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

DEC | 7 1998

MEMORANDUM TO: Gary C. Matlock Director Office of Sustainable Fisheries

FROM: Hilda Diaz-Soltero Director Office of Protected Resources

SUBJECT: ESA Section 7 Consultation on Federal American Lobster Fishery Management Plan under the Magnuson-Stevens Fishery Conservation and Management Act with a new plan under the Atlantic Coastal Fisheries Cooperative Management Act GARFO-1998-00001

The attached biological opinion addresses the potential effects of Federal American Lobster fishery management plan under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) with a new plan under the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA), on threatened and endangered species pursuant to section 7 of the Endangered Species Act of 1973, as amended (ESA). This opinion concludes that the proposed federal American lobster fishery as conducted under the ACFCMA is not likely to jeopardize the continued existence of threatened or endangered species or designated critical habitat.

The biological opinion includes an Incidental Take Statement that provides the fishery with an exemption to the take prohibitions established in section 9 of the ESA. Please note that the reasonable and prudent measures identified in the Incidental Take Statement are non-discretionary and must be implemented for the section 9 exemption to apply. We need to be certain that the fishery is conducted in a way that complies with these measures and we look forward to working with you to ensure compliance with the Incidental Take Statement.

Finally, please note that consultation on the American lobster fishery must be reinitiated if the amount or extent of taking specified in the Incidental Take Statement is exceeded, or is



expected to be exceeded; new information reveals effects of the action that may affect listed species or critical habitat in a way not previously considered; the action is modified in a way that causes an effect to listed species that was not previously considered; or, a new species is listed or critical habitat is designated that may be affected by the action.

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Attachments

ENDANGERED SPECIES ACT SECTION 7 CONSULTATION BIOLOGICAL OPINION

Agency:	National Marine Fisheries Service
Activity:	Reinitiation of Consultation on the Federal American Lobster Fishery
Conducted by:	National Marine Fisheries Service Northeast Regional Office
Date Issued:	17 Dec 98
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INTRODUCTION

The National Marine Fisheries Service (NMFS) proposes to replace the current federal American lobster fishery management plan under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) with a new plan under the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA). The primary geographic area affected by this action includes Northeast and Mid-Atlantic waters of the United States Exclusive Economic Zone. In addition, territorial waters of Northeast and Mid-Atlantic states are affected through the regulation of activities of federal permit holders fishing in those areas.

This biological opinion is based on information provided in the Draft Environmental Impact Statement and Regulatory Impact Review for Federal Lobster Management Actions in the Exclusive Economic Zone (DEIS), the draft proposed rule under ACFCMA, entanglement data reported to NMFS since the last formal consultation, and other sources as noted. The administrative record for this consultation is on file in NMFS' Office of Protected Resources in Gloucester, Massachusetts.

CONSULTATION HISTORY

Consultation history on fishing activities under the MSFCMA federal American lobster fishery management plan (FMP) up through December 13, 1996, is included in the Biological Opinion issued on December 13, 1996, (NMFS 1996a) and is incorporated by reference. The 1996 biological opinion concluded that fishing activities conducted under the American Lobster FMP are likely to jeopardize the continued existence of the northern right whale and may affect but are not likely to jeopardize the continued existence of other endangered and threatened species of whales, sea turtles, or fish under NMFS jurisdiction or result in adverse modification of critical habitat.

The 1996 biological opinion included a reasonable and prudent alternative (RPA) designed to eliminate the threat of jeopardy to right whales. That alternative included restriction of the lobster pot fishery in the Great South Channel critical habitat area to reduce the chances of

entanglement in lobster pot gear. NMFS published emergency regulations implementing those restrictions under the Marine Mammal Protection Act (MMPA) on April 4, 1997. An informal consultation on the emergency regulations concluded, on March 24, 1997, that these measures would directly reduce the likelihood of entanglement and foster development of modified lobster pot gear that could be fished without jeopardizing the northern right whale. The second part of the alternative required NMFS to analyze fishing effort and whale distribution in order to avoid clumping fixed gear effort in high-risk/overlap areas and/or sensitive whale areas such as right whale critical habitat. This analysis has not yet been completed. Coordination with the states has begun to analyze fishing effort data, but models to predict shifts in effort have not yet been developed.

While the RPA was considered sufficient to remove the likelihood of jeopardizing the continued existence of the northern right whale in the short term, the biological opinion recommended an alternative RPA. The Atlantic Large Whale Take Reduction Plan (ALWTRP), developed by NMFS pursuant to the 1994 amendments to the MMPA, was expected to provide a more comprehensive plan for reducing the potential for take in the long term than was afforded by the RPA issued with the 1996 biological opinion. Specifically, the RPA noted that "NMFS will review the plan and initiate consultation under section 7 of the ESA on the proposed implementation.... If this plan is found to be sufficient to avoid jeopardy to the right whale, then NMFS may use the implementation of the plan as an alternative to the reasonable and prudent alternative outlined...."

A formal consultation on the ALWTRP culminated in a biological opinion issued on July 15, 1997 (NMFS 1997c). That 1997 biological opinion concluded that implementation of the ALWTRP and continued operation of fisheries conducted under the American Lobster FMP, Northeast Multispecies FMP, and southeast shark gillnet component of the Shark FMP may adversely affect but were not likely to jeopardize the continued existence of any listed species of whale or sea turtle under NMFS jurisdiction. Thus, NMFS effectively substituted the ALWTRP, which was implemented on November 15, 1997, for the RPA issued with the 1996 biological opinion, thereby removing the likelihood of jeopardy to the northern right whale from the proposed lobster fishing activities.

On March 1, 1998, NMFS published an interim final rule under the ACFCMA implementing restrictions on the non-trap sector of the federal lobster fishery. On January 14, 1998, an informal consultation concluded that the interim non-trap sector regulations did not change the basis for the determination in the 1996 biological opinion.

DESCRIPTION OF THE PROPOSED ACTION

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NMFS is proposing to transfer federal management authority for the American lobster fishery from the MSFCMA to section 804 of the ACFCMA. This transfer will be accomplished through the following three regulatory actions: (1) the final rule to withdraw the MSFCMA plan, (2) the proposed rule to implement the comprehensive new lobster FMP under the ACFCMA, and (3) the final rule implementing the ACFCMA regulations for the non-trap sector. The new federal plan will retain much of the current MSFCMA plan and add new elements designed to

complement the state regulations under Amendment 3 to the ASMFC plan (ASMFC 1997). Management measures in federal waters throughout the effort reduction period will be developed with consideration given to the compliance schedule required by the ASMFC Plan to meet the egg production goals (EPG) established in Amendment 3 of the CFMP, approved in December 1997. As with the MSFCMA, federal permit holders will be required to comply with the federal FMP even when fishing in state waters. Overall, the goal of federal management measures will be to implement regulations that are complementary to the ASMFC Plan while maintaining consistency with the national standards pursuant to section 301 of the MSFCMA.

The MSFCMA plan currently includes the following measures which will be incorporated into the new federal ACFCMA plan:

- prohibition on possession of berried or scrubbed lobsters;
- prohibition on possession of lobster meats, detached tails, claws or other parts of lobster;
- prohibition on possession of V-notched female lobsters;
- requirement for biodegradable "ghost" panel for traps;
- minimum gauge size of 3¹/₄ inches (6.26 cm);
- escape vents on traps;
- prohibition on possession at any time of more than 6 lobsters per person when aboard a party, charter, or dive vessel;
- gear required to be marked in order to identify the licensed individual;
- permit requirements for vessels, dealers and vessel operators;
- a prohibition on interstate or foreign commerce of lobster smaller than the Federal minimum size; and
- framework provisions to meet goals and objectives of the FMP.

The following new measures are proposed:

- initial effort reduction through trap limits for the inshore and offshore trap sectors;
- establishment of a stock-rebuilding time frame;
- adopting ASMFC recommendations for maximum trap size and increased vent-size;
- a maximum 5-inch carapace size in the Gulf of Maine;
- extension of the EEZ moratorium on new entrants through the stock rebuilding period;
- a trap tag program to be implemented on May 1, 1999;
- modifications to the interim final regulations for the non-trap fishery which were implemented March 1, 1998, to incorporate a prohibition on at-sea transfers, non-trap gear stowage requirements, and further clarification of the definition for a lobster fishing day; and
- division of the fishery into two zones in federal waters for management purposes to recognize the socioeconomic and resource differences between the nearshore EEZ and offshore EEZ fisheries. The zone separation would be delineated by the "Area 3" boundary line recommended in the ASMFC Plan.

The following discussion summarizes the major elements of the proposed federal American lobster fishery for the purposes of this biological opinion. A comprehensive discussion of lobster

fishery and background for the proposed action can be found in the March 17, 1998, DEIS (NMFS 1998a) for federal lobster management in the EEZ. The DEIS presented several alternatives although no preferred alternative was identified; the proposed plan represents a modification of alternatives presented in the DEIS.

Since 1978, NMFS has had a plan for American lobster under the MSFCMA which only regulates the U.S. Exclusive Economic Zone (EEZ) fishery and federal permit holders fishing in state waters. State-water fisheries are regulated under ASMFC Coastal Fishery Management Plans (CFMP) as implemented through regulations promulgated by individual states. In order to conserve the lobster resource as a whole, the New England Fishery Management Council (Council) planned to present recommendations for lobster effort management developed by the four regional effort management teams (EMT) under Amendment 5 to the MSFCMA Lobster FMP to the ASMFC for consideration in amending the Lobster CFMP. The recommendations would have required the support and cooperation of the ASMFC and its member states. The EMTs developed stock rebuilding plans according to the schedule required by Amendment 5, but the state representatives on the Council were not all willing to fully support the EMT recommendations. Therefore, the EMT recommendations were not considered by the ASMFC. In lieu of pursuing a Secretarial amendment for the EEZ fishery -- which would not do enough to conserve the lobster resource due to lack of direct jurisdiction over state-water fisheries -- NMFS chose to allow the ASMFC to develop management measures with the understanding that NMFS would withdraw the MSFCMA plan and replace it with complementary regulations under the ACFCMA. NMFS informed the ASMFC that this action could only be taken if the ASMFC plan contained management measures which sufficiently address the overfishing problem and other MSFCMA requirements.

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With regard to regulation of the lobster fishery in the EEZ, section 804(b) of the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA) states that "In the absence of an approved and implemented fishery management plan under the [MSFCMA], and after consultation with the appropriate Councils, the Secretary may implement regulations to govern fishing in the exclusive economic zone that are -- (A) necessary to support the effective implementation of a coastal fishery management plan; and (B) consistent with the national standards set forth in section 301 of the [MSFCMA]...."

The proposed rule will follow the area management system outlined in Amendment 3 to the ASMFC's plan. The ASMFC areas consist of 6 inshore areas and one offshore area. (See chart in Appendix A .) Each of these 6 areas has a lobster conservation management team (CMT) consisting of technical experts including representatives from the ASMFC, NMFS, appropriate states, and a group of ASMFC-appointed lobster industry representatives. The CMTs are responsible for developing effort reduction measures for review and approval by the ASMFC and NMFS.

Although the proposed rule fits within the scope of alternatives identified in the DEIS, the new plan will not identify trap reductions as the primary or default action beyond the first two years of the stock rebuilding period, although trap reduction measures could be considered as defaults. Therefore, the proposed rule does not currently contain a definite trap-reduction schedule. The

type of measure to reduce effort after Year 2 will be determined on an annual basis and may consist of measures other than trap reduction. Furthermore, different management areas can submit different effort reduction measures for conservation equivalency evaluation relative to the EPG. Thus, the basic framework proposed for 1999 consists of an initial cap of 1,000 traps for the nearshore fishery and 2,000 traps for the offshore fishery. For 2000, the nearshore fishery would have a reduction down to 800 traps, and the offshore fishery would have an 1,800-trap limit. Any of the conservation equivalent measures proposed by the CMTs must be approved by the ASMFC and then evaluated by NMFS relative to the lobster conservation goals.

For the remaining 5 plan years (2001 - 2005), effort would be reduced annually via mandatory adjustments to the plan. Effort reduction measures from the CMTs would be evaluated by NMFS. If the CMT measures would not result in sufficient effort reduction, default measures would be implemented by NMFS to meet the EPG for a given plan year. Specific default measures are not proposed at this time. Annual adjustments to the plan may include

- continued reductions in fishing effort through measures such as further trap reduction, gear specification restrictions, and/or time/area closures;
- increases in the minimum harvestable size; and/or
- other measures that might be identified in consultation with the Commission.

Incorporation of the Atlantic Large Whale Take Reduction Plan

Although the ALWTRP is not considered to be part of lobster management under either the MSFCMA or the proposed ACFCMA plan, it is addressed in the DEIS as part of cumulative effects on the lobster resource and lobster fishery. Because the ALWTRP has been adopted as the 1996 RPA for the lobster fishery, it is considered to be part of the scope of the continued operation of the fishery.

STATUS OF AFFECTED SPECIES

NMFS has determined that the action being considered in this biological opinion may affect the following species that are provided protection under the ESA

Endangered	
Blue whale	Balaenoptera musculus
Humpback whale	Megaptera novaeangliae
Fin whale	Balaenoptera physalus
Northern right whale	Eubalaena glacialis
Sei whale	Balaenoptera borealis
Sperm whale	Physeter catodon
Leatherback sea turtle	Dermochelys coriacea
Threatened	
Loggerhead sea turtle	Caretta caretta
Critical Habitat Designations	
Northern right whale	

Of the species expected to be present in the action area, only right, humpback, fin, blue, and sperm whales and leatherback and loggerhead sea turtles are known to become entangled in lobster pot gear. The species which interact with trawl and dredge gear targeting lobster are unknown. Rare historic records of takes of whales in trawl and dredge gear exist, but these gear types are most likely to interact with sea turtles.

Background information on the range-wide status of these species and a description of critical habitat can be found in numerous documents that include the March 23,1994, Biological Opinion on Amendment 5 to the lobster FMP (NMFS 1994), the December 13, 1996, reinitiation of that Biological Opinion (NMFS 1996a), recent sea turtle status documents (NMFS and USFWS 1995, USFWS 1997), Recovery Plans for the humpback whale (NMFS 1991a), right whale (NMFS 1991b), loggerhead sea turtle (NMFS and USFWS 1991) and leatherback sea turtle (NMFS and USFWS 1992) and the 1996 marine mammal stock assessment report (SAR) (Waring *et al.* 1997). Therefore, this section will focus on the establish baseline for the assessment of effects of the proposed action.

Northern Right Whale

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Since NMFS issued the 1996 Biological Opinion on the American lobster FMP, there has been significant discussion on attempts to determine the current status and trend of this very small population and to make valid recommendations on recovery requirements. As reported in the 1996 Biological Opinion, Knowlton *et al.* (1994) concluded, based on data from 1987 through 1992, that the northern right whale population was growing at a net annual rate of 2.5% (CV=0.12). This rate is also used in NMFS' marine mammal stock assessment reports (SARs, *e.g.*, Blaylock *et al.* 1995, Waring *et al.* 1997). Since then, the data used in Knowlton *et al.* (1994) have been re-evaluated, and new attempts to model the trends of the northern right whale population are in progress (Caswell and Brault, unpublished; Kraus 1997). A draft working paper prepared by Hain *et al.* (in prep.) examined the effects of survey effort on preliminary mortality estimates and suggested that it was unlikely that mortalities recorded during the 1990s represented a substantial increase over past years, *i.e.*, relative to the mortality rate incorporated into the calculation of the 2.5% net rate of increase.

Recognizing the precarious status of the right whale, the continued threats present in its coastal habitat throughout its range, and the uncertainty surrounding attempts to characterize population trends, the International Whaling Commission (IWC) held a special meeting of its Scientific Committee from March 19-25, 1998, in Cape Town, South Africa, to conduct a comprehensive assessment of right whales worldwide. The workshop's participants reviewed available information on the northern right whale, including Knowlton *et al.* (1994), Kraus (1997), and Caswell and Brault (unpublished.). After considering this information, the workshop attendees concluded that it is unclear whether the western North Atlantic stock of the northern right whale population is "declining, stationary or increasing, and [that] the best estimate of current population size is only 300 animals." Maintaining a conservative stance due to these uncertainties, participants concluded that the growth rate of this population "is both low and substantially less than that of the southern right whale populations" (IWC 1998).

Workshop participants expressed "considerable concern" in general for the status of the Western North Atlantic population. Based on recent (1993-1995) observations of near-failure of calf production, the relatively large number of human-induced mortalities, and an observed increase in the calving interval, it has been suggested that the slow but steady recovery rate published in Knowlton *et al.* (1994) may not be continuing. Workshop participants urgently recommended increased efforts to determine the trajectory of the northern right whale population, and NMFS' Northeast Fisheries Science Center has already begun to implement that recommendation. Therefore, until the new trend information is available, it is essential to remain diligent in efforts to control human-induced impacts to this population in order to avoid jeopardy from those activities. For the purposes of this Biological Opinion, NMFS will assume that the northern right whale population is declining until new estimates become available. Although this assumption is neither supported nor refuted by the best current scientific and commercial information, it is more protective of the northern right whale than alternative assumptions.

Recent mortality and human impacts

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Six right whale mortalities resulting from various or unknown causes were recorded in 1996. In addition to these mortalities, 2 reports of right whale entanglement in fishing gear were received during 1996. One, classified as a serious injury, was not relocated; the other was disentangled and was seen the following year with a calf. Preliminary data from 1997 indicates that one mortality occurred from natural or unknown causes, another mortality occurred due to a ship strike in the Bay of Fundy, and 8 entanglements were reported. Six of the entanglements were reported in Canadian waters and 2 in U.S. waters; it should be noted that the location of the entanglements are known for only two of the 1997 entanglement events (one in U.S. and one in Canadian waters), and one of the reports may represent a resighting of an earlier entanglement.

So far in 1998, two known mortalities have occurred, as evidenced by stranded carcasses. The first was the mortality of a calf due to natural causes, and the second was an adult (probable) male, for which cause of death has not yet been determined; because of the advance stage of decomposition of the animal, the cause of death is not likely to be determined. Two adult, female right whales were discovered in a weir off Grand Manan Island in the Bay of Fundy on July 12, 1998, and were released two days later; no residual injuries were reported. On July 24, 1998, the Disentanglement Team removed line from around the tail stock of a right whale which was originally seen entangled in the Bay of Fundy on August 26, 1997. This same whale, apparently debilitated from the earlier entanglement, became entangled in lobster pot gear twice in one week in Cape Cod Bay in September 1998. The gear from the latter two entanglements was completely removed, but line believed to be from the 1997 entanglement remains in the animal's mouth. On August 15, a right whale was observed entangled in the Gulf of St. Lawrence; the animal apparently freed itself of most of the gear, but it is unknown whether gear remains on the animal.

The IWC workshop recommended that the following activities be undertaken to reduce the adverse effects of entanglements in fishing gear :

- research into methods to reduce right whale entanglements in fishing gear,
- determination and monitoring of entanglement rates and the success of steps to reduce entanglement,

- modification of protective measures if shown to be insufficient through monitoring,
- establishment of disentanglement programs, and
- consideration of prohibition of any gear that might entangle right whales in high-use habitats, especially in calving, breeding or feeding areas, and sanctuaries.

New Information on Right Whale Entanglements in Lobster Pot Gear

Some time between June 18 and June 24, 1997, a northern right whale became entangled in the buoy line of an offshore lobster pot trawl set 104 miles northeast of Chatham, Massachusetts. The entangled whale was spotted by fishermen outside Chatham harbor on June 24 and partially disentangled that day by the Disentanglement Team. Because the whale was individually identified, right whale scientists in the Bay of Fundy were able to follow its movements several months later and determine that the whale had shed the remaining piece of line.

Prior to disentanglement, the line had made several deep cuts into the animal's upper right gum and through the bonnet callosity. The right front baleen was disrupted, with several plates protruding. Some bleeding from lacerations on the caudal peduncle and tail and a large laceration mid-back were observed. When the whale was sighted in late summer of 1997 in the Bay of Fundy, it exhibited heavy scarring on the peduncle and tail and a large scar mid-back which was infested with red cyamids. Despite this evidence, whale biologists who have studied documentation of the animal's external injuries and subsequent behavior are optimistic that it will survive.

As noted above, two entanglements (involving the same whale) in lobster pot gear occurred in Cape Cod Bay in September 1998; the actual date of entanglement is not known but is considered to be on or shortly before the dates when the whale was sighted entangled, September 12 and September 14. Both entanglements occurred in state waters in gear fished by state-only permit holders and are therefore not directly attributable to the federal fishery. No residual injuries were reported from these two events.

General life history information

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About half of the species' geographic range is within the action area for this consultation, which encompasses the U.S. EEZ from the Canadian border to the Virginia/North Carolina border. In the action area as a whole, right whales are present throughout most months of the year, but are most abundant between February and June. The species uses mid-Atlantic waters as a migratory pathway from the winter calving grounds off the coast of Florida to spring and summer nursery/feeding areas in the Gulf of Maine. NMFS designated right whale critical habitat on June 3, 1994, (59 FR 28793). Portions of the critical habitat within the action area include the waters of Cape Cod Bay and the Great South Channel off the coast of Massachusetts, where the species is concentrated at different times of the year. Whales are most abundant in Cape Cod Bay between February and April (Hamilton and Mayo 1990; Schevill *et al.* 1986; Watkins and Schevill 1982) and in the Great South Channel in May and June (Kenney *et al.* 1986, Payne *et al.* 1990). Therefore, whales are present in areas of concentrated lobster gear in the Gulf of Maine during most of the time they are present in northern waters. Right whales in the Gulf of Maine feed on zooplankton, primarily copepods, by skimming at or below the water's surface with open mouths (NMFS 1991a, Kenney *et al.* 1986, Murison and Gaskin 1989, Mayo and Marx 1990).

Humpback Whale

Since the 1996 Biological Opinion was issued, new information has become available on the status and trends of the humpback whale population, although there are still insufficient data to determine population trends for the Western North Atlantic stock (Waring *et al.* 1997). The current rate of increase of the North Atlantic humpback whale population has been estimated at 9.0% (CV=0.25) by Katona and Beard (1990) and at 6.5% by Barlow and Clapham (1997). The minimum population estimate for the North Atlantic humpback whale population is 4,848 animals, and the best estimate of abundance is 5,543 animals (CV=0.16; Waring *et al.* 1997). However, Palsboll *et al.* (1997) studied humpback whales through genetic markers to identify individual humpback whales in the North Atlantic Ocean. Using breeding ground samples from 1992-1993, Palsboll *et al.* (1997) estimated the North Atlantic humpback whale population at 4,894 (95% confidence interval 3,374-7,123) males and 2,804 females (95% confidence interval 1,776-4,463). The authors noted that this total of 7,698 whales is substantially higher than the most recent photographic-based estimate (above).

Recent mortality and human impacts

In 1996, 3 humpback whales were killed in collisions with vessels and at least 5 humpback whales were seriously injured by entanglement in the same year. At least 3 humpback whale entanglements were reported in 1997. Preliminary stranding records from January through December 1997 include 4 stranded/dead floating humpback whales in the Northeast Region (Maine - Virginia). As of October 14, 1998, at least 12 humpback whale entanglements resulting in injury or mortality and one injury from a vessel interaction have been reported. Three of the injured animals were completely disentangled, one partially disentangled, and another partially disentangled and later shed the remaining gear.

New Information on Humpback Whale Entanglements in Lobster Pot Gear

One of the 1998 reports includes a humpback whale that became entangled in the buoy line of a single lobster pot either on May 27 or during the previous week off Outer Cape Cod, Massachusetts. The buoy line was wrapped around the right lobe of the flukes with the buoy and pot still trailing. This entanglement was reported by a fisherman who stood by until the USCG and the Disentanglement Team arrived, and the whale was completely disentangled that evening. Residual injuries included fresh lacerations on the tail stock and flukes and a linear scar just behind the flippers which may have been from an earlier interaction.

General life history information

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About half of the species' geographic range is within the action area for this consultation. Humpback whales feed in the northwestern Atlantic during the summer months and migrate to calving and mating areas in the Caribbean. Five separate feeding areas are utilized in northern waters after their return; the Gulf of Maine, which is within the action area of this consultation, is one of those feeding areas. As with right whales, humpback whales use the Mid-Atlantic as a migratory pathway. Since 1989, observations of juvenile humpbacks in that area have been increasing during the winter months, peaking January through March (Swingle *et al.*, 1993). Biologists theorize that non-reproductive animals may be establishing a winter feeding in the Mid-Atlantic since they are not participating in reproductive behavior in the Caribbean. Humpbacks are more widely distributed in the action area than right whales. They feed on a number of species of small schooling fishes, particularly sand lance and Atlantic herring, by targeting fish schools and filtering large amounts of water for the associated prey.

Fin Whale

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Hain *et al.* (1992) estimated that about 5,000 fin whales inhabit the northeastern United States continental shelf waters. Shipboard surveys of the northern Gulf of Maine and lower Bay of Fundy targeting harbor porpoise for abundance estimation provided an imprecise estimate of 2,700 (CV=0.59) fin whales (Waring *et al.* 1997).

Recent mortality and human impacts

Of 18 fin whale mortality records collected between 1991 and 1995, four mortalities were associated with vessel interactions, although the proximal cause of mortality was not known. In 1996, three reports of ship strikes were received, although only one death was confirmed to result from these incidents. One entanglement report was received in 1996.

At least five reports of entangled fin whales were received by NMFS in 1997. Four fin whales were reported as having stranded in the period from January 1, 1997, to January 1, 1998, in the Northeast Region; the cause of death was not determined for these animals. One ship strike mortality has been documented thus far in 1998 in the Virginia-North Carolina border area. One entanglement mortality was reported in September 1998.

New Information on Fin Whale Entanglements in Lobster Pot Gear

On July 1, 1997, the Disentanglement Team received a report of an entangled fin whale east of the northeast corner of Stellwagen Bank from a tuna spotter pilot working the area. The whale was fully disentangled the same day, and the gear was identified as lobster pot trawl gear which had been set off Massachusetts. No tissue damage was observed on this animal although the opportunity to make such observations was limited because the disentanglement occurred quickly and easily. The disentanglement team reported that the whale appeared to be in good health.

General life history information

The fin whale is ubiquitous in the North Atlantic and occurs from the Gulf of Mexico and Mediterranean Sea northward to the edges of the arctic ice pack (NMFS 1998c). The overall pattern of fin whale movement is complex, consisting of a less obvious north-south pattern of migration than that of right and humpback whales. Based on acoustic recordings from hydrophone arrays, however, Clark (1995) reported a general southward "flow pattern" of fin whales in the fall from the Labrador-Newfoundland region, south past Bermuda, and into the West Indies. The overall distribution may be based on prey availability, and fin whales are found throughout the action area for this consultation in most months of the year. This species preys opportunistically on both invertebrates and fish (Watkins *et al.* 1984). As with humpback whales, they feed by filtering large volumes of water for the associated prey. Fin whales are larger and faster than humpback and right whales and are less concentrated in nearshore environments.

Blue whale

Compared to the other species of large whales, relatively little is known about this species. The Recovery Plan for the Blue whale (NMFS 1998b) summarizes what is known about blue whale abundance in the western North Atlantic and concludes that the population probably numbers in the low hundreds. More than 320 individuals were photo-identified in the Gulf of St. Lawrence between 1979-1995 (Sears *et al.* 1990), while 352 individuals were catalogued from eastern Canada and New England through Autumn 1997.

Entanglement information

Waring *et al.* (1997), does not note any observations of fishery related mortality for blue whales. In 1987, concurrent with an unusual occurrence of blue whales inshore, one report was received of a blue whale seen entangled in lobster gear in the southern Gulf of Maine.

General life history information

Blue whale range in the North Atlantic extends from the subtropics to Baffin Bay and the Greenland Sea (Yochem and Leatherwood 1985). This species is highly mobile, spending little time in any one area. With the exception of years such as 1987, this species is likely to interact only with the offshore component of the lobster pot fishery. Large euphausiid crustaceans (*Thysanoessa inermis* and *Meganyctiphanes norvegica*) make up the bulk of the blue whale's diet. Fish and copepods may also be consumed but are not likely to be significant diet components (NMFS 1998b).

Sperm whale

The best abundance estimate that is currently available for the western North Atlantic sperm whale population is 2,698 (CV=0.67) animals (Waring *et al.* 1997). No information is available on population trends at this time.

Entanglement information

The only observed take of a sperm whale recorded by the NMFS Sea Sampling program occurred in the drift gillnet fishery for swordfish. Historical reports of sperm whale entanglement include records involving offshore lobster pot gear, heavy monofilament gear, and net from an unknown source.

General life history information

The sperm whale occurs throughout the U.S. EEZ on the continental shelf edge, over the continental slope, and into the mid-ocean regions. It is unclear whether the northwest Atlantic population is discrete from the northwestern or northeastern Atlantic populations (Waring *et al.* 1997). The marine mammal SAR also notes that they are distributed in a distinct seasonal cycle, concentrated east-northeast of Cape Hatteras in winter and shifting northward in spring when whales are found throughout the Mid-Atlantic Bight. Distribution extends further northward to areas north of George's Bank and the Northeast Channel region in summer and then south of New England in fall, back to the Mid-Atlantic Bight.

Loggerhead Sea Turtle

During 1996, a Turtle Expert Working Group (TEWG) met on several occasions and produced a report assessing the status of the loggerhead sea turtle population in the Western North Atlantic (WNA). Of significance is the conclusion that in the WNA, there are at least 4 loggerhead subpopulations separated at the nesting beach (TEWG 1998). This finding was based on analysis of mitochondrial DNA, which the turtle inherits from its mother. It is theorized that nesting assemblages represent distinct genetic entities, but further research is necessary to address the stock definition question. These nesting subpopulations include the following areas: northern North Carolina to northeast Florida, south Florida, the Florida Panhandle, and the Yucatan Peninsula. Genetic evidence has shown that loggerheads from Chesapeake Bay southward to Georgia are nearly equally divided in origin between South Florida and northern subpopulations. Work is currently ongoing in the Northwestern North Atlantic to collect samples which will provide information relative to turtles north of the Chesapeake, which is most of the action area for this consultation.

The loggerhead turtle was listed as "threatened" under the ESA on July 28, 1978, but is considered endangered by the World Conservation Union (IUCN) and under the Convention on International Trade in Endangered Species of Flora and Fauna (CITES). The significance of the results of the TEWG analysis is that the northern subpopulation may be experiencing a significant decline (2.5% - 3.2% for various beaches). A recovery goal of 12,800 nests has been assumed for the Northern Subpopulation, but current nests number around 6,200 (TEWG 1998). Since the number of nests have declined in the 1980's, the TEWG concluded that it is unlikely that this subpopulation will reach this goal. Considering this apparent decline as well as the lack of information on the subpopulation from which loggerheads in the WNA are derived, progress must continue to reduce the adverse effects of fishing and other human-induced mortality on this population.

The most recent 5-year ESA sea turtle status review (NMFS and USFWS 1995) reiterates the difficulty of obtaining detailed information on sea turtle population sizes and trends. Most long-term data is from the nesting beaches, and this is often complicated by the fact that they occupy extensive areas outside U.S. waters. The TEWG was unable to determine acceptable levels of mortality. This status review supports the conclusion of the TEWG that the northern subpopulation may be experiencing a decline and that inadequate information is available to assess whether its status has changed since the initial listing as threatened in 1978. The current recommendation from the 5-year review is to retain the threatened designation but note that further study is needed before the next status review is conducted.

Recent entanglement information

The STSSN does not show any loggerhead interactions with lobster gear since 1995. The 1994 Biological Opinion on the lobster fishery summarized sea turtle and suspected lobster gear interactions from 1983-1993 and noted only 3 loggerhead entanglements. Based on available data, this fishery does not represent a major source of human-induced serious injury or mortality of loggerhead sea turtles, but these records support that the fishery does occasionally take individuals of this species.

General life history information

Loggerhead sea turtles are found in a wide range of habitats throughout the temperate and tropical regions of the Atlantic. These include open ocean, continental shelves, bays, lagoons, and estuaries (NMFS and FWS 1995). In the action area of this consultation they are most common on the open ocean in the northern Gulf of Maine, particularly where associated with warmer water fronts formed from the Gulf Stream. The species is also found in entrances to bays and sounds and within bays and estuaries, particularly in the Mid-Atlantic. Since they are limited by water temperatures, sea turtles do not usually appear on the summer foraging grounds in the Gulf of Maine until June, but are found in Virginia as early as April. They remain in these areas until as late as November and December in some cases, but the large majority are leaving the Gulf of Maine by mid-September. Loggerheads are primarily benthic feeders, opportunistically foraging on crustaceans and mollusks. Under certain conditions they also feed on finfish, particularly if they are easy to catch (*e.g.*, caught in gillnets or inside pound nets where the fish are accessible to turtles).

Leatherback Sea Turtle

Nest counts are the only reliable population information available for leatherback turtles. Recent declines have been seen in the number of leatherbacks nesting worldwide (NMFS and USFWS 1995). The status review notes that it is unclear whether this observation is due to natural fluctuations or whether the population is at serious risk With regard to repercussions of these observations for the U.S. leatherback populations in general, it is unknown whether they are stable, increasing, or declining, but it is certain that some nesting populations (*e.g.*, St. John and St. Thomas, U.S. Virgin Islands) have been extirpated.

Recent entanglement information

The 1994 Biological Opinion on the lobster fishery summarized suspected interactions with the lobster fishery between 1983 and 1993 and noted 45 leatherbacks of which approximately 50% were dead. The STSSN for 1996 has records of five leatherback turtle interactions that indicate lobster gear. These occurred in Massachusetts, New York, Virginia, and Rhode Island. Three of those are confirmed lobster gear, the others noted unidentified "rope" around carapace or flippers. Three of those were dead, and two were released alive. Often the turtle released alive was able to come to the surface to breathe and released by the fisher, supporting the importance of education for reducing the threat of serious injury and mortality when turtles are taken. In addition, while STSSN data for 1997 is not complete, at least one entanglement resulting in mortality occurred in Massachusetts waters.

General life history information

The leatherback is the largest living turtle and ranges farther than any other sea turtle species, exhibiting broad thermal tolerances (NMFS and USFWS 1995). Leatherback turtles feed primarily on cnidarians (medusae, siphonophores) and tunicates (salps, pyrosomas) and are often found in association with jellyfish. These turtles are found throughout the action area of this consultation and, while predominantly pelagic, they occur annually in places such as Cape Cod Bay and Narragansett Bay during certain times of the year, particularly the Fall. Of the turtle species common to the action area, leatherback turtles seem to be the most susceptible to

entanglement in lobster gear and longline gear. This susceptibility may be the result of attraction to gelatinous organisms and algae that collect on buoys and buoy lines at or near the surface.

ENVIRONMENTAL BASELINE

Environmental baselines for biological opinions include the past and present impacts of all state, federal or private actions and other human activities in the action area, the anticipated impacts of all proposed federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of state or private actions that are contemporaneous with the consultation in process (50 CFR §402.02). The environmental baseline for this Biological Opinion includes the effects of several activities that affect the survival and recovery of threatened and endangered species in the action area. The activities that shape the environmental baseline in the action area of this consultation generally fall into the following three categories: vessel operations, fisheries, and recovery activities associated with reducing those impacts. Other environmental impacts include effects of discharges, dredging, ocean dumping, sonic activity, and aquaculture.

A. Federal Actions that have undergone formal or early section 7 Consultation. In the past four years, NMFS has undertaken several ESA section 7 consultations to address the effects of vessel operations and gear associated with federally-permitted fisheries on threatened and endangered species in the action area. Each of those consultations sought to develop ways of reducing the probability of adverse effects of the action on large whales and sea turtles. Similarly, recovery actions NMFS has initiated under both the MMPA and the ESA have promoted the development of ways to reduce the probability of large whales being taken in fisheries and by vessels.

(1) Vessel Operations

and

Potential adverse effects from federal vessel operations in the action area of this consultation include operations of the U.S. Navy (USN) and the U.S. Coast Guard (USCG), which maintain the largest federal vessel fleets, the Environmental Protection Agency, the National Oceanic and Atmospheric Administration (NOAA), and the Army Corps of Engineers (ACOE). NMFS has conducted formal consultations with the USCG, the USN (described below) and is currently in early phases of consultation of ACOE vessels, NMFS has consulted with the ACOE to provide recommended permit restrictions for operations of contract or private vessels around whales. Through the section 7 process, where applicable, NMFS has and will continue to establish conservation measures for all these agency vessel operations to avoid adverse effects to listed species. At the present time, however, they represent potential for some level of interaction. Refer to the Biological Opinions for the USCG (September 15, 1995, July 22, 1996, and June 8, 1998) and the USN (May 15, 1997) for detail on the scope of vessel operations for these agencies and conservation measures being implemented as standard operating procedures.

Since the USN consultation only covered operations out of Mayport, Florida, potential still remains for USN vessels to impact large whales when they are operating in other areas within the

range of these species. Similarly, operations of vessels by other federal agencies within the action area (NOAA, EPA, ACOE) may impact whales. However, the in-water activities of those agencies are limited in scope, as they operate a limited number of vessels or are engaged in research/operational activities that are unlikely to contribute a large amount of risk. Through the consultation process, conservation recommendations will be provided to reduce that potential even further.

(2) Federally Managed Fisheries

Impacts on threatened and endangered species from several types of fishing gear occur in the action area. Efforts to reduce adverse effects from commercial fisheries are addressed through both the MMPA take reduction planning process and the ESA section 7 process. Gillnet, longline, trawl gear, and pot fisheries have all been documented as interacting with either whales or sea turtles or both. Other gear types are known to impact whales as well. For all fisheries for which there is a federal fishery management plan (FMP) or for which any federal action is taken to manage that fishery, adverse effects have been evaluated under section 7.

Several formal consultations have been conducted on the following fisheries known to impact protected species: American Lobster (the subject of this consultation), Northeast Multispecies, Atlantic Pelagic Swordfish/Tuna/Shark, and Summer Flounder/Scup/Black Sea Bass fisheries. These consultations are summarized below; for more detailed information, refer to the respective Biological Opinions.

The Northeast Multispecies Sink Gillnet Fishery is one of the other major fisheries in the action area of this consultation that is known to entangle whales and sea turtles. This fishery has historically occurred along the northern portion of the action area for this Biological Opinion from the periphery of the Gulf of Maine to Rhode Island in water to 60 fathoms. In recent years, more of the effort in this fishery has occurred in offshore waters and into the Mid-Atlantic. Participation in this fishery declined from 399 to 341 permit holders in 1993 and is expected to continue to decline as further groundfish conservation measures are implemented. The fishery operates throughout the year with peaks in the Spring and from October through February. Data indicate that gear used in this fishery has seriously injured northern right whales, humpback whales, fin whales, and loggerhead and leatherback sea turtles. Waring et al. (1997) reports that 17 serious injuries or mortalities of humpback whales from 1991 to 1996 were fishery interactions (not necessarily multispecies gear), the majority of which indicated some kind of monofilament like that used in the multispecies fishery. It is often difficult to assess gear found on stranded animals or observed at sea and assign it to a specific fishery. Consequently, the total level of interaction between whales and fisheries cannot be determined through extrapolation from entanglement reports.

Different components of the *Atlantic Pelagic Fishery for swordfish/tuna/shark* in the EEZ have occurred within the action area for this Biological Opinion. Historically, gear used in this fishery has resulted in the take (in the driftnet portion of the fishery) of 5 endangered whales between 1986 and 1995 (1 northern right whale, 2 humpback whales, and two sperm whales). The right whale was previously entangled in lobster gear, and NMFS has determined that the driftnet entanglement was a non-serious injury since the whale was successfully disentangled from that

gear. Sea turtles are entangled in both the longline and driftnet portions of the fishery. Out of 155 driftnet sets in 1995, 34 loggerheads, 27 leatherbacks, and 1 Kemp's ridley were observed taken (20 turtles were dead). Out of 98 driftnet sets in 1996, 7 turtles were observed taken. Bycatch estimates from the observations of takes in the longline fishery number in the thousands, and significant efforts are underway to evaluate gear and fishing practice modifications that will decrease the number of interactions.

NMFS has not determined which bycatch reduction measures will be implemented for this fishery. The driftnet portion of the fishery was prohibited during an emergency closure that began in December 1996, extended through May 31, and was subsequently extended for another six months. Therefore, the fishery did not operate between December 1996 and July 31, 1998. An extensive environmental assessment has been prepared to evaluate this fishery from both a fisheries and protected species perspective to identify measures that will be implemented for the longline and driftnet fisheries. The northeast swordfish driftnet segment was reopened on August 1, 1998. A proposed rule to implement a comprehensive FMP for the entire pelagic fishery is expected in late 1998 or early 1999.

The Summer Flounder, Scup and Black Sea Bass fisheries are known to interact with sea turtles. While not documented, the gillnet portion of this fishery could entangle endangered whales, particularly humpback whales. Significant measures have been developed to reduce the take of sea turtles in summer flounder trawls and trawls that meet the definition of a summer flounder trawl (which would include fisheries for other species like scup and black sea bass) by requiring Turtle Excluder Devices (TED) in nets in the area of greatest bycatch off the North Carolina coast. NMFS is considering a more geographically inclusive regulation to require TEDs in trawl fisheries that overlap with sea turtle distribution to reduce the impact from this fishery. Developmental work is also ongoing for a TED that will work in the flynets used in the weakfish fisheries. These fisheries are subject to the requirements of the ALWTRP for gillnets in the Mid-Atlantic.

On November 15, 1997, NMFS implemented the interim final rule for the *Atlantic Large Whale Take Reduction Plan*. This plan is designed to reduce the rate of serious injury and mortality of right, humpback, fin, and minke whales incidental to the Northeast sink gillnet, lobster pot, Southeast shark gillnet, and Mid-Atlantic gillnet fisheries to acceptable removal levels as defined in the MMPA. A section 7 consultation was conducted on this plan -- and on the operation of the four fisheries regulated by the plan -- and concluded, with a Biological Opinion issued on July 15, 1997, that the implementation of the ALWTRP and continued operation of these fisheries may adversely affect, but is not likely to jeopardize the continued existence of any listed species of large whales or sea turtles under NMFS jurisdiction. The primary take reduction measures of the plan include closures and modification of fishing gear and practices to reduce the adverse effects of entanglement.

B. State or private actions

(1) Private and Commercial Vessels

Private and commercial vessels operate in the action area of this consultation and also have the potential to interact with whales and sea turtles. For example, shipping traffic in Massachusetts

Bay is estimated at 1,200 ship crossings per year with an average of 3 per day. More than 280 commercial fishing vessels fish on Stellwagen Bank in the Gulf of Maine, and sportfishing contributes more than 20 vessels per day from May to September. Similar traffic may exist in many other areas within the scope of this consultation which overlap whale high-use areas. The invention and popularization of new technology resulting in high speed catamarans for ferry services and whale watch vessels operating in congested coastal areas contributes to the potential for adverse effects from privately-operated vessels in the environmental baseline.

In addition to commercial traffic and recreational pursuits, private vessels participate in high speed marine events concentrated in the southeastern U.S. that are a particular threat to sea turtles. The magnitude of these marine events is not currently known. NMFS and the USCG are in early consultation on these events, but a thorough analysis has not been completed. The STSSN also reports many records of vessel interaction (propeller injury) with sea turtles off the New Jersey coast.

(2) State-Managed Fisheries

Very little is known about the level of take in fisheries that operate strictly in state waters. In addition, depending on the fishery in question, many state permit holders also hold federal licenses; therefore, section 7 consultations on federal action in those fisheries address some state-water activity. Impacts of state fisheries on endangered whales are addressed as appropriate through the MMPA take reduction planning process. NMFS is actively participating in a cooperative effort with ASMFC to standardize and/or implement programs to collect information on level of effort and bycatch in state fisheries. When this information becomes available, it can be used to refine take reduction plan measures in state waters. With regard to whale entanglements, vessel identification is occasionally recovered from gear removed from entangled animals. With this information, it is possible to determine whether the gear was deployed by a federal or state permit holder and whether the vessel was fishing in federal or state waters. Thus far in 1998, 3 entanglements of humpback whales in state-water fisheries have been documented.

In 1998, East Coast states from Maine through North Carolina began implementing regulations pursuant to the Year 1 requirements of *Amendment 3 to the Atlantic States Marine Fisheries Commission's Coastal Fishery Management Plan for American Lobster* (ASMFC 1997). The proposed federal ACFCMA plan is designed to be complementary to the ASMFC plan, and the two plans are largely similar in structure. Regulations will be geared toward reducing lobster fishing effort by 2005 to reverse the overfished status of the resource. States in the 6 coastal areas must implement regulations according to a compliance schedule established in Amendment 3. Effort reduction measures will be similar to those proposed in the federal ACFCMA plan. Several states have implemented trap caps for 1998. Further trap limits, which the compliance schedule requires for Area 1 and the Outer Cape Lobster Management Area in 1999, will generate some localized risk reduction program, the entanglement risk could be substantially reduced overall. As the definition of the fishery in the MMPA includes state water effort, vessels fishing in state waters will be required to comply with MMPA take reduction plan regulations designed to reduce entanglement risk to whales.

Early in 1997, the *Commonwealth of Massachusetts* implemented restrictions on lobster pot gear in the state water portion of the Cape Cod Bay critical habitat during the January 1 - May 15 period to reduce the impact of the fishery on northern right whales. The regulations were revised prior to the 1998 season (Appendix B). State regulations impact state permit holders who also hold federal permits, although effects would be similar to those resulting from federal regulations during the January 1 - May 15 period. Massachusetts has also implemented Winter/Spring gillnet restrictions similar to those in the ALWTRP and the MSFCMA for the purpose of right whale and/or harbor porpoise conservation.

C. Conservation and Recovery Actions Affecting the Environmental Baseline

A number of activities are in progress that ameliorate some of the potential threat from the aforementioned activities. Education and outreach are considered one of the primary tools to reduce the threat of impact from private and commercial vessels. The USCG has provided education to mariners on whale protection measures and uses their programs -- such as radio broadcasts and notice to mariner publications -- to alert the public to potential whale concentration areas. The USCG is also participating in international activities (discussed below) to decrease the potential for commercial ships to strike a whale. In addition, outreach efforts under the ALWTRP for fishermen are also increasing awareness and fostering a conservation ethic among fishermen that is expected in the long run to help reduce the adverse effects of vessel operations on threatened and endangered species in the action area.

In addition to the ESA measures for federal activities mentioned in the previous section, numerous recovery activities are being implemented to decrease the level of adverse effects of private and commercial vessels on the species in the action area and during the time period of this consultation. These include the early warning system (EWS), other activities recommended by the Northeast Recovery Plan Implementation Team for the Right and Humpback Whale Recovery Plans (NEIT) and Southeast Recovery Plan Implementation Team for the Right Whale Recovery Plan (SEIT), and NMFS regulations.

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The Northeast Early Warning System: Under the ESA, NMFS has the ability to impose emergency regulations which may be used to protect unusual congregations of right whales. Through a fax-on-demand system, fishermen can obtain EWS sighting reports and, in some cases, can make necessary adjustments in fishing practices to decrease the potential for entanglements. The Commonwealth of Massachusetts was a key collaborator in the 1996-1997 EWS effort and developed a plan to expand the effort during the 1997-1998 season. The USCG has played a key role in this effort all along, providing both air and sea support, and their continued cooperation is expected throughout. The State of Maine and Canada Department of Fisheries and Oceans have expressed interest in conducting this type of EWS along their coastal waters. It is expected that other potential sources of sightings such as the U.S. Navy may contribute to this effort following NMFS' commitment to support the EWS over the long term. The NMFS Maine ALWTRP Coordinator is also working with local aquaria to collect whale sightings from fishing vessels in the Gulf of Maine. This cooperation will increase the chances that this program will avoid potential adverse effects to threatened and endangered species.

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In order to address the known adverse effects to right and humpback whales described in the Recovery Plans, NMFS established the NEIT. The Recovery Plans describe steps to reduce the adverse effects of human activities to levels that will allow the two species to recover and rank the various recovery actions in order of importance. The NEIT provides advice to the various federal and state agencies or private entities on achieving these national goals within the Northeast Region. The NEIT agreed to focus on habitat and vessel related issues and rely on the take reduction planning process under the MMPA for reducing takes in commercial fisheries.

As part of NEIT activities, a Ship Strike Workshop was held in December 1996 to inform the shipping community of their need to participate in efforts to reduce the adverse effects of commercial vessel traffic on northern right whales. The workshop summarized current research efforts using new shipboard and moored technologies as deterrents, and a report was given on ship design studies currently being conducted by the New England Aquarium and Massachusetts Institute of Technology. This workshop increased awareness among the shipping community and has further contributed to reducing the threat of ship strikes of right whales. In addition, a Cape Cod Canal Tide Chart that included information on critical habitat areas and the need for close watch during peak right whale activity was distributed widely to professional mariners and ships passing through the canal. A radio warning transmission was also transmitted by Canal traffic managers to vessels transiting the Canal during peak Northern right whale activity periods. Follow-up meetings were held with New England Port Authority and pilots to notify commercial ship traffic to keep a close watch during peak right whale movement periods. In response to current needs, the NEIT is reconfiguring its ship strike subcommittee to address these adverse effects on a more formal bases.

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As part of recovery actions aimed at reducing impacts related to vessels on right whales, NMFS published a proposed rule in August 1996 restricting vessel approach to right whales (61 FR 41116) to distances outside of 500 yards in order to minimize human-induced disturbance. The Recovery Plan for the Northern Right Whale identified disturbance as one of the principal human-related factors impeding right whale recovery (NMFS 1991b). Following public comment, NMFS published an interim final rule in February 1997 codifying the regulations. With certain exceptions, the rules prohibit both boats and aircraft from approaching any right whale closer than 500 yds. Exceptions to this rule are allowed when: (a) compliance would create an imminent and serious threat to a person, vessel, or aircraft; (b) a vessel is restricted in its ability to maneuver around the 500-yard perimeter of a whale; (c) a vessel is investigating or involved in the rescue of an entangled or injured right whale, or (d) the vessel is participating in a permitted activity, such as a research project. If a vessel operator finds that he or she has unknowingly approached a right whale by less than 500 yds, the rule requires the operator to steer a course away from the whale at a slow, safe speed. Exceptions are made for emergency situations and where certain authorizations are provided. In addition, all aircraft, except those involved in whale watching activities, are excepted from these approach regulations. The regulations are consistent with the Commonwealth of Massachusetts' approach regulations for right whales. These are expected to reduce the potential for vessel collisions in the environmental baseline.

In April 1998, the USCG submitted, on behalf of the United States, a proposal to the International Maritime Organization (IMO) requesting approval of a mandatory ship reporting system in two areas off the east coast of the United States. The USCG worked closely with NMFS and other agencies on technical aspects of the proposal The proposal was submitted to the IMO's Subcommittee on Safety and Navigation for consideration and submission to the Marine Safety Committee at IMO. The proposal likely will be approved by the IMO, and, if approved, the reporting system may be implemented as early as mid-1999. The USCG and NOAA will play important roles in helping implement the system.

In addition, efforts have been made or are underway to include precautionary measures and advisories to mariners on right whale critical habitat and the 500-yard approach rule in various navigational aids, including nautical charts, the Coast Pilot, Notice of Mariners, and Sailing Directions.

D. Other potential sources of impacts in the baseline.

Activities that may indirectly affect listed species in the action area of this consultation include discharges from wastewater systems, dredging, ocean dumping and disposal, and aquaculture. Effects from these activities are difficult to measure. Where possible, however, conservation actions are being implemented to monitor or study the effects of these activities on threatened and endangered species. For example, extensive monitoring is being required for a major discharge in Massachusetts Bay (Massachusetts Water Resources Authority) to detect any changes in habitat parameters, because it is located in close proximity to Massachusetts Bay. Close coordination is occurring through the section 7 process on both dredging and disposal sites to develop monitoring programs and ensure that vessel operators do not contribute to vessel-related impacts.

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NMFS and the USN have been working cooperatively to establish a policy for monitoring and managing *Acoustic Impacts from Anthropogenic Sound Sources* in the marine environment. Acoustic effects can include temporary or permanent injury, habitat exclusion, habituation, and disruption of other normal behavior patterns. It is expected that the policy on managing anthropogenic sound in the oceans will provide guidance for programs such as the use of acoustic deterrent devices in reducing marine mammal-fishery interactions and review of federal activities and permits for research involving acoustic activities. The Office of Naval Research hosted a meeting in March 1997 to develop scientific and technical background for use in policy preparation. NMFS hosted a workshop in September 1998 to gather technical information which will support development of new acoustic criteria.

Aquaculture operations do not generally occur in areas used by large numbers of whales, but some projects have begun in Cape Cod Bay Critical Habitat and in other inshore areas off the Massachusetts and New Hampshire coast. Acknowledging that the potential for adverse effects is currently unknown, NMFS is coordinating research to measure habitat related changes in Cape Cod Bay and is ensuring that these facilities do not contribute to the entanglement potential in the baseline through the section 7 process. Many applicants have agreed to alter the design of their facilities to minimize or eliminate the use of lines to the surface that may entangle whales and/or sea turtles. Also, NMFS is organizing a workshop to develop guidelines that minimize adverse effects to marine mammals and sea turtles from aquaculture operations.

The *Massachusetts Environmental Trust and Massachusetts Division of Marine Fisheries* have funded several projects to investigate fixed fishing gear and potential modifications to reduce the risk of entanglement to whales. These projects are an important complement to the NMFS research effort and have yielded valuable information on the entanglement problem. The Trust has also funded research on right whales in the Cape Cod Bay critical habitat area.

In summary, the potential for vessels and fisheries to adversely affect whales and sea turtles remains throughout the action area of this consultation. However, recovery actions have been undertaken as described since the 1996 Biological Opinion and continue to evolve. Although those actions have not been in place long enough for the northern right whale population to respond, those actions are expected to benefit the northern right whale in the foreseeable future. These actions should not only improve conditions for the northern right whale, they are expected to reduce sources of human-induced mortality to this endangered species.

Effects of the Action

This section of a Biological Opinion assesses the direct and indirect effects of the proposed action on threatened and endangered species or critical habitat, together with the effects of other activities that are interrelated or interdependent (50 CFR 402.02). Indirect effects are those that are caused later in time, but are still reasonably certain to occur. Interrelated actions are those that are part of a larger action and depend upon the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration (50 CFR 402.02).

Several documents have been prepared previously that are relevant to this assessment of the potential adverse effects of the proposed lobster management actions under ACFCMA on marine mammals and sea turtles. An assessment of impacts of the lobster fishery on endangered and threatened species of whales, sea turtles, and fish was presented in the draft supplemental environmental impact statement prepared by the NEFMC and subsequent NMFS Biological Opinion regarding Amendment 5 to the lobster FMP (NEFMC 1994 and NMFS 1994, respectively). Additional discussion was provided in the environmental assessment (EA) and Regulatory Impact Review prepared regarding the proposed rule to withdraw the federal lobster FMP (NMFS 1996b), the 1996 Biological Opinion on the lobster fishery (NMFS 1996a), the EA prepared for the emergency Marine Mammal Protection Act (MMPA) regulations restricting the lobster pot fishery in the northeast right whale critical habitat areas (NMFS 1997b), and the EA and subsequent Biological Opinion prepared for the Atlantic Large Whale Take Reduction Plan (NMFS 1997 a and c, respectively) interim final rule.

The effects of the MSFCMA measures that will be carried over into the ACFCMA plan were assessed in the 1994 consultation on Amendment 5. No new information on the effects of those measures on endangered and threatened species or critical habitat is available. Therefore, the

following discussion focuses on new measures and those Amendment 5 measures proposed to be modified by this action.

The proposed action contains measures applicable to the non-trap sector, the trap sector, and measures applicable to both sectors of the EEZ fishery. A complete list of these actions can be found in the description of the proposed action.

Non-trap sector

New measures proposed for the non-trap sector are not expected to impact endangered and threatened species or critical habitat. Therefore these measures do not change the basis of previous consultations on the lobster fishery.

Trap Sector

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The proposed plan contains many measures for the trap sector, most of which are not expected to have any measurable effect on endangered and threatened species or critical habitat. Several of the measures, however, may have either beneficial or detrimental effects. Benefits to protected species are likely to accrue from measures reducing the amount of gear in the water. The only measure currently proposed to limit gear would implement trap limits for Year 1 and Year 2 of the plan. An area-based trap reduction program could be considered as a default measure in the following plan years if no acceptable conservation equivalent measures are identified. Because a mandatory reporting system has not yet been implemented, neither the total number of traps fished in the EEZ nor the amount of actual trap reduction that will be achieved from this measure is known at this time. Consequently, the level of potential entanglement risk reduction cannot be quantified. Although many vessels may already be fishing fewer than the proposed limit, a reduction in the risk of entanglement is expected in areas where vessels are currently fishing more than the Year 1 limits. There is a possibility, however, that there will be localized increases in number of traps fished in any given plan year, including Year 1, if vessels which are now fishing fewer than the trap limit for their area elect to increase their number of traps up to the maximum allowed. However, even if trap limits are not implemented beyond Year 2, vessels will not be permitted to fish more than the Year 2 caps throughout the remainder of the stock rebuilding period.

A trap reduction proposal beginning with a cap in 1999 is expected from the Area 3 (offshore fishery) CMT prior to the issuance of the final rule implementing the NMFS lobster plan. In the event that this proposal is endorsed by the ASMFC and reviewed favorably by NMFS, any trap reduction contained in the new measures can be expected to reduce the entanglement risk represented by the offshore fishery. Although the Area 3 CMT or other area CMTs may recommend additional trap reduction in any of the plan years, the outcome is uncertain because there is no way to predict whether trap reduction will be chosen over other effort reduction measures such as gauge or vent size changes. Therefore, NMFS is taking the conservative position that no benefits to protected species from the proposed action can be assumed beyond that occurring from the initial trap limits.

The implementation of trap limits will be conducted through an individual trap tag system which would provide useful information for identifying and managing risks to cetaceans and turtles from the lobster pot fishery. The use of trap tags may increase compliance with trap limits, thereby increasing the potential effectiveness of those measures in reducing entanglement risk. The inclusion of a trap tag program is also likely to increase compliance with ALWTRP provisions, because gear inspected for compliance with lobster regulations must also be in compliance with ALWTRP regulations.

Measures Applicable to All Federal Lobster Permit Holders

YPA

The majority of universal measures proposed for the lobster plan are not likely to impact endangered and threatened species or critical habitat. Measures which may have an impact include area management and the extension of the MSFCMA permit moratorium.

Area management under the ACFCMA lobster plan will increase the complexity of protected species management relative to the lobster fishery. Because of the flexibility created by the area management system, there is a possibility that future section 7 consultations will have different conclusions for each of the 7 areas. In addition, adverse effects may occur along area boundaries, particularly with regard to measures which regulate the density and distribution of traps. The most significant impact might occur if one area is closed for effort control while adjacent areas are open. Under the area management system, there is a possibility that some areas will have trap reduction programs beyond Year 1 while others will not. The use of the Area 3 line to divide the nearshore and offshore components of the fishery may have an impact in some areas due to vessels moving offshore to take advantage of the higher trap limits allowed for the offshore fishery. Although there may be some initial movement of vessels between the nearshore and offshore areas, the use of the Area 3 line as a boundary is not expected to significantly impact protected species in most segments of the action area because the majority of nearshore vessels would not be equipped to fish offshore. In addition, any shift of effort to Area 3 would also be limited by the availability of the lobster resource in the nearshore waters of Area 3. However, there is potential for vessels that fish in areas such as the Outer Cape Lobster Management Area (OCLMA), where the Area 3 boundary is relatively close to shore, to declare into the offshore area in order to be able to fish with the larger number of traps. Thus there could be an increase in the concentration of lobster pot gear just outside the OCLMA area. This type of effort shift would increase the risk of entanglement for protected species migrating through the area, but it is not possible to accurately predict such effort shifts at this time. It will be important to monitor effort shifts along the entire Area 3 line to facilitate identification of increased entanglement risk.

The proposed extension of the moratorium of new entrants into the fishery from the current MSFCMA date of 1999 to the new ACFCMA date of 2005 will provide some limit to the potential for the increase in density of lobster pot gear and may provide a gradual reduction of lobster pot gear. A reduction in the amount of gear would be beneficial, but the effects are not expected to be significant with regard to entanglement risk reduction and cannot be quantified at this time. There may be a number of currently inactive permits which could be activated at any time or sold to new individuals wishing to enter the fishery. However, the activation of these

permits would be monitored on an annual basis and any associated fishing effort would be recorded when mandatory reporting is implemented. (Mandatory reporting is expected to be implemented as part of the comprehensive coast-wide Atlantic Coastal Cooperative Statistics Program, a joint state-federal monitoring program which is currently under development.)

In general, if situations arise where EEZ regulations under ACFCMA are more restrictive than regulations in state waters, vessels may shift effort to state waters, potentially increasing the entanglement risk in state waters. The magnitude of this potential effort shift cannot be predicted at this time but would be limited by the availability of the lobster resource and of fishing area not already utilized by vessels fishing in state waters. Although this consultation considers only the EEZ fishery, the definition of the lobster pot fishery under the MMPA includes state water effort. Therefore -- and regardless of effort shifts -- all fishing with lobster pot gear in both state and federal waters will continue to be regulated by the ALWTRP. Thus, any adverse effects to large whales occurring in state waters will be evaluated relative to ALWTRP goals, and adjustments to plan measures will be made as appropriate. In addition, when data becomes available on actual levels of trap reduction occurring in state waters under the ASMFC plan, this information will be evaluated relative to overall entanglement risk reduction under the ALWTRP.

Overall Effects of Continued Operation of the Federal Lobster Fishery

NMFS anticipates that takes of whales and sea turtles will continue to occur in the federal lobster fishery and that the lobster fishery will continue to be prosecuted in right whale critical habitat. After evaluating the effects of the lobster fishery on these resources, NMFS has issued an Incidental Take Statement (ITS) authorizing the annual take of 10 loggerhead or 4 leatherback turtles by injury or mortality. No take of endangered whales is currently authorized for the American lobster fishery because take of whales could not be authorized pursuant to the Marine Mammal Protection Act.

According to the best information available at this time, the incidental take allowance (ITA) for leatherback and loggerhead turtles has not been exceeded since the 1997 biological opinion. In addition, no new information is available at this time regarding effects of the lobster fishery in general on endangered and threatened species of sea turtles or on right whale critical habitat.

Since the 1997 biological opinion, entanglements of right and fin whales in lobster gear deployed by federally permitted vessels have occurred; therefore, the ITA for these species has been exceeded. A description of these events can be found in the species status discussion above. The 1997 biological opinion on the federal lobster fishery in the context of the ALWTRP concluded that implementation of the ALWTRP as a reasonable and prudent alternative to the unmodified operation, *i.e.*, the current management regime, of the federal lobster pot fishery removed the threat of jeopardy to the northern right whale and provided sufficient protection for the other endangered whale species. Information obtained during the course of this consultation, which considers the potential threat of jeopardy to all endangered whales represented by the fishery over the next 20 years, does not change the basis for that conclusion. A more detailed evaluation of the entanglements of endangered whales that occur during the implementation of the ALWTRP will be presented when consultation on the ALWTRP is reinitiated, including the



ongoing consultation on the final rule. The ALWTRP is designed to reduce the likelihood of serious injury or mortality of large whales resulting from entanglement to acceptable removal levels as defined in the MMPA by April 30, 2001. Some of the ALWTRP measures also benefit sea turtles and may benefit critical habitat.

Addressing Continuing Whale Entanglement Risks through the Atlantic Large Whale Take Reduction Plan

The ALWTRP represents the best efforts of a multi-disciplinary team working on developing gear modifications or alternative fishing practices that reduce the adverse effects of entanglement on whales in the Altnatic. If these measures are effective, they should significantly reduce the adverse effects of gear on northern right whales. NMFS published the interim final rule implementing the ALWTRP on July 22, 1997, and will continue to revise the plan until MMPA goals have been met. NMFS acknowledges that the development of gear solutions will be limited by current technology and the availability of resources necessary to develop new technology. In addition, progress toward solving the entanglement problem is dependent upon the cooperation of the fishing industry and/or other stakeholders through compliance with ALWTRP regulations, developing voluntary and non-regulatory measures, and developing and testing proposed modifications to gear and fishing practices. Even before the ALWTRP was implemented, NMFS began expanding the disentanglement program, outreach, monitoring, whale research, and gear research. Although these actions have not been in place long enough for the northern right whale population to respond, those actions are expected to benefit the northern right whale in the foreseeable future. These actions should not only improve conditions for the northern right whale, they are expected to reduce sources of human-induced mortality to this endangered species.

Throughout the consultation history on the lobster fishery, the potential for jeopardy has only been identified for the northern right whale. Although takes of right whales may continue to occur during the initial stages of ALWTRP implementation while effective gear solutions are being developed, the Disentanglement Program is expected to contribute significantly toward preventing entanglements from seriously injuring or killing right whales. The potential effectiveness of the disentanglement program and associated outreach efforts is illustrated in Appendix C, which contains documents mailed out by the Massachusetts Division of Marine Fisheries (DMF) to state permit holders. These documents include the entanglement hotline reporting flyer developed by the NMFS disentanglement contractor, a cover letter from Massachusetts DMF, and an article from the DMF newsletter describing the successful release of a northern right whale from offshore (Area 3) lobster pot gear in June of 1997. NMFS expects that sufficient progress in implementation of the ALWTRP will be made to avoid jeopardy altogether in the "long-term", i.e., over the next 20 years. This determination is based on the goal of reducing the number and/or likelihood of lethal takes (or "serious injury or mortality" under the MMPA), and that non-lethal takes (or "non-serious" injury under the MMPA) are not considered to contribute toward jeopardy. Thus the ALWTRP as a whole is considered to represent sufficient mitigation at the present time for the fishing activities which it regulates.

The interim final rule has been in effect since November 15, 1997, and the final rule is expected to be published in early 1999. Progress toward AWLTRP goals during the first stages of plan implementation will be reviewed in the final rule. NMFS held the annual review meeting of the Large Whale Gear Advisory Group on October 7-8, 1998, and the Atlantic Large Whale Take Reduction Team (TRT) meeting has been scheduled for February 1999. At this meeting, the TRT will review information on the efficacy of current plan provisions and recommend modifications to the plan as appropriate to meet take reduction goals.

CUMULATIVE EFFECTS

"Cumulative Effects", as defined in the ESA, are "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 action subject to consultation." Therefore, this section does not discuss the cumulative effects of federal actions since these actions undergo section 7 consultations. The Biological Opinion for Amendment 5 identified other cumulative impacts; that discussion is hereby incorporated by reference.

The Action Area for this consultation encompasses most of the western Atlantic Ocean along the coast of the United States. An innumerable number of State, tribal, or private actions that may affect threatened or endangered species within the Action Area may occur, although NMFS does not have information on those actions to include in this section of the Biological Opinion, with one exception. NMFS is aware of various initiatives to expand or establish high-speed watercraft service in the northwest Atlantic, including one service between Bar Harbor, Maine, and Nova Scotia with a vessel operating at higher speeds than established watercraft service. Although this proposal seems reasonably certain to occur, the amount of information available about the proposal is limited. These vessels' operations may adversely affect threatened and endangered whales and sea turtles, as discussed previously with private and commercial vessel traffic in the Action Area. NMFS will monitor this situation as it occurs. As certain elements of the ASMFC lobster plan are already in place, the effects of those state actions are discussed in the Environmental Baseline section.

CONCLUSION

201

After reviewing the best available information on the status of endangered and threatened species under NMFS jurisdiction, the environmental baseline for the action area, the effects of the action, and the cumulative effects, it is NMFS' biological opinion that the continued operation of the federal lobster fishery, with modification to reduce impacts of entanglement through the ALWTRP, may affect but is not likely to jeopardize the continued existence of the northern right whale, humpback whale, fin whale, blue whale, sperm whale, sei whale, leatherback sea turtle, and loggerhead sea turtle and is not likely to destroy or adversely modify critical habitat that has been designated for the northern right whale.

INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by NMFS for the exemption in section 7(0)(2) to apply. NMFS has a continuing duty to regulate the activity covered by this incidental take statement. If NMFS (1) fails to assume and implement the terms and conditions the protective coverage of section 7(0)(2) may lapse. In order to monitor the impact of incidental take, NMFS must report the progress of the action and its impact on the species to NMFS as specified in the incidental take statement. [50 CFR §402.14(i)(3)]

NMFS is not including an incidental take authorization for marine mammals at this time because the incidental take of marine mammals currently cannot be authorized under the provisions of section 101(a)(5) of the Marine Mammal Protection Act or its 1994 Amendments. Following issuance of such regulations or authorizations, NMFS may amend this Biological Opinion to include an incidental take allowance for marine mammals, as appropriate.

NMFS anticipates that the continued operation of the lobster fishery under current and anticipated management measures may result in the injury or mortality of loggerhead and leatherback sea turtles. In the accompanying Biological Opinion, NMFS has determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

The previous Incidental Take Allowance Statement for the 1996 Biological Opinion was based on known takes in the fishery through 1993 and was developed in relation to the anticipated level of effort at the time the 1994 biological opinion was written. Although the proposed action will reduce effort, effort overall has increased since 1993. However, no new information is available to suggest that the expected annual level of sea turtle take has changed. Therefore, the expected level of take (by injury or mortality) remains (10) loggerhead or four (4) leatherback turtles. However, NMFS is aware of the difficulties in assessing the actual extent of take in the lobster fishery. Therefore, the reasonable and prudent measures contain a number of recommendations aimed at improving that estimate which will enable more effective mitigation measures than are currently available to be developed in the future.

Reasonable and Prudent Measures

NMFS has determined that the following reasonable and prudent measures are necessary and appropriate to minimize impacts of incidental take of sea turtles:

Based on lack of adequate data with respect to sea turtle interactions with this fishery, NMFS must assemble a team composed of fishery management, science center, and protected resource staff, and the Conservation Management Teams (CMT) established for each of the 7 lobster management areas and convene a workgroup to address data needs, monitoring, and research on the take of leatherback and loggerhead sea turtles in the lobster fishery. This Team would provide recommendations on the following items:

- (a) Determine how to most appropriately monitor this fishery for sea turtle interactions. Current interactions are documented by anecdotal evidence and it has been suggested that traditional observer coverage in this fishery would have limited effectiveness.
- (b) Develop disentanglement response capabilities
 - 1. Evaluate current policy and provide permits as appropriate for prior authorization of appropriate parties to conduct sea turtle disentanglement.
 - 2. Develop guidance for disentanglement.
 - 3. Develop appropriate resuscitation techniques for leatherback sea turtles.
 - 4. Provide for consistent collection of entanglement data
 - 5. Establish awareness and encourage reporting of interactions with fishermen through public outreach to fishermen
- (c) Develop recommendations on necessary research to determine appropriate take reduction strategies for this fishery.

Terms and conditions:

201

In order to be exempt from the prohibitions of section 9 of the ESA, NMFS must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

- 1. The workgroup must be convened no later than June 30, 1999.
- Until such techniques new resuscitation techniques have been developed for leatherback sea turtles, the techniques for hard shell turtles detailed as provided in 50 CFR Part 227.72(e)(1)(i) must be forwarded to all permit holders by March 30, 1999. This mailing must include a letter that encourages voluntary reporting.

NMFS must provide adequate guidance such that any sea turtle incidentally taken will be handled with due care to prevent injury to live specimens, observed for activity, and returned to the water. Specifically, these measures include the following:

- a. Live animals must be handled with care and released as soon as possible without further injury.
- b. Animals are to be released when the vessel is in neutral and only in areas where they are unlikely to be recaptured or injured by vessels.
- c. Comatose sea turtles should be resuscitated according to the procedures set forth in 50 CFR 227.72 (e)(1)(i).
- d. Dead sea turtles may not be consumed, sold, landed, offloaded, transshipped or kept below deck, but must be released over the stern of the vessel.
- 3. Reports must be submitted by the Office of Inter-jurisdictional Fisheries annually to the NERO that includes all data on sea turtle bycatch in the lobster fishery, beginning September 1, 1999. For the workgroup to be convened in 1999, NMFS, Office of Inter-

jurisdictional Fisheries shall obtain an analysis all available data to determine the observed annual level of incidental take of sea turtles. NMFS, shall prepare a report analyzing existing data, discuss the feasibility of providing estimated levels of take by species, by gear, location, and month and discussing any statistical or other scientific shortcomings of those data for use in developing a monitoring plan.

- 4. A monitoring program, based on the workgroup's recommendations, must be implemented by January 1, 2000.
- 5. NMFS must incorporate a reporting mechanism of sea turtle takes based on the work group's recommendations. Reporting information must provide adequate identification guidance for sea turtles.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with NMFS the need for possible modification of the reasonable and prudent measures.

CONSERVATION RECOMMENDATIONS

20

In addition to section 7(a)(2), which requires agencies to ensure that proposed projects will not jeopardize the continued existence of listed species, section 7(a)(1) of the ESA places an additional responsibility on all federal agencies to "... utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species...." The conservation actions related to entanglement which were recommended in the Recovery Plans for the right and humpback whales are implemented in the Atlantic Large Whale Take Reduction Plan, which will also benefit other endangered whales. The following measures are recommended for sea turtles:

- 1. NMFS, in conjunction with the ASMFC or other appropriate regulatory authority, should encourage states to require fishermen to report sea turtle takes as bycatch in any mandatory state logbooks and should provide instructions on release. Reports should include a description of the animal's condition at the time of release.
- 2 A significant amount of ghost gear is generated in the lobster pot fishery. There is potential that this gear could adversely affect both sea turtles and their habitat. In order to minimize the risks associated with ghost gear, NMFS should assist the USCG in notifying all Atlantic fisheries permit holders of importance of bringing gear back to shore to be discarded properly. In conjunction with the USCG, fishery councils/commissions, and other appropriate parties, NMFS should review current regulations that concern fishing gear or fishing practices that may increase or decrease the amount of ghost gear to determine where action is necessary to minimize impacts of ghost gear. NMFS should assist the USCG in developing and implementing a program to encourage fishing industry and other marine operators to bring ghost gear in to port for

re-use and recycling. In order to maximize effectiveness of gear marking programs, NMFS should work with the USCG and fishery councils/commissions to develop and implement a lost gear reporting system to tie in with ghost gear program and consider incorporating this system into future revisions of the appropriate management plans.

In order to keep the Office of Protected Resources (F/PR3) informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, F/PR3 requests notification of the implementation of any conservation recommendations (notice should be directed to the Office Director, F/PR3 in Silver Spring, Maryland and the Assistant Regional Administrator for Protected Resources in Gloucester, Massachusetts).

REINITIATION-CLOSING STATEMENT

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This concludes formal consultation on the proposed action. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (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 (specifically, should results of monitoring and reporting effort included as part of the ALWTRP provide new information that the levels of take are higher than expected or new fishing methods or gear are developed that will eliminate existing threats to endangered whales, consultation should be reinitiated); (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, NMFS' Office of Sustainable Fisheries must immediately request reinitiation of formal consultation.

Because of the nature of this action, it is anticipated that consultation will be reinitiated annually as new management measures are developed. Each reinitiation will consider all aspects of the FMP.

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Appendix A

CHART DEPICTING AREAS FOR LOBSTER MANAGEMENT

Appendix B

COMMONWEALTH OF MASSACHUSETTS RIGHT WHALE

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PROTECTION MEASURES

Appendix C

EXAMPLE OF DISENTANGLEMENT OUTREACH

Appendix A

CHART DEPICTING AREAS FOR LOBSTER MANAGEMENT

Appendix C

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EXAMPLE OF DISENTANGLEMENT OUTREACH

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New England Whale Disentanglement Network

Emergency CCS HOTLINE: (800) 900-3622 Center for Coastal Studies: (508) 487-3622 for non-emergency calls

U.S. Coast Guard: VHF Ch. 16

Whales can become accidentally entangled in fishing gear and other man-made material. While rare, and often not immediately fatal, these entanglements can hinder the recovery of endangered whale populations. Since 1984 the private, non-profit Center for Coastal Studies (CCS) has coordinated a Network of experienced disentanglement teams as a service to whales and fishermen. This private Network has the necessary authorization from the National Marine Fisheries Service (NMFS) and the invaluable communications and logistical support of the U.S. Coast Guard (USCG). The speedy and accurate reporting of entangled whales by all boaters is essential to the process.

What to look for, what to do (and not do) and what to expect:

- Look for buoys and lines, moving or unusually clumped, near a whale.
- Determine type of whale (see reverse). If it is a right whale, remain at 500 yards unless authorized to move closer through the Network or USCG.
- Call (800) 900-3622 or relay through USCG (VHF16) if whale is entangled.
- <u>Please provide</u> the following: Position, species (or best description), behavior, description of gear and entanglement, and how to contact you.
- You may be requested to stand by the whale, on a voluntary basis. Depending on the situation, fishermen may be compensated for lost time.
- A vessel will be dispatched from the Network, USCG or Marine Patrol, whenever possible, in order to transport a team or to stand by.
- The team may attach a radio tag to locate the whale for future attempts if a disentanglement can not be conducted immediately (e.g., time or weather).
- Do not attempt to disentangle without NMFS authorization and instructions through the Network. Initial instincts of entering the water or cutting some of the gear are dangerous and ineffective. Large whales are powerful and unpredictable. Cutting lines close to the tail makes it very difficult to remove the remaining gear.

Keep this on your boat.

Sources of additional information: National Marine Fisheries Service (508-281-9328), Studds-Stellwagen Bank National Marine Sanctuary (508-747-1691), Massachusetts Division of Marine Fisheries (617-727-3193), and Maine Department of Marine Resources (207-633-9556)