

APPENDIX F

22 July 1996 Biological Opinion



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, Maryland 20910

JUL 22 1996

Captain J. A. Creech
Commandant (G-Nd)
U.S. Coast Guard
2100 Second Street, S.W.
Washington, D.C., 20593-0001

Dear Captain Creech:

The enclosed biological opinion is in response to the U.S. Coast Guard's request for reinitiation of consultation under section 7 of the Endangered Species Act on the opinion the National Marine Fisheries Service (NMFS) issued to the Coast Guard on September 15, 1995.

Based on new information that may indicate a change in the current status of the right whale population, and taking into account cumulative effects, NMFS concludes that continued vessel and aircraft operations by the Coast Guard are likely to jeopardize the continued existence of the species. This new information does not change the basis for the original conclusion that vessel operations may adversely affect, but are not likely to jeopardize the continued existence or result in the destruction or adverse modification of critical habitat for other listed species considered in the consultation. Also, the proposed activities are not likely to result in the destruction or adverse modification of habitat designated as critical for right whales.

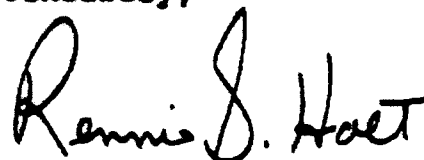
NMFS is providing the Coast Guard with a reasonable and prudent alternative, which if implemented fully and in a timely manner, significantly reduces the Coast Guard's potential to cause injury or mortality to a right whale, and therefore, avoids the likelihood of jeopardizing the continued existence of right whales. In accordance with 50 CFR 402.15(b), please notify NMFS of the final decision the Coast Guard plans to take on this action.

Reinitiation of formal consultation is required if (1) the amount or extent of taking specified in the incidental take statement is exceeded (e.g. an endangered whale is struck or injured by a Coast Guard vessel); (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered,



(3) the identified action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the biological opinion; or (4) a new species is listed or critical habitat designated that may be affected by the identified action.

Sincerely,

A handwritten signature in black ink that reads "Rennie S. Holt". The signature is written in a cursive style with a large initial "R" and "H".

Rennie S. Holt, Ph.D.
Acting Director
Office of Protected Resources

Enclosure

**NATIONAL MARINE FISHERIES SERVICE
ENDANGERED SPECIES ACT -SECTION 7 CONSULTATION**

BIOLOGICAL OPINION

Agency: United States Coast Guard
(Atlantic Coast Districts)

Activity: Reinitiation of Consultation on United States Coast
Guard Vessel and Aircraft Activities along the Atlantic Coast

Consultation Conducted By: National Marine Fisheries Service
Northeast and Southeast Regions

Date Issued:

July 22, 1996

A. Background

On September 15, 1995, NMFS issued a Biological Opinion to the U.S. Coast Guard pursuant to Section 7 (a)(2) of the Endangered Species Act of 1973, as amended, on vessel and aircraft activities along the Atlantic Coast. That opinion included a discussion of information on protected species in this area as well as discussion of the possible impacts from these activities. In 1991 and 1993, the severely depleted northern right whale (*Eubalaena glacialis*) was involved in two (one each year) documented strikes by Coast Guard vessels. Because so few individuals are left in the population, any impact to this species is considered extremely critical. For the Coast Guard, the most serious impact is the possibility of a ship strike that results in injury or mortality of a right whale. Since the strikes that occurred in 1991 and 1993, the Coast Guard has implemented many programs to protect whales, working in conjunction with NMFS and the Recovery Plan Implementation Teams for right whales in the Northeast and Southeast Regions. NMFS concluded that the programs implemented since the 1993 incident were adequate to reduce the probability of another ship strike. That factor, combined with current information on the population at that time, which showed a small but steady 2.5% population growth rate, resulted in a determination that continued vessel activities may adversely affect, but would not jeopardize the continued existence of the northern right whale and would not result in the destruction or adverse modification of its critical habitat.

After the Biological Opinion was issued, the Coast Guard reported that they may have struck another whale. The 1995 Biological Opinion requires reinitiation of consultation if there is a strike of any endangered whale, or if new information becomes available that changes the basis for the original conclusions including information on effects that were not considered, modification of the proposed action, or a new species is listed or critical habitat designated that may be affected by this action. Based on a subsequent tentative identification of the species as a humpback whale, the Coast Guard reinitiated consultation.

In addition to the whale strike, there is new information available that indicates that Coast Guard activities may affect right whales in a manner and to an extent not considered in the September 15 biological opinion.

Following is a detailed description of the events surrounding the whale strike in October 1995 by the Coast Guard and a discussion of the implementation of the conservation recommendations of the September, 1995 Biological Opinion. A discussion of how the new information may affect the status of the right whale population status is included in the Assessment of Impacts section.

Incident Description

On October 9, 1995, the 210 foot CGC Reliance was conducting a Northwest Atlantic Ocean law enforcement patrol, traveling at 15.0 knots, 10 nautical miles northwest of the northern edge of Closed Area II (See Fig. 1). After a few whales were noted about 3 nautical miles off the ships port quarter, the Officer of the Deck (OOD) posted a lookout for whales. Specifically, the OOD instructed the lookout to keep a "sharp lookout for whales", posted him on the forward part of the starboard bridgework and then positioned himself on the forwardmost part of the pilot house with binoculars. The OOD was following current guidance documents for whale sightings which require Coast Guard District units to "maintain a lookout and give whales a wide berth". At 1605Q, the lookout reported to the OOD that he had observed a whale directly off the bow and believed that the ship had come in direct contact with the whale. This conclusion was based on a "thudding" noise and shuddering of the ship just after losing sight of the whale. Concurrently, another seaman that had just gone off duty saw a whale surface 15 to 20 feet off the starboard bow, and tried to warn the bridge, but he felt the vessel "shudder" before that message could be received. The position was marked on the GPS navigation system (42°26.7'N, 067°31.6'W) and the Reliance was brought to a stop. Reliance then returned to the position of contact and searched for any evidence of a struck whale. While conducting the search, two minke whales were positively identified one to two nautical miles away from the

ship. However, the lookout that had observed the whale involved in the incident only saw the 'blackish posterior of a whale for 2-3 seconds and did not see the dorsal fin or tail areas' (Creech, letter comm.). No evidence of a struck whale was found and no exterior or interior structural damage to the vessel was discovered. The vessel continued its transit at approximately 1630Q.

The Coast Guard has stated that uncertainty regarding the identification of the whale delayed their reporting the incident to NMFS. Coast Guard field units were all notified of the requirement in the September 1995 biological opinion to report any incidents involving endangered whales to NMFS within 24 hours. Since the only whales identified in the vicinity of the strike were non-endangered minke whales (Baleanoptera acutorostrata), the captain was not certain that the situation came under the recommendations of the opinion. After descriptions of the incident from the seamen involved were gathered and a month after the incident occurred, the District Commander notified the NMFS Northeast Regional Director that a Coast Guard cutter may have made physical contact with a humpback whale (Megaptera noveangliae) and directed the cutter to conduct an investigation into the matter.

Since the identification of the whale species involved in this incident was not clear from the Letter Incident Reports (LIR) written by the off-duty seaman involved, the Coast Guard arranged to have NMFS staff interview the seaman at the First District Headquarters in Boston, MA on July 2, 1996. The seaman looked at two field guides for whales in the Gulf of Maine (Katona et al., 1993 and NOAA Tech. Rep. 396). The seaman has experience on the water and has observed whales on past occasions. He was fairly certain at the time of the incident that he had seen a humpback whale and this was what he reported in the LIR. His look at the whale was brief, but he saw a number of distinctive characteristics that make it probable that it was indeed a humpback. Based on the general size of the animal, it was not likely a fin whale or any of the larger species such as blue whale. A report from the Captain of the vessel mentioned that minke whales had been seen in the area around the time of the incident, but he was not present on the bridge during this incident. The seaman observed 'bumps all over the head' which were probably 'stovebolts', one of the more distinctive features of humpback whales. In addition, as the whale approached the ship, part of the underside of the chin was visible just before diving and he distinctly remembers seeing throat grooves. This means it was probably a rorqual whale. The whale was described as 'blackish on top and grayish on the bottom'. He stated that he definitely knew what pilot whales look like and the dorsal fin of this whale was not falcate; humpback whales commonly have more blocky shaped dorsal fins. Finally, he observed surface activity by other whales in the area before this activity

occurred. He also saw breaching. Surface activity is common for feeding humpbacks while most other whale species feed underwater. Based on these observations, the time of year and location of the strike, it is likely that the whale involved in the incident was a humpback.

This incident did not occur in critical habitat for northern right whales or in any other of the special areas identified in the conservation recommendations of the September 15th Biological Opinion. Consequently, many of these conservation recommendations did not apply. There was no notation that normal transit speed was reduced as advised in the conservation recommendations when whales are in the area. However, the Reliance implemented the appropriate guidance when the whales were sighted: post a lookout, use caution, and maintain a safe distance.

Consultation Record

On November 7, 1995, the District Commander notified the NMFS Northeast Regional Director by letter that a Coast Guard cutter may have made physical contact with a humpback whale while on patrol in the vicinity of George's Basin. The cutter was instructed by the Coast Guard to conduct an investigation and report by November 29, 1995.

NMFS staff received the initial Letter Incident Report from the Reliance on January 24, 1996. On February 20, 1996, the Coast Guard sent the completed investigation report to NMFS headquarters. This correspondence requested reinitiation of consultation, as specified in the September 15, 1995 biological opinion, and was based on the probability that the vessel strike involved an endangered humpback whale.

Between February 20 and June 24, 1996, NMFS continued to consult with the Coast Guard through meetings at the headquarters level and coordination through the First District and the NMFS Northeast Region. This includes meetings on April 22 and June 7 at headquarters to discuss issues pertaining to the reinitiation. On May 20, 1996, NMFS sent a letter delineating the information that was needed before the reinitiated biological opinion could be completed. This information was received from the Coast Guard on June 21, 1996.

Since the September 15, 1996 Biological Opinion was signed and the October whale strike, the Coast Guard has issued stricter reporting requirements which have gone out under the District's guidance (Appendix 1) and state that "OPCON shall immediately notify District Command Center if any vessel comes into contact with a whale. The First Coast Guard District is required to notify NMFS within 24 hours of the incident". While the Fifth

and Seventh Districts have been instructed to follow this updated guidance, the official documents for these Districts have not been updated.

Coast Guard Implementation of Conservation Recommendations Identified in the September 1995 Biological Opinion.

1. Between January 1 and March 31, when humpback and fin whales are concentrated in shallow waters between Cape Henry and Cape Hatteras, all USCG vessels operating in this area should post dedicated lookouts to spot endangered species. This lookout should watch for whales at all times, and the vessel operator should take necessary precautions to avoid whales. The USCG should maintain regular contact with the Virginia Marine Science Museum (Mark Swingle at (804) 437-4949) and the NMFS Beaufort Laboratory (Vicky Thayer at (919) 728-8762) to obtain reports of whale sightings in the area which will be used as a guideline to determine when extra precautions may be necessary. Sightings of endangered whales in the area should be broadcast over NAVTEX, with a warning to mariners in the vicinity to exercise caution.

Implementation: In the entire Fifth District, including the area specified above, lookouts are tasked with watching for whales at all times and are using notices to mariners, broadcasts and NAVTEX as appropriate. This tasking is specified in the Marine Mammal and Endangered Species Protection Program which was provided in the original Biological Assessment and is implemented in the Fifth District.

2. In addition to posting dedicated observers on vessels in the southeastern critical habitat area over the calving season, it is recommended that dedicated observers also be posted on all USCG vessels operating in the general area between Savannah Georgia and Palm Beach, Florida, to watch for whales. Critical months in Savannah are November - December and March - April, when the whales are transiting to and from the calving grounds, and January to March in the extended area to the south of designated critical habitat.

Implementation: The Seventh District Marine Mammal and Endangered Species Program fully implements this recommendation. In addition, since the program went into effect, Seventh District units were involved in assisting a disentangling effort and placement of a satellite tag on a right whale in January, 1996.

3. The terms "maximum safe speed" for emergency operations and "proportional to the mission" for standard operations currently convey that the mission goals supersede the safety of protected species. In certain operations, such as emergency search and rescue and drug interdiction missions, maximum safe speed may be the only choice. The USCG's standard operating procedures should

be revised, with the assistance of NMFS, to incorporate protection for endangered and threatened species where they occur in conjunction with USCG operations. This is particularly important for operations when whales are aggregated in known high-use and high-density areas.

Implementation: The guidance document implemented in all three Districts provides special instruction to units that are operating in critical habitat or in areas of endangered whale concentrations. This guidance reinforces the significance of the highly endangered status of the right whale. Guidance contained in these documents partially incorporates conservation recommendations #3 and #5 which concern speed. Conservation recommendation #3 states that the safety of protected species is a particularly important consideration during non-emergency transits. The guidance document in place at the time of this incident instructs operators to use caution and speeds that will reduce the possibility of whale strikes. However, this guidance only refers to right whale critical habitat areas and the immediate area surrounding them or other areas where whales are concentrated. This includes reducing the speed of 'all vessels transiting these areas' during the critical time periods for non-emergency operations.

The Coast Guard revised the guidance document in the First District in April of 1996 (Appendix I) and instructed the other Districts to follow this new guidance. Essentially, Coast Guard standard operating procedures now implement the recommendations in CR#3 by placing the safety of protected species on par with mission requirements during emergency operations and make the safety of protected species a primary factor during non-emergency operations. This revised guidance will be followed by the Fifth and Seventh Districts and will also be made part of the official documents in the future. The guidance in place at the time of the October 9 incident, while not the more protective revised guidance, states that reduced speeds are to be used when transiting right whale critical habitat or areas frequented by right whales.

In recommending reduced speeds, NMFS has not issued guidance to operate at a specified speed since vessels have different minimum clutch speeds and different abilities to maneuver at various speeds based on engineering, size, and safety considerations. Also, the Coast Guard has maintained that reducing speed in all transits may hamper the agency's ability to fulfill its mission.

4. The USCG should ensure that its lookouts (described in the BA as standard operating procedure) are trained in techniques required to spot marine mammals and sea turtles.

Implementation: The guidance document requires units to develop a training program for lookouts and bridge personnel on whale species identification, unit responsibilities, avoidance procedures, and areas of special concern. The First District has formally developed a course curriculum on marine mammal protection that is used at the Northeast Regional Fisheries Training Center (Appendix 2). NMFS assists in this program which has been in place for approximately 14 months (Austin, pers. comm.) and incorporates both species and guidance/regulation information. The Fifth District units have invited NMFS personnel and local stranding network organization to participate in local training sessions. However, a formal program similar to the First District's has not been implemented in the Fifth and Seventh Districts.

5. In the southeastern United States (Georgia through Florida) from mid-December through March, to protect the calving grounds for the northern right whale, broadcasts reporting right whale sightings by the Early Warning System should be transmitted as quickly as possible over NAVTEX and any other practicable means available to as wide a distribution of vessels possible. The message should advise mariners within 15 nm of the sighting to operate at the slowest safe speed (5 knots if possible), exercise caution, and keep a watch for right whales. This recommendation is based on observations by researchers that right whales can travel at burst speeds of 5-6 knots; thus speeds of 5 knots could allow a right whale to successfully evade a ship if necessary. Greater vessel speeds may not allow a right whale to escape in time to prevent a collision. Due to the difficulty in spotting this particular species, as well as its unpredictable nature, implementing slow speeds under the conditions described above may be the only method to prevent collisions.

In previous meetings and correspondence with members of the Right Whale Recovery Implementation team, the NMFS Southeast Region has recommended that the protocol for the emergency warning system include advising all large vessels to slow to 5 knots (or the safest speed possible) when they have been alerted that a right whale has been sighted within 15 nm of the vessel or when visibility is limited. This guideline is currently adhered to by the Corps of Engineers for dredging operations in the South Atlantic.

Implementation: Vessels have different minimum clutch speeds and different abilities to maneuver at various speeds based on engineering, size, and safety considerations. Therefore, reducing speed to 5 knots or less depends on whether the vessel's ability to maneuver can be maintained.

The First District began aerial surveys over critical habitats in Cape Cod Bay and the Great South Channel in 1996 that occur 2-3 times a month and include notification to mariners. The Seventh

District did surveys and broadcasts during calving season in the southeast this year. No plan currently exists to implement a similar program in the Fifth District as their waters do not include critical habitat and are primarily migratory routes for right whales. This District is currently focused on providing information to mariners based on vessel sightings. However, NMFS recommended that the Coast Guard investigate, in conjunction with the implementation teams, methods to prevent impacts on juvenile humpback and fin whales that concentrate in the Fifth District waters during winter. This is a recent phenomenon that needs further investigation.

6. The USCG should develop training for personnel that emphasizes not only stranding and enforcement issues, but information on the distribution and behavior of these species that will help the USCG to anticipate where and when conflicts may occur. The USCG should strive to promote a healthy, conservation-oriented climate, as mandated by section 7(a) of the ESA, which tasks Federal agencies not only to prevent jeopardy to the species, but to promote recovery.

Implementation: See the description of current training provided in the implementation section of No. 4.

7. When and where possible, routine transits should avoid those high-use and high-density whale habitat areas during the seasons when whales are concentrated in those areas. For the northern right whale, these areas are shown on nautical charts as Critical Habitat. Although implementing some of these precautionary measures may incur extra time, this contribution may be as valuable or even more beneficial to the survival and recovery of these species than directed research or data gathering projects.

Implementation: In the supplemental information the Coast Guard provided for this consultation, it stated that all units are instructed to avoid high-use and high-density areas 'whenever practical'. The term 'practical' takes into account that in some locations these areas cannot be avoided. This information did not state the proportion of time that these areas cannot be avoided; therefore, no conclusions can be made on the magnitude of actual implementation of this recommendation. This recommendation was being implemented at the time of the October 9 incident, but the vessel was not transiting a known high use, high density area.

8. The USCG should continue its active participation in regional recovery plan implementation teams and task forces.

Implementation: The First and Seventh District are fully participating in the Recovery Plan Implementation Teams. However, the teams are not currently involved in issues directed at the mid-Atlantic area, and the Fifth District has not

participated in the other implementation team activities. Examples of involvement by the First and Seventh District include the early warning system implemented this year during calving season and during the period when the whales were present in Cape Cod Bay and Great South Channel critical habitat, participation in development of entanglement response plans in the northeast and southeast, and vessel and technical support for disentangling and stranding responses. A Coast Guard representative attends Team meetings and actively participates in sub-committees that address issues such as the ship strike problem. These committees are developing recommendations on what information is needed and what activities can be done to reduce the impact of vessel traffic and other threats.

9. The USCG should continue fulfilling its missions, with modifications as discussed above, which support recovery efforts of protected species.

Implementation: These items are discussed under the specific recommendations above. In addition, the MOA between the CG First District and NMFS includes elements to aid recovery (Appendix 3) such as providing the commercial marine industry with educational materials, providing dedicated patrols in critical habitat areas, supplying information on endangered whales to boarded vessels, provide limited short-term vessel support for out-of-habitat situations, entanglement, or stranding efforts. All Districts have provided logistical and vessel support for disentangling efforts. The Seventh District has participated in extensive NAVTEX and broadcast systems as detailed in the Biological Assessment (Batelle Ocean Sciences, 1995) prepared for the previous consultation and the September 1995 biological opinion and is incorporated here by reference. Since that opinion was issued, Coast Guard standard operating procedures now place the safety of protected species on par with mission requirements during emergency operations and make the safety of protected species the primary factor during non-emergency operations. The current guidance document for unit operations can be found in Appendix 1. The Seventh District has made significant efforts to control activities off the Georgia coast associated with the 1996 Olympics to prevent impacts on protected species.

10. During standard operations, and following a whale sighting, USCG vessels should maintain a minimum distance from the whale (recommended distances are a minimum 100-yards for all large whales).

Implementation: This is implemented through the updated guidance document in the First District and will be implemented in the guidance documents for the Fifth and Seventh Districts, timing unknown. The guidance specifies "100 yards if practical," and was not in place until April 1996 when the First District revised guidance was implemented.

The following conservation recommendations have not been fully implemented. The Coast Guard stated that it has been implementing recommendations that were aimed at protecting right whales first. While some of these measures also benefit other endangered whales, protection measures for other endangered whales and sea turtles were not as critical. The Coast Guard states that they will be implemented, but a time frame was not provided.

11. The Coast Guard has stated that it is standard practice for vessels in the vicinity of beaches where sea turtles are actively nesting, or near whale sightings, to be notified and advised to proceed through the area with caution.

Partial Implementation: The Coast Guard guidance document instructs units to proceed through areas with whale sightings with caution. In the October 9 incident, the lookout was instructed to "keep a sharp lookout for whales." However, the Coast Guard believes the initial sighting and surfacing and subsequent strike occurred too rapidly for the vessel to implement any avoidance operation.

12. The USCG should evaluate the collective impact of all of their vessel activities, including passive activities (e.g., anchorages), within the Florida intracoastal waterways on Johnson's seagrass, a species proposed to be listed as threatened. A summary of anticipated projects and estimates of any potential seagrass take levels should be developed to allow NMFS to provide a comprehensive conference or consultation.

13. As this biological opinion does not consider the effects of USCG activities on endangered/threatened species in the Gulf of Mexico, we recommend that the USCG initiate consultation on those activities in the Gulf.

14. To provide additional cooperative opportunities for conservation and protection of these species in mid-Atlantic and southern portions of their range, an MOU should be developed among NMFS, the Fifth and Seventh USCG Districts, and the National Marine Sanctuaries Program regarding the New England and Southeastern regional Implementation Teams for the Right Whale and Humpback Whale Recovery Plans.

15. Juvenile humpback and fin whales have increased in abundance in coastal waters from Cape Henry to Cape Hatteras between January and March. Concurrent with these recent observations, there have been a number of vessel-related whale mortalities in this region (Barco, pers. comm.). The concentration of vessels in the area, coupled with the shallow water depths found in the area, makes the potential for whale/vessel collisions high (Wiley et al., 1995). NMFS recommends that, with the cooperation and participation of the USCG, the New England Right and Humpback Whale Implementation Team, and the Southeastern Right Whale Implementation Team, should coordinate the development of a Mid-Atlantic Implementation Team that addresses these mortalities.

This group should meet and discuss how to organize reports of whale sightings in the area to a central repository, which could provide information on these sightings to the USCG for broadcast over NAVTEX.

In summary, the first 10 of the conservation recommendations of the September 15, 1995 Biological Opinion have now been implemented among the Atlantic Coast Districts. Some, but not all, were in place before the October 9, 1995 incident. The benefits of more long-term programs cannot be fully realized until the programs have been developed and in place for a longer period of time. The remaining conservation recommendations (with the exception of part of #11) have not been implemented.

B. Proposed Activity

This reinitiation of consultation considers continued operation of vessels and aircraft by the USCG in support of its missions: response to marine pollution events, port safety and security issues, law enforcement issues, search and rescue missions, vessel traffic control, and maintenance of aids to navigation. These activities are described in detail in the biological assessment prepared by Batelle Ocean Sciences and the NMFS Biological Opinion issued September 15, 1995 and are incorporated in this opinion by reference. In addition, this consultation considers the activities that are being implemented in response to the conservation recommendations in that opinion, but do not constitute a modification of the proposed action and are not a reason for the reinitiation. These actions have been adopted as part of the Coast Guard's "Atlantic Protected Living Marine Resource Initiative."

C. Listed Species Likely to be Adversely Affected

Listed species under the jurisdiction of NMFS that occur in the Northwest Atlantic Ocean and may be affected by the proposed activities include:

Endangered

Humpback whale	<u>Megaptera novaeangliae</u>
Northern right whale	<u>Eubalaena glacialis</u>
Fin whale	<u>Balaenoptera physalus</u>
Leatherback sea turtle	<u>Derموchelys coriacea</u>
Kemp's ridley sea turtle	<u>Lepidochelys kempi</u>
Green sea turtle ¹	<u>Chelonia mydas</u>
Hawksbill sea turtle	<u>Eretmochelys imbricata</u>

(¹ Green turtles in U.S. waters are listed as threatened except for the Florida breeding population which is listed as endangered. Due to the inability to distinguish between these populations away from the nesting beach, green turtles are considered endangered wherever they occur in U.S. waters.)

Threatened

Loggerhead sea turtle

Caretta caretta

Critical Habitat Designations

Northern right whale

Eubalaena glacialis

Complete species accounts and references can be found in the September 15, 1995 NMFS Biological Opinion and are incorporated here by reference. New information that has become available on northern right whales is described below.

Northern right whale (*Eubalaena glacialis*)

The following new information is in addition to that included in the right whale species account in the September 15, 1995, Biological Opinion. The implications of this information are provided in the section on Assessment of Impacts. The new information is the number of mortalities documented in the past 12 months and information from the right whale identification catalogue which compares current and past mortalities to known births to give a perspective on the population trend since 1980. Also, locations of carcasses of some of the 1996 mortalities, as well as preliminary offshore aerial survey data (GADNER, unpublished data) and sightings reported by the Navy, indicates that right whales may exhibit a more offshore distribution in southeast waters during the calving season than previously believed.

Mortalities

The two known mortalities in 1995 occurred in middle and late summer. The animals were reported dead off the coast of Rhode Island and in Canada. The Rhode Island whale had been severely entangled in fishing gear since 1993 which may have significantly reduced the animal's ability to survive. The line had worn its way through the soft tissues and down to the bone at the base of the flipper and the whale appeared to be in a debilitated condition. The cause of death was reported as a vessel collision.

Seven mortalities were documented in the first three months of 1996. A review of mortality and serious injury attributed to ship strikes from 1976 to the present (Kenney and Kraus, 1993; Kraus, 1990; and updated listing provided by A.R. Knowlton, pers. comm.) indicates a relatively consistent mortality rate attributable to this source of 0-2 a year. One of the 1996 mortalities can be definitely attributed to a vessel strike, another was probable. Evidence from the other necropsies was not as conclusive. Following is a description of the whales that were retrieved and necropsied (these descriptions are excerpted

from the respective necropsy reports) as well as those that were observed but not retrieved.

January 2, 1996 - A stranded dead, female right whale calf was located on Atlantic Beach, near Jacksonville, Florida. The whale was necropsied at New England Aquarium on January 11. No obvious sign of gross trauma was evident from the internal exam. Breaks in the rib cage and dislocation of the right flipper were post mortem. The lungs were noted to be congested. Umbilicus openings were most likely post-mortem changes. A definitive statement was made that there were no gross lesions suggestive of vessel collision.

January 30, 1996 - A 45 foot floating dead right whale was observed 10 miles east of Sapelo Island, Georgia by a private vessel and was reported to the Coast Guard. The carcass was towed to shore and necropsied. No external evidence of trauma was visible with no evidence of chronic disease. Grossly the animal appeared in good flesh, but a large contusion was discovered that corresponded with deeper bone damage. The intestines and stomach were positioned cranial to the liver which could have been the result of severe impact. The cranium sustained massive fracturing that extended into the upper left palate. The lateral processes of the cervical vertebrae were also broken and the atlas was disarticulated. The left ribs, left scapula and associated tissue and musculature showed heavy damage. The cranial fractures extended through massive bone elements. These injuries with the associated hemorrhage indicate blunt impact trauma with a large moving vessel. The nature of injuries indicate that death was rapid and cause of death was recorded as vessel collision.

February 5, 1996 - Whale carcass observed by Navy at 30°29' N, 80°37' W (reported to Florida Department of Environmental Protection (FLDEP) on February 09, 1996)

February 7, 1996 - 35 foot female right whale carcass observed by the US Navy at 30°44'N, 80° 57.2'W. Carcass not retrieved, species confirmed by Florida Department of Environmental Protection (FLDEP). Drift pattern believed to be inconsistent with carcass noted above (i.e. these likely were two different carcasses).

February 19, 1996 - A female right whale calf was necropsied at the University of Florida. No external scars, abrasions or contusion were apparent. Significant findings included saturated, congested lungs and the fact that the calf appeared to be in good flesh and to have been nursing prior to death which precludes abandonment by the mother. Microscopically, the left eye exhibited mild inflammation around the ocular vasculature. Also, a small fracture of the basioccipital bone was observed, but no hemorrhage was associated with these fractures.

February 22, 1996 - A male right whale calf was reported at 30°56.53'N, 80°47.70'W and towed to necropsy site north of

Brunswick, GA. The changes observed in lung tissue from this calf are generally associated with shock. Internal hemorrhaging of tissues in the periocular region was noted and suggestive of a unilateral traumatic event such as concussion. This animal had numerous shark bites, some of which could be ante-mortem. The combination of the acute respiratory distress and the hemorrhaging behind the eye suggest effects from unidentified external trauma.

March 9, 1996 - An adult male right whale stranded in Wellfleet, Massachusetts and was necropsied. The whale had lobster polypropylene going through both sides of the mouth and a lobster pot was attached to line. Propeller cuts were evident along the back, baleen was damaged and line scarring was present around the tailstock and leading edges of the flukes. A thick area of the skull was broken suggesting a ship strike, but it was not determined if this was before or after death. Propeller scarring was present and a major infection process was in progress. Cause of death could have been one of two possibilities: septicemia from abscess resulting from an old penetration wound or the animal was killed by a ship strike (evidence suggests that the cut in the back occurred pre-mortem as dead whales typically float on their sides or belly up, making it unlikely, but not impossible, to be cut on the back). The gear entanglement did not seem severe enough to have caused the animal's death, although it may have compromised feeding and swimming.

March 25, 1996 - A dead whale was sighted by the US Navy at 28° 55.3'N, 079° 12.1'W, approximately 80 nm east of New Smyrna Beach. The animal was reported as small, dark, and floating on its side which was consistent with the previous two right whale calves recently recovered (Wang, pers comm). This animal could not be located by aerial sighting efforts and the search was abandoned. Species identification was unconfirmed.

Ear parts from three of the necropsied whales were sent to an expert otolaryngologist, Dr. Darlene Ketten, for analysis. The U.S. Navy was conducting exercises off of Mayport, Florida, which involved detonation of explosive devices in the water around the time these whales were observed dead, and there was concern that this activity may have caused internal trauma and consequent mortality of some of these specimens.

Adult male ears from the January 30 mortality were fragmented, but due to lack of soft tissue accompanying the specimens and the advanced state of decomposition, it could not be determined if the fracture occurred before or after death. However, Dr. Ketten noted that the amount of fracturing was unprecedented in her experience. The level of damage could have resulted from either a blast or a ship strike. The female calf ear from the February 19 mortality showed no evidence of ante-mortem abnormalities. The male calf ears from the February 22 mortality showed no evidence of trauma, but did show presence of unusual ear tissues that may indicate respiratory, middle ear or mastoid disease. It is possible that disease or debilitation was the cause of death and

examination of the lungs would have been more conclusive. Unfortunately, the animal's advanced state of decomposition precluded the possibility of an histological examination of the lungs. Presence of fluid in the left inner ear indicated a possible blow to the skull or extreme physiological stress-- however, since it was only present in one inner ear only it is unlikely that it could be related to explosions.

Information from Right Whale Identification Catalog

At a meeting of the New England Whale Recovery Plan Implementation team on May 28, 1996, data was presented on historic right whale mortalities that currently is being gathered and analyzed by the New England Aquarium (Knowlton 1996). Mortalities were sorted into the following categories: unknown, natural causes, ship strikes, and entanglements. Recent increases in observed mortality may reflect an increased awareness and increased effort although this information has not been analyzed for its effect on these records. On the other hand, offshore survey effort recently has been reduced, and this information needs to be factored into the analysis as well. Since 1970, 42 mortalities have been recorded. Of these, 12 were natural calf mortalities, 14 were from ship strikes, 2 from entanglement, and 26 of unknown cause. However, it should be noted that the entanglement number varies from Kraus (1990) who considered one serious entanglement observed in Newfoundland as a mortality. Knowlton reclassified this as a serious injury in her recent evaluation of the catalogue because the whale was not recovered dead. Observations of other serious entanglements have occurred that may have resulted in other deaths, but these cannot be confirmed. In addition, entanglements appear to have been contributing factors in a number of the recent deaths described above. The location of the actual entanglement is rarely known. Most often when gear is discovered on a whale, it has been dislodged from where it may have been set. Ship strikes have usually occurred in the vicinity of critical habitats in the north and south, or in the mid-Atlantic near shipping lanes.

Identification Catalog - The following table summarizes what has been observed from maintaining the right whale identification catalogue in the North Atlantic and was presented at the spring meeting of the Southeastern Recovery Plan Implementation Team in 1996 by Scott Kraus, New England Aquarium.

**Actual Observations from the Right Whale Catalogue (Kraus,
pers. comm.)**

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Total number of whales identified from the right whale catalogue	62	102	99	115	76	103	152	152	197	205	147	156	128	172	195	193	?
Number of calves born (actual observ.)	5	8	11	9	13	11	13	11	7	16	12	17	12	6	8	7	21
Number of deaths (actual observ.)	0	1	2	2	1	0	1	4	2	4	1	1	1	4	2	2	*6

* represents a minimum, preliminary estimate

In addition to these actual values, the right whale catalogue can be used to derive an estimated total number for deaths in the population by making an assumption that if a catalogued (i.e., identified) whale has not been seen for six years, it is assumed to be a mortality. In the years the catalogue has been maintained (since 1980), only two whales reappeared after they were assumed dead (one after 8 years and one after 11 years). However, a number of biases are inherent in this approach and have to be taken into account before this information can be used definitively to determine the current status of the right whale population. For example, a whale may have died in any of the six years in which it was not observed, so the numbers in any one year do not necessarily represent the number of animals that died that particular year. They could have died anytime in the years since they were last seen. This probably results in some of the numbers being clustered; however, this factor is not reflected in the table below.

Survey effort in offshore waters was reduced in recent years which may result in some individuals simply not being observed. Therefore, the relationship between observations and effort must be calculated to make the estimate below more useful in determining population trends for right whales. Specifically, additional information is required on the changes in the spatial distribution of sampling and the tendency of whales to be resighted in different geographic regions (Clark, pers. comm.). If some whales are more frequently resighted in offshore areas (Brown's Bank, Great South Channel), then some proportion of these animals will be unreported when sighting effort decreases offshore. For example, a continuous 11-year series of surveys in the Great South Channel ended in 1989 -- several years before the high numbers of disappearances were recorded in 1994 and 1995. These higher numbers may reflect reduced survey effort meaning the whales simply were not seen. Again, the effects of reduced effort have not been factored into the estimates in the table below. However, based on raw data, it appears there may be an overall trend of decline.

Estimates using 6 year absence criteria (Kraus, pers. comm.)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Number of whales not seen for six or more years	5	4	6	3	7	4	3	19	18	?
Offshore survey effort (values not yet analyzed)	DECREASING----->									

Other than the few calves that are considered neonate mortalities that have died from natural causes (including possible inbreeding depression), most of these deaths are related to human activity, specifically ship strikes and entanglement in fishing gear. Incidences of human interactions with right whales are becoming more evident possibly as a result of increased efforts to retrieve carcasses so that in-depth necropsies can be conducted to determine the cause of death.

D. Assessment of Impacts

The species accounts and assessment of impacts for all species, other than the right whale, considered in the 1995 Biological Opinion have not changed and are incorporated here by reference.

Impacts from vessel and aircraft operations on right whales were discussed in detail in the September 15, 1995 Biological Opinion and are incorporated by reference. These include vessel collision, physical and acoustic harassment, prey dispersal, and increased pollution. Also, the identification of the potential impacts has not changed. However, the environmental baseline on which the potential harm to the population was based has changed as a result of recent documented mortalities and the magnitude of those potential impacts to the population. In determining the environmental baseline, NMFS evaluates that status of the species and critical habitat which involves consideration of the present environment in which the species and critical habitat exists, as well as the environment that will exist when the action is completed, in terms of the totality of factors affecting the species and habitat.

The following factors form the new baseline on which the impacts of another right whale injury or mortality, including a potential vessel strike by the Coast Guard, must be evaluated.

- The combined total of nine mortalities in the twelve months prior to issuance of this Biological Opinion is the primary change in knowledge about what is happening in the population and describes significant human induced mortality.
- The possibility, while not yet fully analyzed, that the right whale population may be experiencing an actual population decline.

The baseline also includes the following factors considered in the September 1995 Biological Opinion:

- The 'potential biological removal' figure and the extremely small population size;

- The lack of any measurable recovery progress for this species; and
- The cumulative sources of human induced mortality.

Human Induced Mortalities

Several Federal activities, other than Coast Guard operations, as well as non-Federal activities, are sources of human induced mortality that affect right whales. Combined with information on the status of the species, these factors form the baseline on which to evaluate the additional impact of Coast Guard vessel operations. Although the U.S. Navy has not formally consulted under section 7 concerning the effects of its operations on listed species, NMFS is including Navy activities in the baseline because those activities have significant potential to impact right whales.

Entanglement: While ship strikes account for 14 of the 42 observed mortalities since 1970, entanglement in fishing gear also contributes to the injury and mortality of right whales (Knowlton, pers. comm.). NMFS conducts section 7 consultation on all Federal fishery management plans and amendments before they are implemented. Although the cause of death may be attributed to other factors, many of the right whale carcasses examined showed evidence of present or past entanglement in fixed gear including pot and trap fisheries and gillnets. The observed entanglement rate for the right whale catalogue was 57 percent in 1990. At this time, three entanglements were considered mortalities, but Knowlton's updated summary removed one incident and included it in the serious injury category. While this reduces Kraus' estimated 4.3 percent fatality figure, the impact on the estimate is minimal because many observed serious injuries from entanglement have probably resulted in mortalities that have not yet been confirmed. Based on the new information presented in this biological opinion, NMFS will reinstitute consultation on all fishery actions which it approves, funds or permits that may result in injury or death to right whales.

The outcome of many observed entanglements where a disentanglement effort may have been unsuccessful, or the whale was spotted by a private vessel, is unknown and may further add to the number of mortalities (Knowlton, pers comm). The Coast Guard has provided vessel, aircraft, staff and technical support for disentanglement and other efforts (e.g. stranding) in all the Atlantic Coast Districts and they are an important component in the network aimed at reducing the impacts of fishing gear entanglements. Fishery management councils are increasingly aware of the need to protect endangered and threatened species and participate in the Recovery Plan Implementation Teams. The New England Fisheries Management Council, NMFS, and the New England Recovery Plan Implementation Team are working together to implement measures aimed at fixed gear to protect right whales through framework adjustments to the appropriate fishery

management plan in the Great South Channel and Cape Cod Bay critical habitat.

Also, NMFS is proposing to revise its List of Fisheries issued under the provisions of the Marine Mammal Protection Act to combine inshore and offshore lobster fisheries along the East Coast into one fishery and to designate it as a Category I fishery for 1997. The classification criteria consists of a two-tiered, stock-specific approach that first addresses the total impact of all fisheries on each marine mammal stock and then addresses the impact of individual fisheries on each stock. This approach is based on the rate, in numbers of animals per year, of serious injuries and mortalities due to commercial fishing relative to the potential biological removal (PBR) level for each marine mammal stock. When a fishery is listed as Category I it means that the annual mortality and serious injury of a marine mammal stock in a given fishery is greater than or equal to 50 percent of the PBR level. Fishers participating in Category I fisheries must be registered under the MMPA, report all incidental mortality and injury of marine mammals while commercial fishing to NMFS, and are required to accommodate an observer on board their vessels, if requested.

Aquaculture: This is a growing industry in the western north Atlantic and the number of proposals for all kinds of culturing in the marine environment is increasing. Many projects have complicated and massive structural components that present a hazard to whales similar to fishing gear. This is particularly true in Cape Cod Bay, which is right whale critical habitat and also has good potential for culturing shellfish. Not only do aquaculture operations in critical habitat present an entanglement hazard, but the impact of these operations on the plankton dynamics of these areas that are critical to right whales are currently unknown. NMFS consulted under section 7 of the ESA on a limited project scheduled to begin soon in Cape Cod Bay. Consultation resulted in a reduction in the number of potential entanglement components as well as requirements for further investigation to determine if any impacts to habitat are occurring.

Vessel and Aircraft Interactions: NMFS is preparing a proposed rule that is designed to reduce vessel interactions and behavioral disturbances to right whales in the Atlantic Ocean by prohibiting close approaches by vessels, aircraft and other objects. It is expected to be similar to the rule promulgated in 1987 by NMFS for approaching humpback whales in Hawaiian waters which NMFS believes has been successful in preventing serious injury and mortality to humpback whales in those waters.

Dredging Operations: Dredging projects add to the potential for vessel strikes and disruption of habitat. During calving season in the southeast, Army Corps of Engineers dredges have agreed to reduce speed to a minimum, but other dredge vessels could still strike whales during transits when speeds are much greater than during actual dredging. Dredging can also harass whales by

causing them to change behavior or alter use of important areas and are yet another stressor on the population which NMFS considers when consulting on activities that may affect right whales.

Coast Guard Vessel and Aircraft Operations: The assessment of impacts of these operations is incorporated by reference in the September 1995 biological opinion. However, the impact of these operations on right whales has changed because of the new baseline for determining impacts to right whales. Although only two of the right whale mortalities in 1995-1996 can be directly related to a vessel collision, the large number of deaths in a short period of time must be considered in the context of the large number of Federal and non-Federal activities that have the potential to injure or kill right whales. Therefore, the significance of a potential vessel strike by the Coast Guard to the continued existence of the population has increased since the September 1995 biological opinion.

None of the 1996 right whale mortalities were attributed to Coast Guard vessels. The interaction that occurred on October 9 has been tentatively identified as a humpback whale and was outside areas of whale concentration areas or right whale critical habitat where the Coast Guard emphasized greatest whale protection guidance to their units. Although the collision occurred in the open ocean more than 20 nm from shore, it does not mean that the guidance currently in place has not been protective of right whales and reduced the potential for Coast Guard vessel interactions with right whales. However, whales can appear almost anywhere without warning, even with trained observers on board; therefore, the possibility remains that a Coast Guard vessel may strike another right whale in the future. To significantly reduce this possibility, the Coast Guard will need to implement additional protective measures.

The new information relating to the status of the right whale indicates that the potential impacts of Coast Guard operations may affect the species in a manner not previously considered in the original biological opinion. Given the worsened status of the right whale, the impacts of the Coast Guard operations identified in that opinion may have a greater adverse effect than previously analyzed.

NMFS also considers the activities of Federal agencies that contribute to the conservation and recovery of right whales. Coast Guard activities have been previously described. The Army Corps of Engineers also participates in Recovery Plan Implementation teams and coordinates vessel operations (including speed restrictions) during the calving season in the southeast. In the northeast, EPA has provided vessel support and also participates on the implementation team.

Population Estimate and PBR

The 1995 NMFS US Atlantic and Gulf of Mexico Marine Mammal Stock Assessment report (Blaylock et.al., 1995) estimates the present minimum size of the right whale population to be 295 animals. The Potential Biological Removal (PBR) for this species is set at 0.4 whales which was exceeded in 1995 and already exceeded for 1996. The Stock Assessment Reports and PBRs for all stocks are currently undergoing review and/or revision, but the PBR for right whales, if revised, is not expected to exceed the level set in 1995. Due to the extremely small population size, the lengthy calving interval, and other factors affecting population growth such as inbreeding depression, it is expected that each mortality will further inhibit recovery of this species. Despite 50 years of protection, it cannot be shown that this population has made any steps towards recovery.

E. Cumulative Effects

"Cumulative effects" are defined in 50 CFR §402.02 as those effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal activity subject to consultation. These are discussed in the 1995 Biological Opinion and are incorporated by reference. The cumulative effects of Federal activities combined with state and private activities complete the picture of all potential for human related injury and mortality to right whales.

Because private boaters and commercial shipping interests have far more vessels on the open ocean than the Coast Guard, there is a greater probability of these vessels impacting right whales. Although U.S. citizens are subject to the takings prohibition of section 9 of the ESA, it is more difficult to provide measures to prevent these interactions since these activities do not fall under a specific Federal agency. However, the interaction of these agencies with the public and industry may be instrumental in providing increased awareness of potential hazards and ways to reduce them. As a point of reference, shipping traffic in Massachusetts Bay is estimated at 1200 ship crossings per year, averaging three per day. More than 280 commercial vessels fish on Stellwagen bank alone. Sportfishing contributes more than 20 vessels per day from May to September. This is only a small fraction of the species' entire range where they are subjected to hazardous vessel traffic.

The effects of pollution on foraging habitat is poorly understood, but is less likely to be a problem for right whales as they are feeding at the bottom of the food chain. Contaminants are usually more of a problem after they have bioaccumulated in prey higher up the food chain. Impacts from pollution sources such as feed supplied to cultured fish could impact plankton resources, but the extent is currently unknown.

Some of the impacts from state activities promote recovery and protection of right whales. The Commonwealth of Massachusetts has an approach distance regulation for state waters which requires boaters to maintain a distance greater than 500 yds from a right whale. On completion of an ESA Section 6 Cooperative Agreement, the Massachusetts plans to work with NMFS to answer some of the questions concerning plankton dynamics in Cape Cod Bay and the impacts of various activities on this resource. Georgia and South Carolina are active members of stranding networks supported through Section 6 Cooperative Agreements. The Atlantic States Marine Fisheries Commission plans to incorporate protected species concerns into their fishery management planning process to deal with the entanglement issue.

F. Conclusion

Based on new information that may indicate a change in the current status of the right whale population, and taking into account cumulative effects, NMFS concludes that continued vessel and aircraft operations by the US Coast Guard may result in serious injury or mortality to the northern right whale, and that these activities are likely to jeopardize the continued existence of the species. This new information does not change the conclusion in the September 1995 opinion that vessel operations may adversely affect, but are not likely to jeopardize the continued existence or result in the destruction or adverse modification of critical habitat for other listed species considered in this consultation. Also, the proposed activities are not likely to result in the destruction or adverse modification of habitat designated as critical for right whales.

Given the precarious level of the most recent right whale population estimate (295 animals and a PBR of 0.4), mortality at the rate that occurred over the last 12 months, and the potential sources of future mortality, current Coast Guard vessel operations cannot continue without jeopardizing the continued existence of the population. Each new right whale death reduces the chance for survival and recovery of the species. It is likely that the new population estimate will show a declining, rather than a stable population.

The October 1995 vessel strike by the Coast Guard does not necessarily mean that recent operational changes directed at whale protection are not preventing some interactions. Several of the measures were not fully in place at that time and others have not had time to become fully effective at the District level. The conclusion in this biological opinion is based on the changes that are occurring in the environmental baseline for right whales including mortalities from all sources.

NMFS is providing the Coast Guard with a reasonable and prudent alternative, which if implemented fully and in a timely manner, significantly reduces the Coast Guard's potential to cause injury or mortality to a right whale and, therefore, avoids the likelihood of jeopardizing the continued existence of right

whales and would not violate section 7(a)(2) of the ESA. This alternative includes measures to mitigate the probability of a strike by the Coast Guard as well as measures to reduce the probability of a strike by other vessels. Also, it requires new measures to reduce the possibility of a strike in addition to those described as conservation recommendations in the September 1995 NMFS opinion to the Coast Guard.

6. Reinitiation of Consultation

Reinitiation of formal consultation is required if (1) the amount or extent of taking specified in the incidental take statement is exceeded (e.g. an endangered whale is struck or injured by a USCG vessel); (2) new information reveals effects of the action that may affect listed species or critical habitat (when designated) in a manner or to an extent not previously considered, (3) the identified action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the biological opinion (e.g., if the measures outlined in the proposed activity are not implemented or are modified in a manner that results in increased risks to endangered or threatened species); or (4) a new species is listed or critical habitat designated that may be affected by the identified action.

REASONABLE AND PRUDENT ALTERNATIVE

The regulations implementing Section 7 of the Endangered Species Act (50 CFR 402.14 specify that a 'jeopardy' biological opinion shall include reasonable and prudent alternatives, if any.' The following reasonable and prudent alternative must be taken to avoid the likelihood of jeopardizing the continued existence of the north Atlantic right whale. It can be implemented in a manner consistent with the scope of the Coast Guard's legal authority and jurisdiction, and is economically and technologically feasible. NMFS has discussed this alternative with the Coast Guard and has used the expertise of the Coast Guard in identifying the components of this alternative. NMFS concludes that implementing all the components of the reasonable and prudent alternative is necessary to ensure that continued long-term vessel and aircraft operations of U.S. Coast Guard are not likely to jeopardize the continued existence of the north Atlantic right whale.

Reasonable and Prudent Alternative: The U.S. Coast Guard must reduce significantly the possibility of vessel collisions with right whales, including those by non-Coast Guard vessels where the agency has the authority to act.

The following components of the Reasonable and Prudent Alternative are necessary to ensure that US Coast Guard vessel operations avoid striking whales to the maximum extent possible and that long-term operations are not likely to jeopardize the north Atlantic right whale:

1. All conservation recommendations from the September 1995 biological opinion that concern endangered whales must be implemented. Specifically, this includes all recommendations with the exception of Nos. 12 and 13 and the portion of No. 11 that concerns sea turtle sightings. Some recommendations identified in the 1995 opinion are modified by the provisions in this reasonable and prudent alternative, and must be implemented as modified. Progress on the actual effects of implementation must be determined, and a report provided to NMFS annually beginning with the first report due on January 1, 1997. The Coast Guard also must provide NMFS a schedule by September 30, 1996, for updating the guidance documents for the Fifth and Seventh Districts, expanding the training program, and qualifying all lookout personnel.
2. The Coast Guard must post dedicated lookouts during all transits, both emergency and non-emergency, that occur within 20 nm of shore in addition to posting lookouts during transits in all areas of whale concentrations and high use by right whales, including but not limited to critical habitat in Cape Cod Bay, the Great South Channel and in the calving grounds off the Georgia and Florida Coast and other special areas off Georgia and Florida recently recognized as right whale habitat (specifically, the area offshore and also to the south of currently designated critical habitat, east to the western wall of the Gulf Stream and

south to West Palm Beach). A "dedicated lookout" can be the person who is the regular posted lookout, but who has successfully completed the marine mammal training program described below and, while posted as a lookout, does not perform duties that would require leaving the lookout post unattended.

3. The Coast Guard must ensure that all dedicated lookouts have successfully completed the marine mammal training program which includes a field training section. The field training section must be conducted during the course of normal onboard duty to learn sighting and identification cues and common behavioral patterns of all species of endangered whales as they are encountered during operations. This program must also provide training on appropriate operation of vessels in the vicinity of whales. Although the current training program points out all the appropriate sources of information such as regulations and field guides, and slides are used to show the different species characteristics, it is difficult to actually apply such knowledge to any group of animals without the appropriate field experiences. Improving the current training program should help prevent most future potential interactions. The Coast Guard should standardize this requirement by making it part of Coast Guard qualification criteria for bridge watch standers. This component will not only help Coast Guardsmen observe whales so that they can be avoided, but it will also increase the effectiveness of the agency in whale watch enforcement actions and in providing disentanglement assistance.

4. The First, Fifth, and Seventh Districts must continue current activities in conjunction with the respective Recovery Plan Implementation Teams in New England and the Southeast to provide support for aerial surveys during periods of high use in the different districts, and if necessary, provide additional effort. Current areas and times include, but are not limited to, February through June for the Great South Channel and Cape Code Bay critical habitats and December through March for the southeast calving and nursery areas. Since no team is currently addressing the mid-Atlantic issues, vessel support for sighting must be increased when right whales are in the area.

5. The following guidance must be made effective as soon as practicable, but no later than August 15, 1996. Because vessel speed has been identified as a factor that if reduced could also reduce vessel collisions with right whales, all District guidance documents must be revised to clearly require use of the "slow safe speed" standard as reflected in the biological assessment and September 1995 biological opinion. While this is especially important during periods of low visibility, "slow safe speed" also must be used for all non-emergency transits when an endangered whale has been spotted as well as in designated critical habitat areas, high-use areas, migration routes, right whale concentration areas, or where new sightings have been made (e.g. offshore areas in the southeastern United States). If a right whale is spotted by a Coast Guard vessel, or a Coast Guard vessel is within 5 nm of a right whale that has been sighted in

the past 12 hours, non-emergency vessels must use "slowest safe speed" until the whale has had a chance to move away from the vessel. Greater vessel speeds may not prevent a collision. As new information becomes available, NMFS will inform the Coast Guard of additional areas where "slow safe speed" or "slowest safe speed" should be required. At this time, NMFS is not requiring the Coast Guard to define "slow safe speed" or "slowest safe speed" in terms of a specific speed in recognition of the differing engineering parameters required for each class of vessels and each situation. However, NMFS emphasizes that reducing vessel speed may be the most important factor to reduce vessel collisions with right whales.

6. In conjunction with other organizations, the Coast Guard must participate in investigating, testing and implementing technological solutions to prevent vessel strikes. However, the agencies must consider the impacts from the technology on the marine environment. For example, adding more sound to the ocean may be detrimental to other marine resources. The Coast Guard must report to NMFS the progress of these investigations by January 1, 1998. If significant progress has not been made towards investigating and implementing these solutions, NMFS may request reinitiation of consultation.

7. Effective immediately, the Coast Guard will adopt a policy during non-emergency operations of not approaching whales head-on and not approaching right whales within 500 yards and all other whales within 100 yards. NMFS will work with the Coast Guard to establish a detailed protocol regarding approaches to whales by January 1, 1997. Unless positively identified as another whale species, any large whale should be considered a suspected right whale especially if one has been recently sighted by the vessel, or if the vessel is in an area where right whales could be present. Obviously, if the Coast Guard is assisting in the rescue of an endangered whale, including right whales, or performing its duties to enforce the ESA and the MMPA, the recommended distance does not apply.

The following component of the reasonable and prudent alternative requires the Coast Guard to use its authorities to reduce the probability of vessel strikes by private vessel traffic.

Preventing vessel strikes by non-Coast Guard vessels may mitigate the impact of an unlikely, random vessel strike of a right whale by a Coast Guard vessel.

8. The Coast Guard must provide information to commercial and recreational vessel operators that is geared to avoiding collisions with endangered whales. It should include information to identify whales, critical habitat and other whale concentration and high-use areas, photos of what whales look like on the surface when vessel operators are most likely to encounter them, and regulations applicable to the protection of right whales. Also, it should include information about the whale's

highly endangered status and what the operator can do to avoid causing them harm. Operators must be instructed to report all collisions or sightings of dead right whales immediately. In addition to other public education and outreach endeavors, the Coast Guard will work with the two Federal agencies that maintain and publish the established publications commonly used by U.S. mariners for voyage planning purposes (i.e., the Coast Pilot and Sailing Directions) to ensure that these documents include information necessary to avoid vessel collisions with endangered whales. Depending on vessel size, most U.S. vessels will have one of these publications onboard. In addition, foreign flagged vessels transiting U.S. waters or operating in and out of U.S. ports carry these publications onboard. Progress on implementing this action should be reported to NMFS by January 1, 1997.

9. The Coast Guard must continue to coordinate with the Recovery Plan Implementation Teams to provide timely information on current locations of all endangered whales to commercial vessels coming into major ports in both the New England and Georgia/Florida areas designated as critical habitat. The Coast Guard must develop, in cooperation with NMFS, a plan to alert commercial traffic through port pilots, Captain's of the Port, Vessel Traffic Service (if available), who are aware of the expected arrival time of ships in the various ports and often their current location, and requesting them to relay this information to shippers. Improved methods of getting information to the vessels must be implemented. For the New England area (which includes the Great South Channel and Cape Cod Bay), the Coast Guard must develop with NMFS, such a plan by January 1, 1997 and implement it each year from mid-March through June. The Coast Guard must continue to participate in implementing the plan which has been developed for the Georgia/Florida critical habitat areas.

10. The Coast Guard published an interim rule June 26, 1996 (effective January 1, 1997), identifying which marine events require a permit from the Coast Guard, or only written notice, or neither. The Coast Guard must complete a section 7 consultation with NMFS before the final rule is issued. NMFS is concerned that events which currently require some Coast Guard oversight such as a permit or notification may be allowed to proceed without this oversight and, therefore, the new permit system may indirectly reduce protection for right whales and other listed species. In this regard, the Coast Guard must notify NMFS of any event that will take place in critical habitat and in areas of high-use or concentration for all listed species including right whales.

11. Under the International Maritime Organization, the Coast Guard shall work in conjunction with other agencies to designate critical habitat and high-use areas as Particularly Sensitive Areas (PSSA) or other special areas, and, under the International Maritime Organization, establish traffic routes that would avoid these areas.

Conservation Recommendations:

(1) Coast Guard should also participate or otherwise support related research efforts such as (a) right whale acoustic capabilities to gain a better understanding of why right whales appear unable to hear approaching vessels and which may in the future be used in the potential development of acoustic "alarms" to alert right whales to the presence of vessels; (b) support of satellite tracking studies to more accurately delineate areas where extra diligence and caution may be necessary will also reduce the potential for harm to the population; and (c) ship modeling studies that have produced preliminary results evaluating the physical forces from the shapes of various hull designs causing whales to become drawn into the propellers.

(2) The Coast Guard should investigate expanding NAVTEX to cover all areas of the Atlantic Coast. The present system is inadequate because it covers only approaches from the north and south, but not the east. It is our understanding that the Coast Guard has identified a location that may be feasible for this purpose.

INCIDENTAL TAKE STATEMENT

Section 7(b)(4) of the Endangered Species Act (ESA) requires that when a proposed agency action is found to be consistent with section 7(a)(2) of the ESA, and the proposed action may incidentally take individuals of listed species, NMFS will issue a statement that specifies the impact of any incidental taking of endangered or threatened species. It also states that reasonable and prudent measures, and terms and conditions to implement the measures, be provided that are necessary to minimize such impacts. Only incidental taking resulting from the agency action, including incidental takings caused by activities approved by the agency, that are identified in this statement and that comply with the specified reasonable and prudent alternatives, and terms and conditions, are exempt from the takings prohibition of section 9(a), pursuant to section 7(a) of the ESA.

There is no change from the Incidental Take Statement issued in the September 1995 biological opinion to the Coast Guard, and it is incorporated here by reference.

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