Committee on Resources

Subcommittee on Fisheries Conservation, Wildlife and Oceans

Statement

Statement of John E. Reynolds, III, Ph.D.
Chairman, Marine Mammal Commission
before the
Subcommittee on Fisheries Conservation,
Wildlife and Oceans
House Resources Committee
6 April 2000

Thank you, Mr. Chairman and Members of the Committee. The Marine Mammal Commission is grateful for the opportunity to provide information and share its views on the status of efforts to develop and implement take reduction plans to reduce the incidental mortality and serious injury of marine mammals in commercial fishing operations as prescribed by the 1994 Marine Mammal Protection Act amendments. The Commission has been represented on two of the five take reduction teams established to date and has closely followed the development of the other take reduction plans. My comments today will focus principally on the effectiveness of the Atlantic Large Whale Take Reduction Plan and the Gulf of Maine Harbor Porpoise Take Reduction Plan, the plans developed by the take reduction teams on which a member of the Commission staff participates.

Current Requirements

The requirements pertaining to take reduction plans are set forth in section 118(f) of the Marine Mammal Protection Act. That provision requires the Secretary of Commerce to develop and implement take reduction plans to reduce the incidental taking of marine mammals from "strategic" marine mammal stocks by commercial fisheries. Such plans are required for all fisheries classified as frequently (Category I) or occasionally (Category II) killing or seriously injuring marine mammals from strategic stocks. Strategic stocks are defined in the Act as those (1) for which the level of human-caused mortality from fisheries and/or other causes exceeds the stock's potential biological removal level, (2) that are designated as depleted under the Marine Mammal Protection Act, or (3) that are listed or likely to be listed as endangered or threatened under the Endangered Species Act. The National Marine Fisheries Service has classified 6 U.S. fisheries as Category I fisheries and 26 as Category II fisheries. The immediate goal of each take reduction plan, as specified in section 118(f)(2), is to reduce incidental fishing-related mortality and serious injury to levels below the potential biological removal levels of the affected stocks within six months of plan implementation. The long-term goal is to reduce incidental fishery-related mortality and serious injury to levels approaching zero within five years of the plan's implementation.

To assist in the preparation of a take reduction plan, section 118(f)(6) requires that the Secretary of Commerce establish a take reduction team to develop a draft plan. Take reduction teams are to be composed of members representing all fisheries groups and gear types that incidentally take marine mammals from the stocks of concern, relevant federal and state agencies, regional fishery management councils, environmental

groups, academic and scientific organizations, and, when applicable, interstate fishery commissions and Alaska Native organizations. The time frame for developing a take reduction plan depends on the magnitude of fishery-related mortality and serious injury from the affected stocks.

For strategic stocks with fishery-related mortality and serious injury that exceed the stock's potential biological removal level, section 118(f)(7) requires that a take reduction team, once established, submit a draft take reduction plan to the Secretary within six months. The draft plan is to include recommended regulatory and voluntary measures for reducing fishery-related mortality and serious injury to less than the stock's potential biological removal level within six months of its implementation. Within 60 days of receiving a team's draft plan, the Secretary is required to publish it for public comment in the *Federal Register*, along with proposed implementing regulations and an explanation for any changes to the draft plan proposed by the Secretary. The comment period is not to exceed 90 days and, within 60 days of the close of the comment period, a final plan and accompanying regulations are to be adopted. After a plan is adopted, the take reduction team is to meet every six months, or at such other intervals as the Secretary deems necessary, to monitor plan implementation until its objectives have been met. For stocks with fishery-related mortality and serious injury that are less than the potential biological removal level, section 118(f)(8) allows a somewhat longer time frame for developing take reduction plans.

Section 118(f)(9) identifies the types of measures that may be adopted to implement take reduction plans. It authorizes regulatory measures to (1) limit incidental taking of marine mammals in fisheries by time or area, (2) require the use or encourage the development of alternative fishing gear or techniques less likely to take marine mammals, (3) educate fishermen on the importance of reducing marine mammal bycatch, and (4) monitor the effectiveness of take reduction actions. Section 118(g) directs the Secretary of Commerce to issue emergency regulations when necessary to reduce mortality and serious injury of marine mammals incidental to commercial fisheries that are having immediate and significant adverse effects on a marine mammal stock.

Efforts to Develop and Implement Take Reduction Plans

In furtherance of these requirements, the National Marine Fisheries Service has, to date, established five take reduction teams. They are (1) the Atlantic Large Whale Take Reduction Team, (2) the Gulf of Maine Harbor Porpoise Take Reduction Team, (3) the Mid-Atlantic Coastal Gillnet Take Reduction Team, (4) the Pacific Offshore Cetacean Take Reduction Team, and (5) the Atlantic Offshore Cetacean Take Reduction Team. To organize and support team activities, the Service contracted with professional facilitators to lead meeting discussions and prepare team reports. A representative of the Marine Mammal Commission has participated as a member of the Atlantic Large Whale and Gulf of Maine Harbor Porpoise Take Reduction Teams.

The facilitators used by the Service to help structure and lead discussions of the take reduction teams have served the teams well and have been a great help in preparing reports that accurately reflect the members' discussions and views. While each of the teams has submitted a draft plan to the Service consistent with the requirements of Section 118, adoption and implementation of final plans have not always been accomplished within the mandated time frames and, in some cases, have not satisfied the objective of reducing mortality and serious injury to below a stock's potential biological removal level. The problems that have been encountered appear to be due to a combination of factors related to the complexity of the issues involved, concern about the economic impact of possible mitigation measures, and an inability to meet tightly drawn statutory deadlines.

Pacific Offshore Cetacean Take Reduction Plan: A team to develop a draft plan to reduce the incidental take of several whale species in the California/Oregon shark drift gillnet fishery was established in February 1996. The team submitted a draft plan to the Service in August 1996 at the end of the six-month development period. The Service responded promptly and, early in 1997, published implementing regulations requiring (1) the use of pingers on all nets, (2) the setting of nets at a minimum depth below the surface, (3) fishing boat operators to attend educational workshops, and (4) steps to limit entry into the fishery. As we understand it, the measures are working well and have significantly reduced marine mammal incidental take.

Atlantic Offshore Cetacean Take Reduction Plan: This plan addresses the incidental taking of northern right whales, humpback whales, and sperm whales, as well as the taking of several species of small cetaceans, in pair trawl, longline, and drift gillnet fisheries for swordfish, sharks, and tuna in U.S. waters off the Atlantic coast. A take reduction team was established on 23 May 1996 and submitted its draft plan on 22 November 1996, within the established six-month development period. However, before the plan was finalized, the Service initiated steps in 1997 to permanently close the swordfish gillnet fishery and, early in 1998, to close large segments of other drift gillnet fisheries. These closures were expected to substantially reduce the incidental take of marine mammals and, in light of the changed circumstances, the Service indicated its intention to reconstitute and reconvene the team to address remaining issues. To our knowledge, however, no such action has yet been taken.

Atlantic Large Whale Take Reduction Plan: This plan was developed to reduce the incidental take of several large whale species, including northern right whales, in gillnet and lobster trap fisheries along the East Coast. On 6 August 1996, the Service established a take reduction team to develop a draft plan. Because of the critically endangered status of northern right whales, almost all of the team's attention has been devoted to reducing incidental take of that species.

The potential biological removal level for the western North Atlantic right whale population, the stock affected by these fisheries, was calculated in the original stock assessment to be 0.4 whale per year. It is expected that the potential biological removal level for this stock will be reduced to zero in the next update of the stock assessment. Despite the urgent need to reduce right whale mortality and serious injury, efforts to identify and implement measures to reduce incidental take below the stock's potential biological removal level have been unsuccessful.

With a population of about 300 whales ranging seasonally from Florida to Maine, the team's challenge has been enormous -- identifying measures that will prevent perhaps 5 to 10 serious or fatal right whale entanglements per year in more than three million lobster traps and tens of thousands of gillnet sets along the entire U.S. East Coast. Although the team was unable to reach consensus on all needed measures, it submitted its findings and recommendations to the Service on 3 February 1997, within the statutory time frame. The team recommended (1) requiring gear modifications that could possibly reduce entanglement risks, although their effectiveness was untested and unknown, (2) further gear modification research, (3) efforts to locate and free entangled whales, and (4) seasonal fishery closures in those parts of designated right whale critical habitat that would least affect commercial fishing.

Based on the team's recommendations, the Service published a proposed take reduction plan and implementing regulations on 7 April 1997, within the statutory time frame. The Service's proposal relied heavily on the effectiveness of untested gear modifications and elicited thousands of letters of opposition, primarily from participants in the Maine lobster fishery, who objected to the expense associated with proposed fishing gear modifications. The Marine Mammal Commission also believed that it was premature

to propose extensive gear modifications without first determining their likely costs and effectiveness. In a 5 June 1997 letter commenting on the proposed plan, the Commission recommended that the Service (1) defer imposing most gear modification requirements until more is known about their likely effectiveness, (2) reduce entanglement risks by expanding fishery closures in right whale critical habitat to better cover those times and areas in which right whales are likely to occur, and (3) implement an aggressive gear research program.

The Service published an interim final rule on 22 July 1997, relaxing the proposed gear requirements to a point where few modifications would be required. However, the Service incorporated no offsetting changes to the proposed fishery closures in right whale critical habitats to reduce the potential for whale entanglements. Although the Service made commitments to support further gear research and to increase whale disentanglement efforts, implementation of the plan did little to reduce entanglement risks. Instead, the Service relied on efforts to disentangle whales and on further gear research that it hoped would identify a long-term solution.

To date , the Service has not been able to undertake all of the gear research recommended by the take reduction team and its subsidiary gear advisory group. In 1998 and 1999, agency resources were focused on addressing other pressing right whale recovery efforts and enlisting the assistance of fishermen in reporting and releasing whales entangled in fishing gear. Although some important gear research and testing has been done, much remains to be accomplished.

Despite implementation of the take reduction plan, whale entanglements continue to occur. In 1999 at least six right whales (as well as other whale species) were observed to have been entangled. Three of these whales were initially sighted last spring in the Great South Channel critical habitat area. However, they may have become entangled elsewhere. While funding for disentanglement operations has at times been uncertain, these operations appear to have been adequately funded during both 1998 and 1999. Despite full funding, whale disentanglement efforts have proven to be difficult. Although several right whales and other whales have been successfully disentangled, and some whales have been able to free themselves, others have been hard to relocate, compromising the Service's ability to monitor their status or undertake disentanglement efforts. Last October, after several unsuccessful attempts to remove entangling gear from one right whale, it was found dead.

Disentangling large whales is expensive, risky to the human rescuers, and not an entirely effective means for saving the whales. Thus, at present, the only proven way to reduce right whale entanglement risks is to reduce the presence of potentially hazardous fishing gear at times and in areas where the whales are most likely to occur. Because of the high number of entanglements that occurred in 1999, the Marine Mammal Commission recommended on 1 October, and again on 23 November 1999, that the Service use its emergency rulemaking authority to close the entire area in the Great South Channel designated as right whale critical habitat to gillnet fishing by the spring of 2000 when right whales concentrations in that area would next reach their peak. Although the Service reconvened the Atlantic Large Whale Take Reduction Team on 22-24 February 2000, it has taken no further steps to implement either the Commission's recommendations or other measures to reduce entanglement risks. Inasmuch as the Atlantic Large Whale Take Reduction Team was unable to address the issue of further closures at its February 2000 meeting, it remains uncertain whether and, if so, when the Service will act to strengthen its take reduction plan. In the interim, one right whale entangled in fishing gear died off Rhode Island in mid-January 2000, and another, badly entangled whale seen alive in February in Cape Cod Bay has not been relocated.

The Commission appreciates that reducing incidental taking of northern right whales in fishing gear presents

an extraordinarily difficult challenge. Nevertheless, it seems that more must be done to meet the challenge presented by the 1994 Marine Mammal Protection Act amendments. In particular, we believe that the Service should use its emergency regulatory authority under section 118 to augment its implementation of the existing take reduction plan.

Gulf of Maine Harbor Porpoise Take Reduction Plan: This plan is designed to reduce the incidental take of harbor porpoises in the sink gillnet fisheries for groundfish and other species off New England. To help develop the plan, the Service established a take reduction team on 12 February 1996. At that time, an estimated 1,500 harbor porpoises were being killed annually in gillnet fisheries in New England, mid-Atlantic, and Canadian waters. This far exceeded the potential biological removal level for the affected stock, then calculated to be 403 porpoises per year. The vast majority of the porpoise mortality, estimated at 1,200 animals per year, was occurring off New England.

Because of the urgent need to reduce this take, the 1994 amendments to the Marine Mammal Protection Act authorized the Service to expedite the process for publishing a stock assessment and developing a take reduction plan for the Gulf of Maine harbor porpoise. The amendments also recognized that reducing the take of harbor porpoises in these fisheries could prove particularly difficult and gave the Service flexibility to extend the time by which mortality and serious injury were to be reduced below the stock's potential biological removal level. Nevertheless, the amendments directed the Service to develop and implement a take reduction plan for harbor porpoises by 1 April 1997. While progress has been made in reducing harbor porpoise bycatch, it remains unclear whether efforts to date will prove successful in bringing the number of mortalities and serious injuries to less than the potential biological removal level of the stock.

The take reduction team submitted a consensus draft plan to the Service on 7 August 1996, within the statutory six-month time frame. As core measures, the draft plan recommended regulations to establish two types of management zones. For some zones, all fishing was to be prohibited on a seasonal basis. For others, fishing was to be allowed, but only if fishermen used nets fitted with newly developed acoustic deterrent devices (*i.e.*, pingers) intended to keep harbor porpoises away from nets. The management zones recommended by the take reduction team expanded on fishery closures previously established by the Service under the Magnuson-Stevens Fishery Conservation and Management Act to protect groundfish stocks and other closures established specifically to reduce harbor porpoise bycatch. The draft plan also recommended (1) studies to further test the effectiveness of pingers, (2) a census of the gillnet fleet, (3) a mandatory training and certification program for fishermen on the use of pingers, (4) actions to ensure enforcement of management measures, (5) more timely analysis of data on harbor porpoise bycatch levels, and (6) studies to determine the effects of pingers on harbor porpoises and other organisms in the marine environment.

The team's work was complicated by uncertainty concerning the New England Fishery Management Council's plans for recommending new closures to protect depleted groundfish stocks. The team recognized that the closures recommended by the Council to conserve groundfish would correspondingly reduce harbor porpoise bycatch, but, absent information as to where and when they were likely to occur, the team was unable to predict the extent to which they would do so. Further complicating the matter, the Council was unwilling to consider harbor porpoise take reduction needs specifically as it designed its system of closures.

Shortly after the team submitted its draft plan, the Council recommended, and the Service adopted, a system of gillnet fishery closures that included most, but not all, of the management zone measures recommended in the team's draft plan. Apparently in light of this action, the Service deferred action on the team's recommended plan for one year, thereby missing the statutorily mandated deadline for developing the take reduction plan. During this period, the Service did take action to implement some of the team's other

recommendations, such as conducting research on habituation of harbor porpoises to pinger sounds, but did not address other recommendations, such as establishing a mandatory pinger certification program, developing mechanisms for enforcing take reduction measures, and assessing the effect of pingers on the distribution of harbor porpoises.

By the spring of 1998 it was clear that the measures that had been initiated were insufficient, as harbor porpoise bycatch continued to exceed the stock's potential biological removal level by more than a factor of two. The Service therefore published a proposed take reduction plan that adopted most, but not all, of the measures included in the draft plan submitted by the team a year earlier. By then, however, it was apparent that even if all of the team's recommendations were implemented, they would be insufficient to reduce harbor porpoise mortality and serious injury to the required level. The Service therefore decided to defer action again, opting to reconvene the team in December 1997. Frustrated by the closures implemented in response to the Fishery Management Council's recommendations and the likely adoption of further restrictions to protect harbor porpoises, several fishing industry representatives chose not to attend the meeting. While participating members considered alternative time/area closures at that meeting, no recommendations were put forward. The Service therefore continued to defer action on the proposed plan throughout the first half of 1998 while it considered alternative measures. In the interim, the New England Fishery Management Council recommended a new system of fishery closures to protect groundfish stocks that further reduced fishing effort in areas of high harbor porpoise bycatch.

Dissatisfied with the Service's progress in adopting a take reduction plan that fully met the Act's take reduction goals within the statutorily mandated time frame, environmental groups filed a lawsuit on 21 August 1998. As part of a settlement agreement reached in the case, the Service agreed to publish a new plan promptly and to develop harbor porpoise bycatch estimates on a more timely basis to help assess progress towards reducing incidental mortality and serious injury. On 13 September 1998 the Service published a new proposed harbor porpoise take reduction plan that included measures applicable to waters off both New England and the U.S. mid-Atlantic states (see Mid-Atlantic Coastal Gillnet Take Reduction Plan below).

The plan, adopted on 2 December 1998, significantly expanded the fishing areas subject to pinger requirements. These requirements were established under the authority of the Marine Mammal Protection Act. However, to reach the initial goal of reducing harbor porpoise bycatch to less than the stock's potential biological removal level, the plan also relied on fishery closures recommended by the New England Fishery Management Council to protect depleted groundfish stocks and adopted by the Service under the Magnuson-Stevens Fishery Conservation and Management Act. The adopted take reduction plan also included a mandatory training program for fishermen on the use and maintenance of pingers, a program to randomly test the functioning of deployed pingers, efforts to develop hydrophones that could be used to enforce the pinger requirements, a commitment to provide bycatch estimates in a more timely manner, and further research on the habituation of harbor porpoises to pinger sounds and the effects of those sounds on other components of the ecosystem.

To review progress in implementing the plan, the Service sought to reconvene the team in the summer and fall of 1999. However, several fishery representatives, dissatisfied with the adopted plan, resigned from the team. To enable the Service to identify and appoint new representatives and resolve scheduling conflicts, the team did not meet until 14-15 December 1999. By that time, recently collected data suggested that bycatch had been substantially reduced during the first three-quarters of 1999 and was approaching the harbor porpoises' potential biological removal level. At about the same time, however, the New England Fishery Management Council was again considering changes to the fishery closures instituted to protect groundfish,

and the Service did not yet have data to evaluate how much of the estimated bycatch reduction was attributable to fishery closures and how much was attributable to mandatory pinger use under the harbor porpoise take reduction plan. As a result, the team was unable to provide advice on whether or how to alter the management zones established by the regulations implementing the take reduction plan. It remains uncertain whether or when the Service plans to make any adjustments to the plan.

During the December meeting, the Service advised the team that, although it had purchased hydrophones to help enforce pinger requirements at certain times and in certain areas, the Coast Guard was reluctant to use them based on its concerns regarding the enforceability of the applicable regulations, questions concerning the reliability of the hydrophones, lack of training in hydrophone use, and the value of hydrophone recordings as evidence in enforcement proceedings. Because of these concerns, the Coast Guard requested that a Service enforcement agent or the affected fishermen be present at the time the hydrophones were used to ensure that they were deployed properly. Because the Service does not have enforcement agents available to assign to the task, apparently no efforts have been made to conduct checks to ensure that pingers are in fact being used on deployed nets. The Service also advised the team that it had been unable to randomly collect deployed pingers and replace those determined to be faulty because fishermen believed the replacement pingers to be inferior models and were unwilling to accept them in exchange. As a result, little was done in 1999 to check the durability of pingers under routine industry use.

While significant steps had been taken to reduce harbor porpoise mortality and serious injury, it is unclear whether actions taken to date have successfully achieved the Act's initial objective of reducing these types of takings to below the stock's potential biological removal level. In part, the delay in meeting the statutory goal is attributable to a delay in publishing a take reduction plan. Despite a specific statutory deadline, a plan was not adopted until December 1998, approximately 16 months late.

Much remains to be accomplished to implement the harbor porpoise take reduction plan fully and greater efforts need to be directed at developing bycatch estimates on a timely basis, monitoring and enforcing applicable pinger requirements, testing pinger reliability under operational conditions, and conducting research to assess the effects of pinger sounds on the distribution of harbor porpoises and other species. The slow pace of implementation has frustrated team members, apparently contributing to some resignations from the team, and has resulted in a lawsuit being filed. In addition, data have yet to be developed that would enable the Service to differentiate the extent to which bycatch levels have been reduced as a result of measures in the harbor porpoise take reduction plan as compared to those measures implemented for fishery management purposes, which are subject to change.

Mid-Atlantic Coastal Gillnet Take Reduction Plan: The Service originally planned to convene a take reduction team to address the incidental take of harbor porpoises from the Gulf of Maine stock and bottlenose dolphins in coastal gillnet fisheries for dogfish, monkfish, shad, and other species off the U.S. mid-Atlantic coastal states. Because information on bycatch rates in these fisheries was limited, however, the Service delayed establishment of a take reduction team until 25 February 1997 to enable it to collect and analyze additional observer data. Those data provided a sufficient basis to begin addressing the regional bycatch of harbor porpoises, but not bottlenose dolphins. The Service therefore decided to defer development of a take reduction plan for bottlenose dolphins pending collection of additional data on bycatch rates and better delineation of bottlenose dolphin stock structure along the mid-Atlantic coast.

The take reduction team submitted its draft plan for harbor porpoises to the Service on 25 August 1997, within the statutorily mandated time frame. The plan, reflecting a consensus of team members on most measures, did not recommend mandatory pinger use. Rather, it relied on seasonal gear requirements (*e.g.*,

net twine diameters, net numbers and length, and mesh size) that observer data suggested were less likely to catch harbor porpoises. Apparently in the interest of combining harbor porpoise take reduction measures for the New England and the mid-Atlantic regions into a single plan, the Service deferred action to adopt the recommended measures until 25 September 1998, when it published a proposed plan covering both areas. That plan was adopted on 2 December 1998, as noted above.

Although required by the Marine Mammal Protection Act to carry observers to monitor marine mammal bycatch when requested by the Service, some fishermen have refused to do so. Nevertheless, the observer data that have been collected are believed to reflect bycatch rates for most regional gillnet fishing operations. Based on those data, the Service has estimated harbor porpoise bycatch levels in the mid-Atlantic region at 572 and 446 porpoises for 1997 and 1998, respectively. Bycatch for 1999 appears to have declined to well below 100 animals although a final estimate is not yet available.

Although take reduction measures for harbor porpoises off the mid-Atlantic states, deferred for a year after submission of the take reduction team's draft plan, are now in place and appear to have significantly reduced regional bycatch levels, the Commission is concerned that the refusal of some fishermen to carry observers might be skewing bycatch estimates. Despite the apparent success in reducing harbor porpoise bycatch in the mid-Atlantic region, we are concerned that steps to address the bycatch of bottlenose dolphins have not yet been taken and that it remains unclear when a take reduction team for this species will be established. In this regard, the Commission believes that current incidental take levels may be high enough to be causing population declines and that development of a take reduction plan cannot wait until the uncertainties concerning stock structure are resolved.

Conclusions

The requirements for developing and implementing take reduction plans and convening take reduction teams set forth in section 118 of the Marine Mammal Protection Act appear to be appropriate and fundamentally sound. Among other things, the Commission believes that involving all stakeholders in the development of plans ensures that all views are identified and considered in the process of plan development and that plans consequently are more likely to be successfully implemented.

As noted in the Commission's 29 June 1999 testimony before this Committee on implementation of the 1994 amendments, one change that may be warranted concerns the requirement to prepare plans for all strategic stocks taken in Category I or Category II fisheries. Some stocks are considered strategic solely by virtue of being listed as endangered or threatened under the Endangered Species Act or designated as depleted under the Marine Mammal Protection Act, not because of a significant level of fishery-related mortality or serious injury. In cases where there is a very low level of taking incidental to commercial fisheries, the stocks would benefit little from the preparation of take reduction plans. To ensure the best use of limited agency resources, the Commission recommends that the Act be amended to specify that plans need not be prepared for those strategic stocks for which mortality and serious injury resulting from commercial fishing are inconsequential.

Although the requirements for preparing take reduction plans seem conceptually sound, implementation has been inconsistent and there has been difficulty in meeting the requirements of section 118 in a timely manner. These difficulties seem to be undermining the confidence of some team members in the process and, in certain cases, their willingness to participate. Unless these deficiencies are corrected, progress in adopting and implementing plans is likely to continue at a slower-than-expected pace and may expose the Service to litigation risks. In the case of the northern right whale, delay in initiating an effective take

reduction plan may be significantly affecting the species' prospects for recovery.

With regard to regulatory measures needed to implement the Atlantic Large Whale Take Reduction Plan, Congress should call on the Service to take all necessary steps to implement fishery closures designed to eliminate hazardous fishing gear from designated right whale critical habitat during those times when right whales are most likely to be present. The Service also should be encouraged to develop adaptive regulatory procedures that enable it to institute temporary restrictions in other areas during periods when concentrations of right whales are detected. Preventing hazardous fishing gear from being deployed in areas where right whales are most likely to occur currently is the only way to ensure that entanglement risks for this species are reduced. Based on the fact that right whales continue to get entangled in fishing gear and that some of these entangled whales do not survive, the Commission believes that further remedial actions are essential.

With regard to the Gulf of Maine Harbor Porpoise Take Reduction Plan, the Service needs to ensure that all measures necessary to achieve take reduction goals are reflected in the plan and are addressed in its implementing regulations. Due to constantly changing fishery closures recommended by the New England Fishery Management Council to conserve fish stocks, which affect harbor porpoise bycatch levels, the ability of take reduction teams to provide timely advice on regulatory measures needed to achieve take reduction goals has been impaired.

As we begin to get a handle on reducing fisheries-related mortality and serious injury to biologically insignificant levels, we should not lose sight of other, sometimes more significant, threats to marine mammals. For example, an average of one manatee is hit and killed by a boat in Florida every four or five days. Further, the size of the human population in Florida is increasing and, as this occurs, both the number of boats and the level of risks to manatees continue to increase. Also, as the human population grows, human-related destruction and degradation of essential manatee habitats are likely to increase. Thus, the survival of the species will depend on effective use of the Endangered Species Act and the Marine Mammal Protection Act to reduce human-caused mortalities and to prevent destruction and degradation of critical habitats and habitat components.

Another problem that is becoming increasingly apparent is point and non-point source pollution, which may be having significant adverse effects on marine mammals and other components of marine ecosystems. Both the consequences and uncertainties concerning the sources and effects of ocean contaminants on marine mammals were pointed out by participants in the October 1998 *Workshop on Marine Mammals and Persistent Ocean Contaminants,* sponsored jointly by the Commission, the Biological Resources Division of the U.S. Geological Survey, the National Marine Fisheries Service, the Environmental Protection Agency, and the National Fish and Wildlife Foundation. More recently, I learned that due to the presence of chemical contaminants, people have been warned to limit their consumption of fish caught in Galveston Bay, Texas, to two per month to avoid possible health consequences. In Sarasota Bay, Florida, a presumably much less polluted area, older bottlenose dolphin males -- the individuals that in normal populations appear to sire the most calves -- are showing signs of immune system dysfunction, possibly as a consequence of local pollution. How pollution may be affecting bottlenose dolphins in the Galveston area and other parts of their range in coastal U.S. waters can only be guessed at present.

Apparent contaminant-related problems also are surfacing elsewhere. In California, for example, it has been suggested that the ongoing decline of the southern sea otter, designated as threatened under the Endangered Species Act, may be a direct consequence of environmental contaminants or due to increased susceptibility to disease because of contaminant-related suppression of their immune systems. It also is possible that the apparent decline in reproductive success among right whales in the western North Atlantic is due, at least in

part, to direct contaminant effects or to the effects of contaminants on key prey species.

In this regard, the Commission notes that most research and conservation actions are undertaken in response to acute, often controversial conservation issues. Agency mandates, budgets, and programs largely reflect this reactive approach. The Commission recommends that Congress consider the need to provide direction for development and implementation of more effective recovery and conservation plans for endangered, threatened and depleted marine mammals, as well as take reduction plans for stocks being significantly affected by commercial fisheries. The Commission further believes that there is a need for broad-based, interdisciplinary, anticipatory research that will allow the government to take action to address potential conservation problems before they become serious and controversial. If you would like, we would be happy to discuss the possibilities with committee members and staff at your convenience.

# # # # #