more essential to a species' ability to maintain itself or grow than the number of males.) The primary causes of premature mortality among right whales are anthropogenic (i.e., from human activities), mainly ship strikes and fishing-gear entanglement. Recently, there has been an increase in known anthropogenic mortality and serious injury: for the five-year period 1999 to 2003, the average rate was 2.6 right whales per year; for the five-year period 2000 to 2004, the rate was 2.8; from 2001 to 2005, the rate was 3.2 (NMFS, 2005f; NMFS, 2006; Waring *et al.*, 2007). The most recent estimate of anthropogenic mortality and serious injury available shows a rate of 3.8 right whales per year from 2002 to 2006. Of these, 2.4 were attributed to ship strikes and 1.4 were attributed to entanglements (Glass *et al.*, 2008). In addition to maintaining optimal habitat conditions, any recovery of the right whale population is contingent upon reducing the effects of human activities on the species.

More than 73 right whale deaths have been confirmed since 1970; this number represents a minimum, as it is likely that not all deaths are detected. Nearly half of these deaths (49 percent) have been attributed to ship collisions (29 deaths) or entanglements (7 deaths). Fifty of these deaths (71 percent) have occurred since 1990, suggesting an increase in frequency, though the increase may also reflect an increased awareness about reporting and increased surveying efforts, suggesting that the death rate may in fact have been high for some time. In the 16 months between January 2004 and May 2005, there were eight confirmed right whale deaths (Kraus *et al.*, 2005). Three (possibly four) of these eight deaths were caused by ship strikes and one by fishing gear; the causes of the other deaths are unknown at this time. Six of the eight whales were adult females, three of which were carrying near-term fetuses (Kraus *et al.*, 2005). Four of the six females were entering their years of sexual maturity, during which they would have borne calves. Since on average, a female right whale will produce 5.25 calves over her lifetime, the death of four females represent a lost reproductive potential of as many as 21 animals (Kraus *et al.*, 2005).

Right whale mortality levels over the last two decades have well exceeded the NMFS potential biological removal (PBR) level for the species. The PBR level is the maximum number of individuals that can be removed from a marine mammal population by nonnatural mortality while still allowing that population to reach or maintain its optimum sustainable population

(OSP).<sup>3</sup> NMFS develops PBR levels to assess the effects of nonnatural mortalities on a population. NMFS estimates that the North Atlantic right whale population is well below the OSP. Therefore, the PBR level for the species has been set to zero, meaning that any mortality or serious injury is significant.

---

## 1.1.2 Anthropogenic Causes of Right Whale Injury and Mortality

### 1.1.2.1 Ship Strikes

Ship strikes are responsible for the majority of human-caused right whale mortalities (Jensen and Silber, 2003; Knowlton and Kraus, 2001; NMFS, 2005b). As such, ship strikes are a primary cause of the lack of recovery of the species. In waters off the US and Canadian east coasts, several major shipping corridors overlap with, or are adjacent to, right whale habitat areas and migratory corridors, posing a grave threat to these animals. Presumably, right whales are either unable to detect approaching vessels or they ignore them when involved in important activities such as feeding, nursing, or mating. Additionally, right whales are very buoyant and slow swimmers, which may make it difficult for them to avoid an oncoming vessel even if they are aware of its approach. Finally, given the density of ship traffic and the distribution of right whales, overlap is nearly inevitable, thereby increasing the probability of a collision even if either the whale or the vessel actively tries to avoid it.

In 2003, NMFS published a database of all known ship strikes to large whales worldwide (Jensen and Silber, 2003). Although this database is comprehensive, not all ship strikes are documented; therefore, it almost certainly underestimates the actual number of strikes. Indeed, based on a recent estimate of the mortality rate and records of ship strikes to large whales, scientists estimate that less than a quarter (17 percent) of ship strikes are actually detected (Kraus *et al.*, 2005). The available records indicate that collisions occur off almost every US coastal state, though strikes are most common along the East Coast. More than half (56 percent) of the recorded ship strikes from 1975 to 2002 occurred off the coasts of the northeastern United States and Canada, while the mid-Atlantic and southeastern areas each accounted for 22 percent (Jensen and Silber, 2003). Records from Knowlton and Kraus (2001), an account of right whale deaths, show similar results: of 15 confirmed ship strikes in the western North Atlantic (including Canada) from 1970 to 1999, nine (60 percent) occurred in the Northeast and three (20 percent) occurred in the mid-Atlantic and Southeast. Although all large whale species are represented in the ship strike records, Vanderlaan and Taggart (2007) have concluded that right whales are more vulnerable, on a *per capita* basis, than other species.

The International Whaling Commission (IWC) global database of collision incidents between vessels and cetaceans identifies 763 records, 68 percent of which were confirmed definite vessel-cetacean collisions (Van Waerbeek and Leaper, 2008). Records of deaths from 1970 to 1999 indicate that ship strikes are responsible for over one-third (16 out of 45, or 35.5 percent) of all confirmed right whale mortalities (a confirmed mortality is one observed under specific

---

<sup>3</sup> The term "optimum sustainable population" means, with respect to any population stock, the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element [16 U.S.C. § 1362 (9)].

conditions defined by NMFS).<sup>4</sup> Of the remaining confirmed mortalities, three (6.7 percent) were due to entanglement in fishing gear; 13 (28.9 percent) were neonate deaths; and another 13 (28.9 percent) were deaths of non-calf animals from unknown causes (Knowlton and Kraus, 2001). Based on criteria developed by Knowlton and Kraus (2001), 56 unconfirmed serious injuries and mortalities from entanglement or ship strikes were found to have occurred between 1970 and 1999: 25 (44.6 percent) from ship strikes and 31 (55.4 percent) from entanglement. Of these, 19 were fatal interactions (16 ship strikes, three entanglements); 10 possibly fatal (two ship strikes, eight entanglements); and 27 nonfatal (seven ship strikes, 20 entanglements) (Knowlton and Kraus, 2001).

Another study conducted over a similar period – 1970 to 2002 – examined 30 (18 adults and juveniles, and 12 calves) out of 54 reported right whale mortalities from Florida to Canada (Moore *et al.*, 2005). Human interaction (ship strike or gear entanglement) was evident in 14 of the 18 adults examined, and trauma, presumably from vessel collision, was apparent in 10 out of the 14 cases. Trauma was also present in four of the 12 calves examined, although the cause of death was more difficult to determine in these cases. In 14 cases, the assumed cause of death was vessel collision; an additional four deaths were attributed to entanglement. In the remaining 12 cases, the cause of death was undetermined (Moore *et al.*, 2005).

Glass *et al.* (2008) reported that there were 54 determinations of right whale mortality and serious injury between 2002 and 2006. Out of 21 verified right whale mortalities, 10 were from ship strikes and 3 were from entanglement. Entanglement was identified as the cause of four recorded serious injuries. There were also two documented serious injuries from ship strikes (Glass *et al.*, 2008).

Many types and sizes of vessels have been involved in ship strikes with large whales, including container/cargo ships/freighters, tankers, steamships, US Coast Guard (USCG) vessels, Navy vessels, cruise ships, ferries, recreational vessels, fishing vessels, whale-watching vessels, and other vessels (Jensen and Silber, 2003). Vessel speed (if recorded) at the time of a large whale collision has ranged from 2 to 51 knots (Jensen and Silber, 2003). Vessels can be damaged during ship strikes (occasionally, collisions with large whales have even harmed or killed humans on board the vessels); of 13 recorded vessels that reported damages from a strike, all were traveling at a speed of at least 10 knots (Jensen and Silber, 2003). A summary paper on ship collisions and whales by Laist *et al.* (2001) reported that out of 28 recorded collisions resulting in lethal or severe injuries to whales in which vessel speed was known, 89 percent involved vessels traveling at 14 knots or faster and the remaining 11 percent involved vessels traveling at 10 to 14 knots. None occurred at speeds below 10 knots. The IWC database of vessel collisions identified 83 events where speed was recorded; the majority of serious injuries and mortalities occurred within a similar range of 15 to 20 knots (Van Waerbeek and Leaper, 2008). With regard to the severity of injuries at increasing speeds, Pace and Silber (2005) found a predicted 45 percent chance of death or serious injury at 10 knots. Vanderlaan and Taggart (2007) came to a similar conclusion, determining that the probability of death from a collision was approximately 35-40 percent at 10 knots.

---

<sup>4</sup> There are four main criteria used to determine whether serious injury or mortality resulted from ship strikes: (1) Propeller cut(s) or gashes that are more than approximately 8 cm in depth; (2) Evidence of bone breakage determined to have occurred premortem; (3) Evidence of haematoma or haemorrhaging; and (4) The appearance of poor health in the ship-struck animal (Knowlton and Kraus, 2001).

### 1.1.2.2 Fishing Gear Entanglement

Entanglement in fishing gear is another common anthropogenic cause of right whale mortality and serious injury. Because right whale distribution can overlap with fishing areas, gear entanglement is frequent and can cause death by drowning or serious injuries such as lacerations, which in turn can lead to severe infections. In areas where right whales are feeding, entanglements in the mouth are common. Entanglements of juveniles are particularly dangerous because the line will tighten and infections can worsen as the whale grows. Most right whale entanglements appear to be with gillnets, lobster pots, crab pots, seines, fish weirs, and aquaculture equipment (NMFS, 2005a). NMFS maintains a *List of Fisheries* that categorizes commercial fisheries based on the level of serious injury and mortality to marine mammals caused by each fishery. A fishery qualifies as a Category I if the annual mortality and serious injury of a marine mammal stock in that fishery is greater than, or equal to, 50 percent of the PBR level; as a Category II if annual mortality and serious injury is greater than one percent and less than 50 percent of the PBR level; and as a Category III if annual mortality and serious injury is less than, or equal to, one percent of the PBR level (16 United States Code [U.S.C.] § 1387).

Section 118 of the MMPA requires NMFS to develop and implement take reduction plans to assist in the recovery or prevent the depletion of strategic marine mammal stocks that interact with Category I and II fisheries. As there are four Category I and II fisheries on the East Coast that interact with large whales, NMFS established the Atlantic Large Whale Take Reduction Plan (ALWTRP) to regulate these fisheries and assist in population recovery (Section 1.2.2).

Since the inception of the ALWTRP in 1997, reported right whale entanglements have slightly decreased. According to the 2007 SAR, 44 percent of the records of mortality and serious injury from 2001 to 2005 involved gear entanglement or fishery interactions (Waring *et al.*, 2007). This represents an improvement over the 57 percent reported for 2000-2004 (NMFS, 2006), and the approximately 69 percent reported for 1999-2003 (NMFS, 2005f).

Although entanglement does not always result in death or serious injury, it poses a serious threat to North Atlantic right whales. Analysis of 447 individual animals in the North Atlantic Right Whale Catalog<sup>5</sup> indicates that 338 (75.6 percent) right whales documented from 1980 to 2002 showed physical evidence of entanglement, such as scars, and between 14 and 51 percent experienced entanglements each year (Knowlton *et al.*, 2005).

---

## 1.2 Background: NOAA's Current Right Whale Conservation Measures

Prior to developing the current set of right whale ship strike reduction measures, NMFS implemented various conservation measures to reduce anthropogenic threats to the right whale population.

---

### 1.2.1 Existing Ship Strike Reduction Measures

Due to increasing concern in the 1990s over the disturbance to right whales caused by vessels passing nearby, NMFS issued an interim final rule in 1997 to reduce such disturbance and the

---

<sup>5</sup> The Right Whale Catalog is a database of whale sightings and photos maintained by the New England Aquarium.

associated potential for collision. The rule states that it is illegal to knowingly approach a North Atlantic right whale within 500 yards (460 m) by vessel, aircraft, or any other means unless permitted by NMFS (50 CFR 222.32).

In addition to vessel-approach restrictions, NMFS has developed and implemented various programs to further reduce the potential for vessel collision. NMFS also has several mechanisms in place to alert mariners of right whales' locations and thus help reduce ship strikes. The following sections describe these programs, research projects, and other conservation measures to reduce ship strikes.

### **1.2.1.1 Surveys**

Systematic surveys from aircraft or vessels are conducted to locate right whales in their migratory corridor and critical habitats to:

- Provide sighting locations to mariners.
- Photograph individuals for identification and life-history data collection.
- Document fishery or vessel interactions.
- Record ship traffic patterns and, in some cases, contact mariners directly when whales are in their paths.
- Further quantify or refine distribution patterns, abundance estimates, etc.

Comprehensive surveying began in 1993 in the Southeast Atlantic area (where it is known as the Right Whale Early Warning System) and in 1997 in the Northeast Atlantic area (where it is known as the Right Whale Sighting Advisory System). The collected information is distributed through various means, including the Mandatory Ship Reporting Systems (MSRS).

Surveys are integral to implementing the dynamic management areas described in Section 1.4. Several commenters on the draft environmental impact statement (DEIS) expressed concerns over the viability of surveys, particularly given fluctuations in federal funds available to conduct the surveys. In response to these comments, Table 1-1 shows expenditures for right whale aerial surveys during fiscal years 2003-2005.

Total labor costs steadily increased over the three-year period, while direct costs increased from fiscal year 2003 (FY03) to FY04, and then decreased in FY05. FY06 expenditures for aerial surveys were approximately \$1.1 million for non-state cooperative funding; an additional \$1.5 million was appropriated for state cooperative funding, which includes funds for aerial surveys, recovery implementation, and enforcement (Right Whale News, 2006). NOAA's appropriations for aerial surveys in FY07 were approximately \$1.3 million for non-state cooperative funding and an additional \$1.6 million was appropriated for state cooperative funding (Right Whale News, 2007).

**Table 1-1**  
**Expenditures for Right Whale Aerial Surveys from FY03 – FY05**

Agency	Type	FY03 Costs (\$)		FY04 Costs (\$)		FY05 Costs (\$)	
		Labor	Direct	Labor	Direct	Labor	Direct
NOAA	Surveys/Aerial Surveys (Internal)	366,130	440,000	433,727	500,000	466,100	580,000
	Surveys (External)	0	146,448	0	420,461	0	249,361
	Early Warning/Sighting system surveys	33,000	620,000	24,999	670,000	24,000	670,000
Navy	Early Warning/Sighting system surveys	0	155,000	0	155,000	21,450	155,000
USACE	Early Warning/Sighting system surveys	0	141,000	0	174,000	0	185,000
USCG	Aerial Surveys (External)	0	8,071	0	24,272	0	0
	Aerial Surveys (Time-Area Closures)	0	27,280	0	108,484	0	20,270
	Early Warning/Sighting system surveys	0	191,000	0	221,000	0	223,000
<b>Total</b>		399,130	1,537,799	458,726	2,052,217	511,550	1,859,631

Source: Marine Mammal Commission right whale program review, March 2006.

### 1.2.1.2 Mandatory Ship Reporting Systems

NOAA designed the Mandatory Ship Reporting System (MSRS) and prepared a proposal for the International Maritime Organization (IMO) in an effort to further raise mariner awareness of right whales and to disseminate information on the location of the whales and how to avoid them. The United States submitted the proposal to the IMO, which approved it in December 1998. Jointly funded by NOAA and the USCG, the MSRS began operation in July 1999. The two agencies continue to operate the program. The overall goals of the MSRS are to:

- Alert mariners to right whale locations in two East Coast aggregation areas.
- Raise awareness about the whales' vulnerability to ship strikes.
- Obtain data on ship traffic volumes and patterns from the incoming ship reports to aid in developing measures to reduce ship strikes.

When ships greater than 300 gross tons enter two key right whale habitats – one in waters off the northeastern United States and one off the southeastern United States – they are required to report to a shore-based station. Mariners report their ship's location, speed, course, waypoints, and destination. In return, ships receive an automated message about right whales, their vulnerability to ship strikes, precautionary measures the ship can take to avoid hitting a whale, and locations of recent whale sightings. Mariners are advised to reduce their speed to 10 knots or less when whales are reported in the area, when transiting through whale critical habitat, or in conditions of poor visibility. The MSRS are in effect year-round in a predetermined area that includes Cape Cod Bay and the Great South Channel (WHALESNORTH) in the northeast and from November 15 to April 16 in southeastern waters (WHALESSOUTH).



Compliance with the MSRS varies by region and port. The average monthly compliance rate for major ports (ports that expect to receive more than 12 calls during the period when the MSRS is in effect, e.g. Boston) within WHALESNORTH is 78 percent for calendar year 2006 (CY06). This percentage reflects a range of 34 percent compliance in Quincy, Massachusetts to 100 percent in Castle Island. The average monthly compliance for minor ports (ports that expect to receive 12 or fewer calls during the period when the MSRS is in effect, e.g. Gloucester) within WHALESNORTH is 54 percent. This percentage reflects a range of zero percent compliance in Provincetown, Massachusetts to 100 percent in South Boston. The average monthly compliance rate for major ports within WHALESSOUTH was 74 percent for CY06. This percentage reflects a range of 59 percent compliance in Blount Island to 86 percent in Brunswick. Due to the low number of port calls at minor ports, even one failure to report can greatly affect the observed compliance rate. In general, MSRS compliance rates have steadily increased over the years.

There are several caveats associated with these data. MSRS compliance rates are measured by cross-checking the Ship Arrival Notification System (SANS) database (96-hour notices provided by inbound ships) against mariners' MSRS reports. Due to changes in vessel movement after the vessels submit their MSRS and SANS reports, compliance may be underreported. The data represent a snapshot in time, added into the database on a monthly basis to gauge the general compliance rate. The USCG continues to work with NMFS to ensure that the automated system is a robust management tool that will monitor effectiveness of the MSRS program and indicate which ports require additional outreach efforts to increase compliance rates.

### 1.2.1.3 Charts and Publications

The National Ocean Service (NOS) routinely updates and publishes nautical charts with new or emerging navigational hazards, regulations, or requirements. Additionally, NOS publishes *Coast Pilot*, a series of regional references on navigation hazards, rules, and environmental conditions that ship captains of a certain vessel size class are expected to carry in US waters. NMFS routinely works with NOS to ensure that the information on endangered species in this publication is current. At the request of NMFS, NOS has added advisories and precautions for mariners regarding right whales. As a result, NOS' nautical charts and *Coast Pilots* contain information on right whale critical habitat, seasonal occurrence, MSRS, and regulations regarding approaching protected marine species. In 2005, updates to these navigational aids provided by NMFS included speed advisories that suggested mariners travel at 12 knots or less when whales are present. NMFS updated this speed advisory in 2007 to suggest a 10-knot speed restriction.

Additionally, at NOAA's request, the National Geo-Spatial Intelligence Agency routinely includes information on right whales and other endangered species in its international guides to mariners – *Notice to Mariners* and *Sailing Directions*. Information on avoiding collisions with right whales and other endangered species was first added in 1998 and is updated annually.

### 1.2.1.4 Regional Recovery Plan Implementation Teams

Two recovery-plan implementation teams (as provided for under the ESA) exist for the right whale, one in the US Southeast Atlantic region and one in the US Northeast Atlantic region. In the past, these implementation teams focused on critical habitat areas, vessel strikes, and

entanglement reduction<sup>6</sup>, as provided for under the MMPA. However, the Right Whale Recovery Plan Northeast Implementation Team (NEIT) was reorganized by NMFS in 2004, and the focus shifted to ship strike reduction efforts. Occasionally the teams are limited by funding; this has been the case for the NEIT since FY06.

The principal focus of the Right Whale Recovery Plan Southeast Implementation Team (SEIT) is currently education and outreach, including the collection and real-time dissemination of right whale sighting information to mariners through collaboration with the Navy, USCG, and US Army Corps of Engineers (USACE). The team has several ongoing efforts to protect right whales, including a geographic information system (GIS) subcommittee to analyze sightings, vessel-traffic data, and environmental data to learn how to aid in reducing threats and enhancing recovery. One of its principal foci, however, is to develop priorities and implement a list of tasks to maximize industry-wide mariner education programs. This work is quite comprehensive, involving the execution of a number of projects, and is ongoing. The SEIT has also provided recommendations to NMFS regarding; right whale research in the Southeast, additional measures to reduce the possibility of ship strikes, and restrictions of hazardous fishing gear in right whale calving areas (NMFS, 2005b).

#### **1.2.1.5 Right Whale Grant Program for Research**

Congressional funding for right whale research and management by NMFS began in 1986. NMFS oversees and distributes a portion of this funding through a competitive grant program for right whale research. NMFS contributes funds to the recovery activities previously mentioned as well as the following ones:

- Photo identification and sighting databases to help assess such things as right whale demographics, right whale distribution, and threats to right whales.
- VHF radio tracking and passive acoustic detection of vocalizing right whales to assess distribution and movements.
- Detection of whales at sea.
- Predictive modeling.
- Habitat and zooplankton abundance monitoring.
- GIS analysis of whale distribution and vessel traffic patterns.

#### **1.2.1.6 Ship Speed Advisories**

NOAA issues ship-speed advisories to mariners to help reduce ship strikes using NOAA-based communications. Advisories are distributed by e-mail, fax distribution lists, postings on websites (e.g., National Data Buoy Center website)<sup>7</sup>, NAVTEX<sup>8</sup>, local Notices to Mariners, and, as noted above, insertion in navigational publications and the MSRS. The National Weather Service (NWS) issues right whale advisories and speed advisories on NOAA weather radio when aggregations are sighted. Compliance with the advisories is voluntary and is expected only in areas where right whale sightings have been confirmed. The advisories indicate that neither

---

<sup>6</sup> Entanglement reduction through the take-reduction process is described in Section 1.2.2.

<sup>7</sup> <http://www.ndbc.noaa.gov/>

<sup>8</sup> NAVTEX is an international automated medium frequency (518 kHz) direct-printing service for delivery of navigational and meteorological warnings and forecasts as well as urgent marine safety information to ships.

navigational nor human safety is to be jeopardized as a result of reduced speeds. As noted above, speed advisories have also been integrated into NOAA publications.

In addition, Federal agencies that conduct vessel operations along the East Coast have been advised to modify their vessel operating procedures by posting extra lookouts in areas where whales may occur, limiting transits through such areas, and training ship crews to detect, identify, and avoid large whales. The USCG and Navy have issued speed advisories to their respective Atlantic fleets, and, in 2005, NMFS contacted all relevant Federal agencies, requesting that their vessels proceed at 12 knots or less while in right whale habitat in the absence of any overriding need to travel faster (e.g., national security or rescue mission).

In 2007, the USCG updated the Local Broadcast Notice to Mariners to include a message that NOAA recommends a speed of 10 knots or less in areas used by right whales. The Local Broadcast Notice to Mariners is transmitted via VHF and single-band radios, and is published for distribution. More information on this medium is provided in Section 3.4.1.3.

As noted in Section 1.2.1.3, the National Ocean Service's Office of Coast Survey publishes language on right whales in the *Coast Pilot* series. These publications have been updated to include the ship-speed advisories. In addition, there is the possibility that real-time environmental data layers (including right whale advisories) could be incorporated into NOAA's Electronic Navigational Charts.

A study of mariner compliance with NMFS-issued speed advisories in the Great South Channel found that 95 percent (38 out of 40) of the ships tracked did not slow down or route around areas for which right whales sighting locations and speed advisories had been provided (Moller *et al.*, 2005). Whether this is due to mariners disregarding the alerts or their being unaware of them is not known. In a related study, Wiley *et al.* (2008) found that commercial whale watching vessel operators exhibited high non-compliance rates even when they were aware of vessel speed zones around whales. Therefore, even when whale locations are detected and provided, it is not clear how, or if at all, mariners will respond.

#### **1.2.1.7 Review of Current and Emerging Technologies**

While there currently is no proven technology to effectively manage the risk to right whales, NMFS plans to review technologies periodically in order to assess technology-based systems that might be used to reduce the risk of ship strikes to right whales. As part of these reviews, NMFS may engage the maritime industry and the scientific community to work on developing efficient and effective technologies to address the threat of ship strikes. NMFS will document any findings and may in some cases prepare a draft report for public comment. Should a technology be deemed viable, NMFS may consider taking appropriate steps to allow its use. In general, NMFS will consider implementing new technologies provided they are at least as protective as speed restrictions and more cost effective.

In support of this effort, NMFS held a workshop in Providence, Rhode Island in July 2008. The goals of this workshop were to (1) identify existing or emerging technologies that might be useful in reducing ship strikes, (2) assess the feasibility of each in reducing ship strikes, and (3) identify research and development needs and schedule requirements to make a given technology useful in reducing the threat. To meet these goals, NMFS will (a) update a 2002 summary paper on technologies, (b) identify emerging technologies by hearing from inventors or companies with

candidate technologies, and (c) evaluate and rank technologies considering (i) research and development needs, (ii) costs, and therefore (iii) overall feasibility.

#### **1.2.1.8 Other Conservation Measures**

NMFS also develops and implements education and outreach programs to raise mariner awareness about the right whale ship-strike problem. Working collaboratively, NMFS and other organizations have produced a variety of materials to distribute to mariners, fishermen, shipping companies, cruise ships, and ports concerning right whales and ship strikes.

For example, Holland America Line, in collaboration with NMFS and the National Park Service (NPS), developed an interactive, computer-based training program called "Avoiding Whale Strikes" that is mandatory for all Holland America captains and crew. The program provides guidelines for identifying whales at sea, and precautionary measures to take when transiting known whale habitats, including speed restrictions in Glacier Bay National Park in Alaska and areas where right whales are known to aggregate seasonally along the US east coast. Holland America has made the CD available to other cruise lines through the International Council of Cruise Lines, and has given NOAA and NPS permission to distribute the CD to other industries for non-commercial purposes.

NOAA has implemented various routing measures to reduce the probability of vessel collisions with right whales and other baleen whales.

Finally, as provided in Section 7 of the ESA, NMFS has conducted several interagency consultations with other Federal agencies regarding the effects of military operations, dredging, Liquefied Natural Gas (LNG) terminals, and vessel operations on right whales. A synopsis of these consultations is provided in Section 1.7.3; more detailed information is provided in Appendix A.

---

### **1.2.2 Fisheries Gear Entanglement Prevention Measures**

The 1994 amendments to the MMPA required NMFS to establish teams comprised of stakeholder groups to determine ways to reduce serious injury and mortality of strategic stocks of marine mammals, including threatened or endangered species, that interact with category I or II fisheries (see Section 1.1.2.2). The Take Reduction Team assists NMFS in developing a Take Reduction Plan. The immediate goal of the Take Reduction Plan is to reduce incidental mortality or serious injury to the marine mammal stock's PBR level within six months of the plan's implementation. The longer-term goal is to reduce serious injuries and mortality to an insignificant level approaching a zero mortality and serious injury rate (NMFS, 2005b).

In August 1996, NMFS established the Atlantic Large Whale Take Reduction Team (ALWTRT) to design an ALWTRP for North Atlantic right whales, humpback whales, fin whales, and minke whales affected by the southeastern US shark gillnet fishery, the Northeast/mid-Atlantic lobster trap/pot fishery, the mid-Atlantic coastal gillnet fishery, and the Northeast sink gillnet fishery. The ALWTRP was first put into effect in 1997 and has been modified several times since, most recently in August 2003. The ALWTRP includes gear restrictions, research recommendations, time and area closures, outreach and education recommendations, and a disentanglement program. In February 2005, NMFS released a draft EIS to analyze alternatives for gear modifications and improved time and area management in the ALWTRP (NMFS, 2004d). The

proposed rule for these modifications to the ALWTRP was published in the *Federal Register* in June 2005. The final EIS was released on August 17, 2007, and the final rule published on October 5, 2007. However, NMFS published a proposed rule on June 6, 2008 to delay the effective date of one of the broad-based gear modifications from October 2, 2008 to April 5, 2009.

One measure contained in the ALWTRP is seasonal area management (SAM). SAM restrictions are in place to protect from entanglement in fishing gear the predictable aggregations of right whales in waters off Cape Cod out to the Exclusive Economic Zone (EEZ). The western zone is in effect from March 1 to April 30 and the eastern zone is in effect from May 1 to July 31. The SAM program restricts the use of lobster trap/pot and gillnet gear. Such gear may only be used if it meets the requirements allowing it to be considered low-risk gear as described in the ALWTRP.

In addition, dynamic area management (DAM) measures were in place in Cape Cod Bay and the Gulf of Maine to limit fishery interactions with right whales when whales are sighted at unanticipated times or in unanticipated locations. Three or more right whales in an area covering 75 square nautical miles [nm<sup>2</sup>] (0.04 right whales per nm<sup>2</sup>) was the density required to trigger DAM closures in an area (NMFS, 2004g). On April 5, 2008, under the recent ALWTRP regulations and expansion of the SAM areas, the DAM program was eliminated.

---

### 1.2.3 Other Conservation Measures

NMFS encourages research geared towards assessing the effects of habitat destruction and pollution on right whales. Other threats to the right whale population, including disease, loss of genetic diversity, and food availability, are accounted for through research and workshops. NOAA has also launched a collaborative effort to gather information and assess the impact of shipping noise on all marine mammals. NMFS designated critical habitat for right whales in 1994 to further protect important feeding grounds in the Northeast and calving grounds in the Southeast. The location of the critical habitat areas is discussed in Chapter 2.

---

## 1.3 Purpose and Need

NMFS' purpose and need for the vessel operational measures considered in this FEIS is to reduce the occurrence and severity of vessel collisions with North Atlantic right whales, thereby contributing to the recovery and sustainability of the species while minimizing adverse effects on the shipping industry and maritime commerce.

NMFS has authority and responsibility under both the ESA and the MMPA to protect the endangered North Atlantic right whale. Although various measures to reduce ship strikes (described in Section 1.2.1) have been in place for several years, these measures have not significantly reduced the number of vessel collisions with right whales. A continued lack of recovery, and possibly extinction, will occur if deaths from ship strikes are not reduced. Therefore, additional action is needed for NMFS to fulfill its responsibility. Collision with vessels is the primary anthropogenic cause of serious injuries and deaths to right whales. Therefore, NMFS is proposing to reduce this threat by taking the regulatory approach expected to be most effective at facilitating population recovery while minimizing adverse economic impacts. The proposed action consists of vessel operational measures that would impose

regulatory speed restrictions and provide for nonregulatory routing measures on specific vessel classes to reduce the ship-strike threat to right whales without imposing an undue economic burden on the shipping industry. The combination of speed restrictions and reducing the co-occurrence of right whales and vessel traffic is expected to be an effective means to reduce the occurrence and severity of ship strikes and promote population growth and recovery.

---

## 1.4 Vessel Operational Measures

The conservation measures described in Section 1.2 have increased awareness of the endangered status of right whales and of the threats of ship strikes, gear entanglement, and naturally-occurring obstacles to recovery. However, they have failed to sufficiently reduce the occurrence of human-caused mortality among right whales. Therefore, while existing conservation programs will continue, NMFS proposes to take additional steps to reduce ship strikes. To this end, NMFS developed, published, and requested comments on a set of North Atlantic right whale ship-strike reduction measures in an advanced notice of proposed rulemaking (ANPR) dated June 1, 2004 (69 FR 30857).<sup>9</sup> On June 26, 2006, NMFS published and requested comments on proposed rulemaking to restrict vessel speeds in areas where right whales occur (71 FR 36299). The proposed rule contains vessel operational measures to reduce the likelihood and threat of collisions between vessels and endangered North Atlantic right whales. It also aims to minimize, through nonregulatory actions, the geographical overlap of shipping lanes and whale occurrence to reduce the likelihood of ship strikes in a manner that minimizes adverse effects on the shipping industry and maritime commerce.

The operational measures are customized by region to account for differences in (1) oceanography, (2) commercial ship traffic patterns, (3) navigational concerns, and (4) right whale migration patterns and behavior. Three regions of implementation have been defined and are (from south to north):

1. The southeastern US (SEUS) Atlantic Coast region, bounded to the north by latitude 31°27'N and to the south by latitude 29°45'N.
2. The mid-Atlantic US (MAUS) region, extending from the northernmost boundary of the SEUS to the southernmost boundary of the third region, the northeastern US (NEUS) Atlantic Coast.
3. The NEUS Atlantic Coast region, north and east of Block Island northward up to Canada.

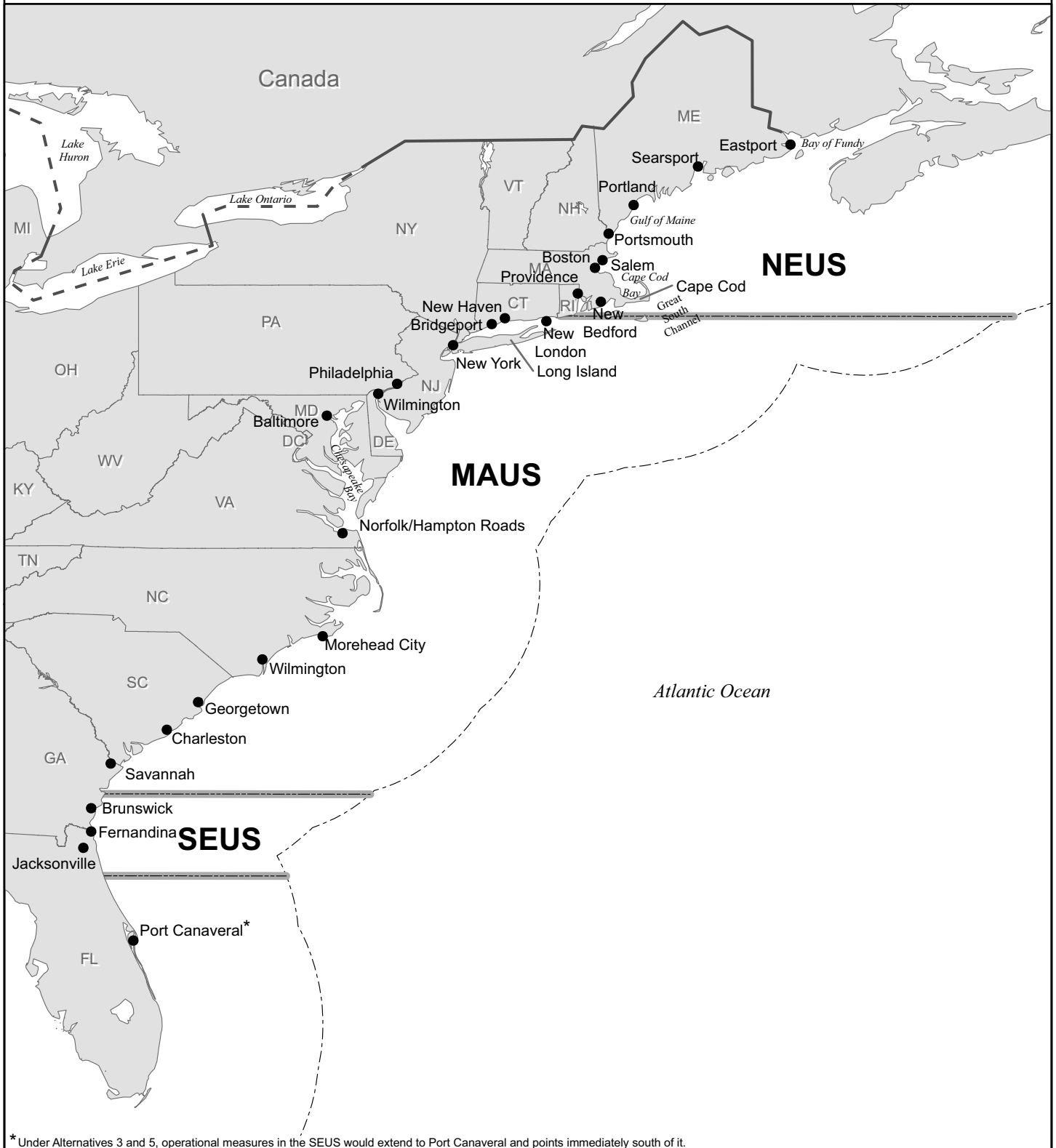
Seaward, each area extends out to the US EEZ. The regions of implementation are illustrated in Figure 1-1.

The vessel operational measures would only apply to non-sovereign vessels 65 ft (19.8 m) and greater in overall length subject to the jurisdiction of the United States. They would not apply to sovereign vessels, that is, vessels owned or operated by, or under contract to, the US Federal

---

<sup>9</sup> In documents and communications prior to February 2007, these measures were collectively referred to as NMFS's *North Atlantic Right Whale Ship Strike Reduction Strategy*. In addition to the vessel operational measures considered in this FEIS, the ANPR included the following actions: continue ongoing research and conservation activities; continue to develop mariner education and outreach programs; review the need for ESA Section 7 consultations with all Federal agencies that operate or authorize the use of vessels in waters inhabited by right whales, or whose actions directly or indirectly affect vessel traffic; and negotiate a Right Whale Conservation Agreement with the government of Canada.

# Regions of Implementation



\* Under Alternatives 3 and 5, operational measures in the SEUS would extend to Port Canaveral and points immediately south of it.

- Port
- Implementation Region Boundary
- - - Boundary of Exclusive Economic Zone (EEZ) (Approximate)

0 100 200 400 Miles

0 100 200 400 Kilometers



Figure 1-1

**This Page Intentionally Left Blank**



government, or to law enforcement vessels of a state or political subdivision thereof, when engaged in enforcement or human safety missions. Additionally, where speed restrictions would normally apply, a vessel could operate so as to maintain safe maneuvering speed instead of the required speed if oceanographic, hydrographic, and/or meteorological conditions in the area severely restrict maneuverability and if the need to operate at such speed is confirmed by the pilot on board or, when the vessel is not carrying a pilot, the master of the vessel. If a deviation from the speed limit is necessary, the reasons for the deviation, the speed at which the vessel is operated, the latitude and longitude of the area, and the time and duration of such deviation would be entered into the logbook of the vessel. The master of the vessel would attest to the accuracy of the logbook entry by signing and dating it.

Research on vessel collisions indicates that most severe and lethal injuries to whales resulting from ship strikes involved large ships. A recent synthesis using strike records for which vessel speed at the time of strike is available showed that out of 58 collisions with a whale (all large whale species), 23 resulted in the death of the animal. Of these 23, at least 20 (87 percent) involved vessels longer than 262 ft (80 m). Of the 15 collisions where the whale was seriously injured, three involved vessels less than 65 ft (19.8 m), three involved vessels between 65 and 262 ft (19.8 and 80 m), and the rest involved vessels more than 262 ft (80 m) (Laist *et al.*, 2001). Until recently, the smallest vessel known to have been involved in a fatal collision with a right whale was an 82-ft (25-m) USCG ship (NMFS, 2004i). However, on March 10, 2005, a 43-foot vessel struck a right whale, inflicting serious injuries. It is likely that this incident resulted in the death of the animal, although this has not been confirmed (NOAA, 2005). NMFS is aware that vessels less than 65 ft (19.8 m) in length may pose a threat and will continue to consider means, including future rulemaking, to address this issue. In the interim, NMFS has determined that, for the purposes of the measures considered in this FEIS, the appropriate threshold vessel size is 65 ft (19.8 m). Additionally, the 65-ft (19.8-m) threshold corresponds to a well-established criterion used in many USCG regulations, and one understood by mariners.

Chapter 2 of this FEIS describes the alternatives being considered to meet the purpose and need, including the Proposed Action (NMFS' preferred alternative). The proposed vessel operational measures considered by NMFS in the development of the alternatives are summarized below. As described in Chapter 2, each of the alternatives analyzed in this FEIS consists of one or more of these measures. Details on the specific components (e.g., season, location, duration) of the measures are described in Chapter 2. The three types of measure considered are:

- **Seasonal Management Areas (SMAs).** SMAs are predetermined and established areas within which seasonal speed restrictions apply.
- **Dynamic Management Areas (DMAs).** DMAs are temporary areas consisting of a circle around a confirmed right whale sighting. The radius of this circle expands incrementally with the number of whales sighted and a buffer is included beyond the core area to allow for whale movement. Speed restrictions apply within DMAs, which may be mandatory or voluntary and apply only when and where no SMA is in effect.
- **Routing Measures.** These consist of a set of routes designed to minimize the co-occurrence of right whales and ship traffic. Use of these routes is voluntary; therefore, they constitute a non-regulatory measure. However, mandatory speed restrictions would apply in the portions of the routes located within an active SMA. NMFS would monitor these routes and consider making them mandatory if use is low.

The vessel routing measures adopted by the IMO and those submitted for consideration, described in the DEIS, are no longer included among the potential measures evaluated in this FEIS. The US proposal to modify the northern leg of the Boston Traffic Separation Scheme (TSS) was accepted by the IMO in 2006 and was implemented in July 2007. Starting July 1, 2007, the USCG alerted mariners of the changes in the TSS through standard maritime communications and updated charts. The United States submitted two additional proposals to the IMO in 2008. One proposal is to amend the north-south leg of the Boston TSS, and the second proposal is to create a seasonal Area to be Avoided (ATBA) in the Great South Channel. If accepted, these proposals will be implemented in summer 2009. As changes in the TSS and creation of an ATBA are independent of the NMFS rulemaking and the vessel operational measures considered in the FEIS, they are no longer included among the potential measures. However, they are considered in the cumulative impact analysis.

---

## 1.5 Relevant Legislation

Federal rulemaking and implementation of Federal regulations must be consistent with a number of relevant laws and regulations. The following sections provide brief descriptions of the principal requirements relevant to the proposed vessel operational measures. Both the MMPA and the ESA require NMFS to implement plans to protect the North Atlantic right whale, as it is both a depleted marine mammal species and an endangered species. The MMPA and the ESA both prohibit the taking of North Atlantic right whales.

---

### 1.5.1 Endangered Species Act

The ESA provides broad protection for species and critical habitats of fish, wildlife, and plants that are listed as threatened or endangered. Under the ESA, it is generally unlawful for any person subject to the jurisdiction of the United States to “take” any such species within the United States or on the high seas, unless authorized under specific provisions of the ESA. The ESA defines “take” as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct to species listed as threatened or endangered.” [16 U.S.C. § 1532(19)]

The North Atlantic right whale population is currently part of a wider-ranging species listed as endangered under the ESA (although NMFS has proposed to list the North Atlantic right whale separately [Section 1.1.1]). Therefore, in accordance with ESA Section 4(f), NMFS is responsible for developing and implementing a recovery plan for the conservation and survival of the species. The recovery plan requires actions to assess and establish voluntary or mandatory measures to reduce the likelihood of ship/whale interactions. In 1991, NMFS completed a Final Recovery Plan for the Northern Right Whale (which included both the North Atlantic and Pacific right whales). This plan was revised in 2005, and is now entitled *Recovery Plan for the North Atlantic Right Whale*. Reduction of ship strikes is one of the top priorities identified in the plan.

---

### 1.5.2 Marine Mammal Protection Act

The MMPA protects all marine mammals. Right whales are designated as “depleted” under the MMPA because the population is below OSP (see Section 1.1.1) and they are listed as

endangered under the ESA. The MMPA, subject to limited exceptions, prohibits any person or vessel subject to the jurisdiction of the United States from “taking” marine mammals in the US or on the high seas without authorization. The term “taking” is defined in the MMPA [16 U.S.C. § 1362(13)] as “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.” The term “harassment” in the context of this action means any act of pursuit, torment, or annoyance which [16 U.S.C. § 1362(18)(a)]:

- Has the potential to injure a marine mammal or marine mammal stock in the wild (Level A Harassment); or
- Has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B Harassment).

Because the North Atlantic right whale is considered part of a depleted marine mammal species, the MMPA requires NMFS to develop a conservation plan designed to conserve and restore the species.

---

### **1.5.3 Ports and Waterways Safety Act**

The Ports and Waterways Safety Act of 1972 (PWSA) gives the USCG authority over vessel and port operations to promote vessel safety and protection of the marine environment. The act recognizes the need for advanced planning to ensure protective measures for the nation’s ports and waterways and continued consultations with other Federal agencies (33 U.S.C. § 1221). Section 1224 of the act gives the USCG authority over vessel traffic services (VTS) and related activities. It also gives the USCG authority to require specified navigation equipment and other electronic devices, specify times of entry and departure, and establish routing measures.

---

### **1.5.4 Regulatory Flexibility Act**

Under the Regulatory Flexibility Act of 1980 (RFA), Federal agencies must consider the economic impacts their rules may have on small entities, including small businesses, organizations, and governmental jurisdictions. The agency must prepare an initial and final regulatory flexibility analysis (IRFA/FRFA), unless it can certify that the rule would not have “a significant economic impact on a substantial number of small entities.” In IRFA/FRFA documents, among other kinds of processes regulatory alternatives must undergo is evaluation of the extent to which they achieve the objective of applicable statutes and might minimize negative economic impacts on small entities. However, the RFA does not require that the alternative with the least cost or the least impact on small entities be selected as the preferred alternative.

---

### **1.5.5 Coastal Zone Management Act**

The Coastal Zone Management Act (CZMA) is designed to encourage and assist states in developing coastal management programs, to coordinate state activities, and to safeguard regional and national interests in the coastal zone. Section 307(c) of the CZMA and the implementing regulations (15 CFR 930) require that any Federal activity affecting the land or water uses or natural resources of a state’s coastal zone must be consistent to the maximum extent practicable with the enforceable policies of the state’s federally-approved coastal zone

management program. Compliance with Section 307(c) can be achieved through a coastal zone consistency determination letter from the action agency to the affected state coastal zone management programs.

---

### **1.5.6 National Marine Sanctuaries Act**

The National Marine Sanctuaries Act (NMSA) (16 U.S.C. § 1431 *et seq.*) authorizes the Secretary of Commerce to designate and manage areas of the marine environment which have special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational, or esthetic qualities as national marine sanctuaries. Following designation, there are several mechanisms under this act that allow for continued protection of national marine sanctuaries. For example, if the Secretary finds a Federal action is likely to destroy, cause the loss of, or injure a sanctuary resource, the National Marine Sanctuary Program (NMSP) is required to recommend reasonable and prudent alternatives that will protect sanctuary resources if implemented by the agency in taking the action. This may be achieved through interagency coordination or commenting on the proposed rule and/or DEIS.

---

## **1.6 Applicable Executive Orders**

Two executive orders (EOs) are applicable to the proposed vessel operational measures.

---

### **1.6.1 Executive Order 12898**

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs all Federal agencies to incorporate environmental justice considerations in achieving their missions. Each Federal agency is to accomplish this by conducting programs, policies, and activities that substantially affect human health or the environment in a manner that does not exclude communities from participation in, deny communities the benefits of, or subject communities to discrimination under, such actions because of their income, race, color, or national origin.

---

### **1.6.2 Executive Order 12866**

EO 12866, *Regulatory Planning and Review*, requires Federal agencies to follow “a program to reform and make more efficient the regulatory process.” During regulatory decision-making, Federal agencies are required to maximize net benefits after conducting quantitative and qualitative cost-benefit analyses, including the option of not regulating.

---

## **1.7 Plans, Policies, and Interagency Coordination**

This section describes other relevant conservation activities, recovery plans, and other policies related to NMFS’ proposed right whale ship-strike reduction measures and subsequent right whale recovery.

### 1.7.1 Right Whale Recovery Plan

The *Final Recovery Plan for the Northern Right Whale (Eubalaena glacialis)* was originally published by NMFS in December 1991. The revised *Recovery Plan for the North Atlantic Right Whale* was released in May 2005.

The ultimate goal of the recovery plan is to promote the recovery of North Atlantic right whales to a level sufficient to warrant their removal from the Federal list of endangered and threatened wildlife and plants. The intermediate goal is to reclassify the species from endangered to threatened. The most significant need for North Atlantic right whale recovery is to reduce or eliminate deaths and injuries from anthropogenic activities, namely shipping and commercial fishing operations. In addition, the development of demographically-based recovery criteria must be completed quickly. Secondary priorities for the species' recovery are characterization, monitoring, and protection of important habitat; and identification and monitoring of the status, trends, distribution, and health of the species. Third-level priorities include conducting studies on the effects of other potential threats and ensuring they are addressed; and conducting genetic studies to assess population structure and diversity. An overarching need is to work closely with state, other Federal, international, and private entities to ensure that research and recovery efforts are coordinated (NMFS, 2005b).

---

### 1.7.2 Atlantic Large Whale Take Reduction Plan

The ALWTRP (see Section 1.2.2) was developed pursuant to Section 118 of the MMPA to reduce serious injury and mortality of right, humpback, fin, and minke whales due to incidental interactions with commercial fisheries. NMFS published final regulations to modify the ALWTRP by instituting broad-based fishing gear modifications on October 5, 2007. This section discusses the differences between the ALWTRP and ship-strike reduction regulations.

The measures considered in this FEIS focus solely on ship strikes to right whales, whereas the ALWTRP is intended to reduce fishing-gear threats to humpback, fin, and minke whales as well. While fin whales and humpback whales are affected by vessel collisions, Vanderlaan and Taggart (2007) have found that right whales are far more vulnerable, per capita, to ship strikes than other large whales. Although both fin whales and humpback whales are endangered, the measures evaluated in this FEIS focus on right whales because they are critically endangered, and the need for rigorous protection is immediate. From 2002 to 2006, right whales had the highest proportion of entanglements and ship strikes relative to the number of reports for a species (i.e., even though right whales had fewer reports than other species, there was still a high occurrence of incidents) (Glass *et al.*, 2008). Steps taken to protect right whales will benefit other large whale species because in some areas their habitats overlap.

---

### 1.7.3 ESA Section 7 Consultations

Under Section 7 of the ESA and implementing regulations, Federal agencies are required to consult with NMFS and/or the USFWS to ensure that their actions do not jeopardize the continued existence of any listed species or destroy or adversely modify critical habitat. Generally, a Biological Opinion (BO) is issued when the action is likely to adversely affect a listed species. BOs include conservation recommendations, reasonable and prudent measures to

mitigate the adverse effects, and terms and conditions with which the agency is required to comply.

The Marine Mammal and Sea Turtle Conservation Division of NMFS' Office of Protected Resources requested initiation of informal Section 7 consultation with the office's Endangered Species Division on the proposed rulemaking in January 2007, and received concurrence that implementation of the proposed regulations may affect, but are wholly beneficial to, large whale species listed under the ESA.

A summary of previous NMFS consultations conducted under Section 7 of the ESA involving right whales is provided in Appendix A.<sup>10</sup> NMFS will be reviewing Federal agency actions involving vessel operations to determine where new or re-initiated Section 7 consultations would be appropriate, although it is the action agencies that formally request consultation. However, this FEIS does not address these future Section 7 consultations with other Federal agencies that operate vessels in waters inhabited by right whales because it only evaluates the vessel-operational-measures component of the overall set of proposed ship-strike reduction measures. NMFS' Office of Protected Resources has previously conducted Section 7 consultations with the Navy, USCG, and the USACE regarding right whale protection measures. BOs were issued following consultations with the USCG in 1995, 1996, and 1998; with the US Navy in 1997 and several in 2008; and with the USACE in 1978, 1980, 1986, 1991, 1995, 1997, 2000, 2002, and 2003.

The 1995 USCG BO addressed the potential impacts of USCG vessel and aircraft operations off the US East Coast on threatened and endangered species. The BO concluded that the proposed activities may adversely affect, but were not likely to jeopardize, the continued existence of endangered and threatened species under NMFS' jurisdiction. In 1996, the USCG re-initiated consultation on the same activities. NMFS concluded that these actions may affect, but were not likely to jeopardize, the continued existence of humpback and fin whales or any species of sea turtles except the Olive ridley, but *were* likely to jeopardize the continued existence of the North Atlantic right whale. NMFS issued a reasonable and prudent alternative based on these findings (Appendix A). In 1997, the USCG again re-initiated the consultation. NMFS found that USCG actions were not likely to jeopardize the continued existence of specific endangered species and not likely to destroy or adversely modify the critical habitat that had been designated for the North Atlantic right whale. Although there were findings of no jeopardy, mitigation measures were developed to minimize potential adverse affects, and are included in Appendix A.

The 1997 BO issued to the US Navy for activities off the coast of the southeastern US concluded that these actions were not likely to jeopardize the continued existence of any endangered or threatened species under NMFS jurisdiction. The mitigation measures included in this BO are described in Appendix A.

The consultation that culminated with this 1997 BO commenced following the deaths of six right whales early in 1996 in waters adjacent to the southeastern US critical habitat. US Navy facilities adjacent to the critical habitat used offshore areas for gunnery exercises. Because several of the carcasses were found near a Navy gunnery range, it was suspected that some deaths were related to the use of underwater explosives. Although a link to military activities was not established, the

---

<sup>10</sup> Appendix A is not inclusive of all BOs, although it does summarize the major consultations dealing with right whales.

US Navy implemented right whale protection measures and initiated consultation with NMFS under Section 7 of the ESA following the right whale deaths in March 1996.

NMFS is currently engaged in, or has completed Section 7 consultations with, the US Navy on several Navy actions off the East Coast of the United States. In April 2008, NMFS issued a BO on training activities the US Navy planned to conduct in the Virginia Capes, Cherry Point, and Charleston - Jacksonville Range Complexes from spring through winter 2008. In July 2008, NMFS issued a BO on ship shock trials the US Navy planned to conduct on the Mesa Verde. Both of these biological opinions considered potential collisions between surface vessels and endangered whales that might occur in the action area of the consultation; that consideration included measures the US Navy planned to use to avoid collisions (including scheduling and locating exercises to avoid whale distributions, having observers on the bridge of ships to look for whales and protocols for changing course and speed to maintain safe distances from whales) and a review of data on the effectiveness of those measures.

NMFS is currently engaged in section 7 consultations on active sonar training activities the US Navy plans to conduct along the Atlantic Coast and Gulf of Mexico over the next five years; on training activities that do not involve active sonar in the Virginia Capes, Cherry Point, and Charleston – Jacksonville Range Complexes; and on the Navy’s proposal to homeport additional vessels at the Mayport Naval Station in Florida. Each of these consultations, which should be complete by early 2009, is considering the potential effects of ship traffic associated with each specific proposal as well as the potential cumulative risks of collision associated with the total ship traffic. For background information, the mitigation measures that the Navy has proposed offshore of the eastern United States related to vessel transit and North Atlantic right whales are described in a Navy’s *Draft Atlantic Fleet Active Sonar Training EIS/Overseas EIS*, which is available on line at <http://afasteis.gcsaic.com> and in other Navy Draft EISs addressing proposed activities in the Navy’s east coast range complexes (see, for example, <http://www.vacapesrangecomplexeis.com> and <http://www.jacksonvillerrangecomplexeis.com>).

The USACE BOs were issued on the potential impacts of harbor dredging and related activities. Consultations in the southeastern United States began in 1978 and were re-initiated in 1980, 1986, 1991, 1995, and 1997. The pursuant BOs found that these actions were not likely to adversely affect right whales, although reasonable and prudent measures were developed as part of the 1991 BO (Appendix A). Similar consultations on dredging in the Northeast in 2002 and 2003, and a beach renourishment project in 2000, also found the potential for whale/vessel interaction was unlikely, although conservation measures were adopted for these actions as well.

In 2005, informal and formal Section 7 consultations were initiated on proposed sites for LNG terminals in the northeastern and mid-Atlantic United States (see Section 4.7.3.1). At the time of this writing, NMFS has completed three BOs on LNG facilities, the first of which was the Crown Landing BO (Delaware River), on May 23, 2006. The applicants agreed to adhere to seasonal speed restrictions identified in the ship-strike reduction proposed rule as an interim measure until final regulations are issued. The BO contained a ‘not likely to adversely affect’ determination for whales. The Neptune BO was signed on January 12, 2007, and came to a finding of ‘may adversely affect, but is not likely to jeopardize right whales’. The NE Gateway BO was signed on February 5, 2007, and came to the same finding as the Neptune BO. The applicants for these offshore LNG facilities voluntarily committed to mitigation measures, which are described in Section 4.7.2.7. These LNG sites have been approved, and after they are constructed or expanded they will cumulatively contribute additional vessel traffic along the coast, which could increase

the risk of ship strikes. However, in an effort to reduce this risk, the mitigation measures the facilities are operating under are consistent with the proposed ship-strike reduction regulations.

---

#### **1.7.4 Stellwagen Bank National Marine Sanctuary**

The NOS' Office of National Marine Sanctuaries administers Stellwagen Bank National Marine Sanctuary (SBNMS). SBNMS is located around Massachusetts Bay and provides habitat for many species, including right whales. Eight percent of the Sanctuary is within the proposed Cape Cod Bay SMA and 55 percent is within the proposed Off Race Point SMA (see Section 2.1.3 and Figure 2-12 for these SMAs). SBNMS is required to develop and maintain a management plan under the NMSA (see Section 1.5.6). The original management plan was completed in 1993; it was revised and released as a draft management plan in April 2008. The management plan provides a review of information relevant to large whale conservation, including shipping traffic, fishing-gear entanglements, and whale watching. Refer to the Marine Mammal Vessel Strike Action Plan in Chapter 7 of the draft management plan for specific strategies SBNMS is recommending to reduce vessel strikes.

NMFS is coordinating with SBNMS on various operational and technical measures to reduce right whale ship strikes. One of these measures involves analyzing vessel traffic patterns through SBNMS in an effort to re-route shipping lanes through areas with low whale densities. SBNMS initiated the analysis that led to NOAA's preparation of the US proposal to the IMO to rotate the Boston TSS 12 degrees to the north into an area with lower densities of baleen whales. This shift is expected to result in a decrease in the potential for whale encounters with shipping vessels. It would add approximately 3.75 nm (6.9 km) to the TSS, which would increase a vessel's travel time by approximately 10 to 22 minutes depending on speed (Wiley, 2005, *unpublished data*). After working with other Federal agencies through the interagency review process, the USCG (on behalf of the United States) submitted the proposal for a modification to the TSS to the IMO in April 2006; the Maritime Safety Committee endorsed the proposal in December 2006. The modification to the TSS was implemented in July 2007.

SBNMS, NMFS, and Cornell University have collaborated to use technology to improve understanding of right whale distribution in the Sanctuary, with the intention of better protecting the whales from ship strikes and entanglements. Ten acoustic pop-up buoys, or passive listening devices were installed in an array that covers 85 percent of the sanctuary. Among other things, these devices allow for the detection of present and vocalizing whales and inform LNG carrier transits. LNG vessels are required to slow down to 10 knots when whales are detected.

---

### **1.8 Related NOAA NEPA Documents**

The following sections provide a brief summary of NEPA documents NOAA is preparing that are related to this EIS because the North Atlantic right whale is one of the species considered in those documents.



### **1.8.1 Draft Environmental Assessment to Implement the Operational Measures of the North Atlantic Right Whale Ship Strike Reduction Strategy**

This draft environmental assessment (EA) was completed in June 2005 (NMFS, 2005e). It provided an analysis of the potential environmental impacts of the proposed vessel operational measures. The analysis indicated that some of the impacts had the potential to be highly controversial and/or significant. Consequently, in compliance with NEPA regulations, NMFS initiated preparation of this EIS.

---

### **1.8.2 EIS for Amending the Atlantic Large Whale Take Reduction Plan**

On February 25, 2005, NMFS published in the *Federal Register* (70 FR 9306) a notice of availability (NOA) of the DEIS for proposed amendments to the ALWTRP regulations (50 CFR 229.32). The proposed rule was published in the *Federal Register* on June 21, 2005 (70 FR 35894). The NOA for the FEIS was published in the *Federal Register* (72 FR 46217) on August 17, 2007. The final rule was published on October 5, 2007 (72 FR 57104). The ALWTRP was developed pursuant to Section 118 of the MMPA to reduce serious injury and mortality of right, humpback, and fin whales due to incidental interactions with commercial fisheries. NMFS is proposing additional regulations for the fisheries currently covered by the ALWTRP, which include the Northeast sink gillnet, Northeast/mid-Atlantic American lobster trap/pot, mid-Atlantic coastal gillnet, Southeast Atlantic gillnet, and southeastern Atlantic shark gillnet fisheries. NMFS is also proposing to regulate the following fisheries from the MMPA's List of Fisheries (Section 1.1.2.2) for the first time under the ALWTRP: Northeast anchored float gillnet, Northeast drift gillnet, Atlantic blue crab, and Atlantic mixed species trap/pot fisheries targeting crab (red, Jonah, and rock), hagfish, finfish (black sea bass, scup, tautog, cod, haddock, pollock, redfish [ocean perch], and white hake), conch/whelk, and shrimp.

---

### **1.8.3 Right Whale Scientific Research Permit EIS**

NMFS' Office of Protected Resources is in the preliminary stages of a programmatic analysis of the issuance of scientific research permits for both North Atlantic and North Pacific right whales. Permits are required for scientific research because right whales are protected under both the MMPA and ESA. Permits and authorizations are required under the ESA and the MMPA to conduct activities that may result in the "taking" of a protected species. As indicated in Sections 1.5.1 and 1.5.2, "taking" is defined slightly differently by the ESA and the MMPA. "Taking" is defined by the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct," whereas MMPA defines "taking" as "to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal."

## 1.9 Public Involvement

Public involvement is an integral part of the NEPA process. This section describes the public involvement activities conducted in connection with the scoping, draft, and final versions of this EIS. To avoid redundancies, NMFS has integrated, as much as possible, public involvement efforts and outcomes for the overall set of proposed ship-strike reduction measures and the ANPR, with the public involvement for this EIS. NMFS' intent is to encourage the public to participate in the rulemaking and NEPA processes, including interested citizens and environmental organizations, the shipping industry, and local, state, and Federal agencies, as well as any other agencies with relevant jurisdiction or expertise.

### 1.9.1 Public Involvement in Formulating the Proposed Ship Strike Reduction Measures

NMFS fostered public participation in the formulation of the proposed ship-strike reduction measures through several methods, including solicitation of public comments on the ANPR, public meetings, industry stakeholder meetings, and focus group meetings. NMFS worked with state and Federal agencies, concerned citizens and citizens groups, environmental organizations, and the shipping industry to address the ongoing threat of ship strikes to right whales. Meetings, presentations, and workshops were convened by the ship-strike committee as early as 1999 in support of developing recommended measures to reduce ship strikes to right whales. Between 1999 and 2001, NMFS held 26 meetings along the East Coast. A NMFS contractor compiled information from these meetings and synthesized right whale sighting data to develop recommended measures, which were submitted to NOAA in August 2001 (Russell, 2001). NMFS formed an internal working group to review the report and to identify and assess options available to reduce ship strikes. Many of the measures in the 2001 report were eventually included in the ANPR.

NMFS published the ANPR for right whale ship strike reduction in the *Federal Register* on June 1, 2004 (69 FR 30857) and provided a comment period (ultimately extended until November 15, 2004 [September 13, 2004; 69 FR 55135]) to determine issues of concern with respect to the practical considerations involved in implementing the proposed measures and to determine whether NMFS was considering the appropriate range of alternatives. Five-thousand two-hundred fifty comments were received from governmental entities, individuals, and organizations. These comments were in the form of e-mails, letters, website submissions, correspondence from action campaigns (e-mail and US mail), faxes, and a phone call. They are available on NMFS' website.<sup>11</sup> The majority (more than 4,500) of the submissions were e-mails from action campaigns; 700 of the submissions were form letters; fewer than 100 were unique letters.

NMFS also held five public meetings on the ANPR at the following locations:

- Boston, MA: Tip O'Neill Federal Building (July 20, 2004)
- New York/New Jersey area: Newport Courtyard Marriot (July 21, 2004)
- Wilmington, NC: Hilton Riverside Wilmington (July 26, 2004)

<sup>11</sup> [www.nmfs.noaa.gov/pr/shipstrike](http://www.nmfs.noaa.gov/pr/shipstrike)

- Jacksonville, FL: Radisson Riverwalk Hotel (July 27, 2004)
- Silver Spring, MD: NOAA Headquarters Science Center (August 3, 2004)

During these meetings, public comments were requested and recorded, and questions were answered. In addition, nine industry stakeholder meetings were held in the following cities in the fall of 2004:

- Boston, MA (September 30, 2004)
- Portland, ME (October 1, 2004)
- Norfolk, VA (October 4, 2004)
- Morehead City, NC (October 6, 2004)
- Jacksonville, FL (October 13, 2004)
- Savannah, GA (October 14, 2004)
- New London, CT (October 20, 2004)
- Newark, NJ (October 25, 2004)
- Baltimore, MD/Washington, DC (October 27, 2004)

A summary report of these meetings and a list of the attendees are posted on the Internet at <http://www.nero.noaa.gov/shipstrike>.

NMFS also hosted two focus-group discussions with participants from non-governmental organizations, academia, and Federal and state agencies. The first meeting was held in Silver Spring, MD, on September 26, 2004; the second in New Bedford, MA, on November 5, 2004.

Comments on the ANPR addressed several broad topics, including: speed restrictions; vessel size and operations; speed and routing issues specific to regions; routing restrictions (recommended routes and ATBA); safety of navigation; alternative or expanded dates for the vessel operational measures; military and sovereign vessel exemptions; enforcement; and compliance. The written comments received are available on the aforementioned NMFS website.

---

## 1.9.2 Public Involvement for the EIS

### 1.9.2.1 Notice of Intent

NMFS published the NOI to prepare this EIS in the *Federal Register* on June 22, 2005 (70 FR 36121; a copy is included in Appendix B). In addition to describing the proposed action and the agency's purpose and need as well as providing background information, the NOI presented, and solicited comments on, six initial alternatives:

- Alternative 1: No Action (continuation of existing conditions).
- Alternative 2: Use of DMAs only.
- Alternative 3: Speed Restrictions in Designated Areas.
- Alternative 4: Use of Designated or Mandatory Routes.
- Alternative 5: Combination of Alternatives 1 through 4.
- Alternative 6: NOAA Preferred Alternative, similar to Alternative 5 but with less extensive speed restrictions.

Because several public and stakeholder meetings, workshops, and other consultation were held as part of the ANPR public involvement effort and sufficient public input was received on the NOI, NMFS did not consider it necessary to hold scoping meetings for the EIS. However, interviews were conducted at several key port areas (Boston, Hampton Roads, Charleston, Savannah, and Jacksonville) in reference to the economic impact analysis.

### 1.9.2.2 Summary of Major Comments on the Notice of Intent

During the 30-day comment period that followed publication of the NOI (June 22, 2005 to July 22, 2005), NMFS received 41 letters and approximately 300 form e-mails. A complete table of these comments with NMFS' responses is provided in Appendix B. The following is a brief summary:

- **Comments from Federal Agencies.** Several Federal agencies encouraged enhanced interagency communications to further develop the proposed ship-strike reduction measures and ensure consistency with international law.
- **Comments from Stakeholders.** Passenger-vessel stakeholders voiced concerns that the initial analysis presented in the June 2005 EA (see Section 1.8.1) underestimated the number of passenger-vessel arrivals. Recreational-vessel stakeholders indicated their group was not given proper consideration in the draft EA, although they did not understand why recreational vessels should be required to abide by speed restrictions. Stakeholders representing environmental groups urged NMFS to take immediate action with emergency regulations and/or implementation prior to completion of the EIS. Several groups suggested that NMFS develop viable and effective enforcement measures. Shipping stakeholders indicated that operating costs had risen considerably since the 2002 and 2003 estimates used in the EA. They also voiced concern about potential delays resulting from speed restrictions, and the possibility of a port being affected as a result of shipping entities choosing an alternate destination. Industry representatives also recommended that NMFS evaluate impacts on port operations, impacts on local economies that serve ports and port communities, and any other indirect economic and environmental impacts. Several stakeholders suggested the EIS contain a review of Navy and USCG vessel activity along the East Coast. Several commenters proposed that NMFS seek technological solutions instead of, or in conjunction with, changes in vessel operations. Specific port authorities raised port-specific issues and the possibility of cumulative impacts to the port area. Commenters from various groups recommended that NMFS require Federal vessels to adhere to the proposed vessel operational measures. Several industry groups raised the issue of additional vessel traffic and regulations associated with the proposed and current LNG terminals.
- **Comments on the Alternatives.** There was broad support from the general public for Alternative 6, although several comments recommended changes to the times, dimensions, and boundaries of the SMAs. There was also broad agreement among environmental conservation organizations that Alternatives 2, 3, and 4 would not be sufficient to reduce ship strikes; however, a number of industry commenters preferred these stand-alone measures. A few comments supported Alternative 1 (No Action). Several commenters recommended Alternative 5 as the most effective means to reduce ship strikes, although they also indicated Alternative 6 was reasonable as the minimum for protective measures.

- **Comments on Speed Restrictions.** Some commenters were supportive of the proposed speed restrictions in the range of 10 to 14 knots based on the best available data, whereas other commenters questioned the effectiveness of speed restrictions as a mitigation measure and would not support this measure until further speed and hydrodynamic studies are completed. Commenters provided no new data on the effectiveness or lack thereof of specific vessel speed.
- **Comments on DMAs.** Commenters suggested that certain revisions to triggering and implementing a DMA were necessary before they could be considered a viable measure.

### 1.9.2.3 Notice of Availability for the DEIS

Following publication of the Notice of Availability (NOA) of the DEIS on July 7, 2006 (71 FR 38641), NMFS held three public hearings (in Jacksonville, FL; Baltimore, MD; and Boston, MA) to solicit and receive comments. NMFS advertised these meetings via notices in the *Federal Register* and major local newspapers. Interested parties could also send written comments to mailing and e-mail addresses printed on the title page of the DEIS and in the NOA.

### 1.9.2.4 Summary of Major Comments on the DEIS

NMFS originally provided 60 days (from July 7 to September 5, 2006) for interested parties to review and comment on the DEIS. This review period was subsequently extended by 30 days to October 5, 2006. A total of 121 comments were received on the DEIS, 42 of which were form e-mails, 39 oral comments from the public hearings, and 40 letters, e-mails, and faxes. These comments are available online at [www.nmfs.noaa.gov/pr/shipstrike](http://www.nmfs.noaa.gov/pr/shipstrike). A complete table of these comments with NMFS' responses is provided in Appendix B. NMFS carefully considered all comments on the DEIS in the development of this FEIS. A summary of the comments on the DEIS follows:

- **Comments on the Alternatives.** In general, the environmental conservation groups supported Alternative 5 and a 10-knot speed restriction, and stated that Alternative 6 should be the bare minimum for protection. Other commenters requested an explanation for the differences in dates and management areas among Alternatives 3, 5, and 6. Commenters also asked for an explanation of the rationale for selecting the preferred alternative in the FEIS.
- **Comments on DMAs.** Many commenters suggested that the effective date and time of the designation of a DMA in the Federal Register should be shortly after the initial sighting of whales that triggers the DMA. Other commenters said that DMAs need to be actively managed throughout the period during which they are in effect and that the restrictions should be lifted when the whales are no longer present rather than after 15 days. Representatives of the ferry and whale-watching industries were concerned about the impacts a DMA could have on their businesses if it went into effect during their peak season.
- **Comments on the Economic Analysis.** Some commenters suggested that the economic analysis did not consider the secondary effects on the cities serviced by commercial shipping and ferry vessels. Others commented that the impacts were understated or did not account for logistical constraints. Several commenters also requested that the EIS provide an assessment of the economic benefits of right whale protection and the fuel

cost benefits of slowing ships down. However, no commenters provided new or specific economic information that would contradict the DEIS analysis.

- **Comments on Federal Vessels.** The majority of comments pertaining to Federal vessels stated that exemptions should only be granted for certain critical activities, such as human safety, national security, and national disaster missions, or if they are operating under conditions identified in a BO. Other commenters stated that the exemption should not apply to government research vessels or similar vessels not involved in the above-mentioned critical activities. There were also several requests for information on the number of vessels to which the exemption would apply.
- **Comments on Speed Restrictions.** Among the comments pertaining to speed restrictions that mentioned a specific speed, most advocated 10 knots. Others were concerned that vessel maneuverability would be compromised at 10 knots. Several commenters stated that there are insufficient data to support the assumption that speed restrictions would adequately protect whales against ship strikes. Several commenters suggested that speed restrictions would increase the risk of ship strikes because vessels would be in the area for a longer time and would emit less noise than they would at their regular speed. Commenters provided no new data on the effectiveness or lack thereof of specific vessel speeds.
- **Comments on Routing Measures.** In general, commenters supported the recommended routes. Several commenters requested a more detailed explanation of how and when the TSS modification and ATBA would be implemented.
- **Comments on SMAs.** There were numerous comments on the timing and boundaries of the SMAs, including comments suggesting a January start date for the Off Race Point SMA, that the timing and boundary of the Southeast SMA be extended to include the critical habitat and/or additional ports to the north of Brunswick, Georgia, and that the times in which restriction would be in effect be synchronized among the regions so that they are the same for all alternatives.

### 1.9.2.5 Review of the FEIS

The FEIS will be available for public review for 30 days from the release date; NMFS will not issue a Record of Decision (ROD) until the close of this review period.

---

## 1.10 Structure of the FEIS

**Chapter 1** presents the purpose and need for the proposed action and background information.

**Chapter 2** describes the alternatives evaluated in the FEIS, including the proposed action (preferred alternative).

**Chapter 3** describes the affected environment.

**Chapter 4** analyzes the potential impacts of the alternatives on the environment.

**Chapter 5** addresses requirements under EO 12866 (Regulatory Impact Review).

**Chapter 6** lists references.

**Chapter 7** lists the persons, organizations, and agencies that were sent a copy of the Draft and Final EIS for review.

**Chapter 8** lists the persons that prepared the FEIS.

Several **appendices** contain supporting information too detailed or technical to be incorporated in the body of the FEIS.

---

## **1.11 Issues Not Addressed in the FEIS**

### **1.11.1 Enforcement**

Enforcement of the proposed vessel operational measures is not addressed in the FEIS. NMFS is addressing enforcement in the final rule and in select responses to comments in Appendix B.

---

### **1.11.2 National Security**

The proposed action and alternatives are not expected to affect national security. Neither the Navy nor the USCG expressed national security concerns in their comments on the DEIS. Although these agencies are taking a number of right whale conservation steps, their vessels would not be subject to the proposed operational measures, and therefore their operations would not be affected. Requiring vessels to limit their speed may even promote national security, as suggested by the fact that the USCG occasionally slows vessels as a step to decrease the potential for a security threat (Section 3.4.1.3).