



# MARINE MAMMAL COMMISSION

12 August 2019

Mr. Chris Oliver  
Assistant Administrator for Fisheries  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring, MD 20910-3225

Dear Mr. Oliver:

The Commission continues to be very concerned about the status of the North Atlantic right whale, particularly in light of recent deaths and low recruitment to the population and shares the National Marine Fisheries Service's (NMFS) sense of urgency that additional actions are needed to reverse these trends. The Commission encourages NMFS to continue to work with its counterparts in Canada to strengthen ongoing efforts, and offers its assistance and support.

As you are aware, the population of North Atlantic right whales is declining at an alarming rate and faces an increasing risk of extinction. The primary causes of the mortality driving this decline are entanglements in lobster and crab fishing gear, and ship strikes. The population has fallen from roughly 500 to 400 whales in less than a decade, and it is especially alarming that fewer than 100 reproductive-age females remain. Entanglement in fishing gear often results in sub-lethal effects, compromising the condition and health of those females and contributing to the recent, historically low calving rate.

The Commission supports NMFS's efforts to conserve right whales, but more action is required by both the U.S. and Canada to prevent unsustainable numbers of deaths such as occurred in 2017 and 2019, and to put the population back on a path to recovery. Adoption of ship speed regulations and entanglement mitigation measures by the United States over the past three decades reduced the human-caused mortality rate and contributed to a roughly two percent per annum population growth rate observed prior to 2010. Yet that recovery rate was still substantially below what could be expected given the seven percent rate that has been observed in populations of southern right whales. Each year, the documented rate of human-caused mortality and serious injury has exceeded the population's potential biological removal level (PBR) by a substantial margin since 1995. Since 2010, the numbers of serious injuries and mortalities due to entanglement have been increasing and alone have exceeded PBR by 2-3 whales per year. And, although NMFS has consistently found that U.S. fishery-management programs are sufficiently protective of right whales to enable it to make "no jeopardy" findings under the Endangered Species Act, in retrospect, those findings were based on overly optimistic estimates of the effectiveness of the right whale conservation measures enacted.

To achieve the required reductions in mortality and serious injury of right whales, the Commission recommends that NMFS strengthen its efforts in four areas: 1) rulemaking, 2) surveys and monitoring 3) collaboration with Canada, and 4) funding.

## Rulemaking

The Commission was encouraged by NMFS's actions ahead of the April 2019 meeting of the Atlantic Large Whale Take Reduction Team (TRT). NMFS provided a preliminary resolution that assessed the relative contributions of U.S. and Canadian fisheries to the overall mortality rate due to entanglement, developed a decision-support tool to assess anticipated entanglement risk reduction, and tasked the TRT with identifying a suite of mitigation measures that would achieve a 60-80 percent reduction in entanglement risk. NMFS estimated that such a level of risk reduction should be sufficient to reduce the annual number of human-caused deaths and serious injuries below PBR, as required by the Marine Mammal Protection Act (MMPA). NMFS encouraged the TRT to use the decision-support tool to assess whether various combinations of management measures would achieve the upper limit of the risk-reduction target (80 percent).

However, the TRT struggled to identify measures that it could agree would attain even the lower end of the risk-reduction target (60 percent). Each New England state represented on the TRT proposed measures for its fisheries, which in combination, became the TRT's near-consensus recommendation to NMFS. Among the approaches considered were measures expected to reduce the probability of whales becoming entangled (reducing the number of buoy lines and establishing time-area closures) and measures designed to reduce the severity of injuries once whales are entangled (weak rope). Although a few time-area closures were considered, they contributed very little to meeting the targeted risk reduction for New England as a whole, due largely to their small size. Therefore, each state focused its proposal on buoy-line reductions and mandatory use of weak rope for buoy lines.

The Commission supports NMFS's original goal in directing the TRT to seek an 80% reduction of risk. In light of the recent deaths, the Commission believes that NMFS, in meeting its responsibility to reduce right whale mortality and serious injury to below PBR, needs to expand upon the TRT's recommendations. The Commission therefore recommends that NMFS identify a suite of mitigation measures projected to reach the risk reduction target's upper limit (80 percent) for each state or lobster management area (LMA) and promptly publish a proposed rule to adopt those measures.

The Commission believes that this 80 percent target likely can be achieved only by adding larger or dynamic time-area closures to the suite of protective measures, and recognizes that these are bound to be strongly opposed by local interest groups. As such, NMFS will need to provide a solid rationale, grounded in science, for each closure that it proposes. Closures proposed by TRT members at the October 2019 could provide the kernels for larger, more effective areas, or NMFS could integrate the co-occurrence model with lobster catch information and use a Marxan-like analysis to identify areas that would maximize risk reduction while limiting the economic impact on the fisheries. The existing example of Massachusetts, where closures adopted in 2001 have provided significant protection of right whales in the spring when they aggregate in large numbers in Cape Cod Bay, demonstrates the effectiveness and feasibility of this approach.

In the near term, the Commission understands that the lobster industry is encountering difficulty sourcing weak rope for buoy lines. Because the state proposals already anticipated substantial cuts in the number of buoy lines being deployed (30-50 percent), it is unlikely that additional reductions in the number of lines can be made to offset the loss of risk reduction

attributable to the use of weak rope if sources for that rope cannot be found. In the near-term, absent a reliable source of weak rope, NMFS will need to identify alternative risk reduction measures even to reach a 60-percent risk reduction, let alone an 80-percent reduction. Again, the Commission believes that the only viable alternative measures will be time-area closures for areas where and when right whales are most likely to occur. It may be necessary to make such closures dynamic, to take into account unpredicted whale movements and accommodate fisheries in areas where whales are not occurring as predicted.

Improvement and further refinement of the risk reduction assessment tool must be another priority. The tool has two components – a co-occurrence model that uses data on whale and gear densities to estimate the relative likelihood of whales becoming entangled, and severity measures that evaluate the relative likelihood that entangled whales would be killed or severely injured based on gear configurations. Taken together, the two components produce a relative risk measure. The Commission agrees with NMFS that the co-occurrence model is sufficiently well-founded and tested to be considered the best available tool for predicting likely overlap of fishing gear and right whales. As discussed by the TRT, the model could be improved by adding other data sets, and the Commission encourages NMFS to make those improvements to the model where feasible.

Many TRT members clearly indicated their belief that the severity measures are not on as strong a quantitative or scientific footing as the co-occurrence model. The severity measures were derived from a poll of TRT members, and fall short in two important ways. First, it was not apparent to TRT members when polled that their responses would have such important consequences. Had they been aware, many likely would have taken greater care in formulating their responses. Second, while the poll was described as reflecting expert opinion, it was not a rigorous, social-science-based expert elicitation, which would have, for example, taken variations in expertise among TRT members into account. Many TRT members are not experts on the injury threat to right whales posed by different gear types and configurations. The Commission recommends that NMFS conduct a rigorous, best-practice expert elicitation to assess the risk posed by different gear configurations, or find some other means to put the severity measures on a firmer scientific footing.

### **Surveys and Monitoring**

The distribution of North Atlantic right whales has been in flux over the last decade. Many fewer whales have been seen on former summering grounds in the Gulf of Maine and Bay of Fundy, while large numbers of whales have appeared in the Gulf of St. Lawrence where they had previously been observed only occasionally. This shift apparently has been driven by a change in the distribution of their prey, likely in response to ocean warming. Recent events in the Gulf of St. Lawrence have tragically demonstrated that this shift in distribution into areas where right whale conservation measures are inadequate is putting the whales at increased risk of injury and death from entanglement and ship strikes. The Commission recommends that NMFS, in collaboration with partners in the United States and Canada, increase efforts to delineate the contemporary late spring, summer, and fall distribution and movements of right whales through the use of geographically and temporally expanded visual and acoustic surveys. The risks to the whales cannot be managed and mitigated without a sound fundamental understanding of where and when the whales are, and which threats they are likely to encounter. While attention over the past three years has focused on the Gulf of St. Lawrence and areas of known concentration in U.S. waters, whales may be at risk elsewhere in Canada, the United States, or international waters. The Commission recommends that

(1) the recent level and design of survey effort (visual and acoustic) be maintained with its focus on areas known to be used currently by the whale population and (2) additional coverage focus on areas and times with known threat sources present (specifically pot fisheries, gillnet fisheries, or major shipping lanes) and reason to suspect (based on historical evidence, ecological modeling, anecdotal reporting, etc.) that right whales are or may be present.

### **Collaboration with Canada**

Following the 2017 right whale deaths in the Gulf of St. Lawrence, Canada instituted extensive new regulations for the Gulf (including gear modifications, and static and dynamic fishery closures and ship slow-downs), regular monitoring (aerial and acoustic surveys), and additional research into gear-modification solutions. These measures seemed to work in 2018 when no deaths and only one entanglement were reported in the Gulf of St. Lawrence. However, despite further adjustments to the measures prior to 2019, the number of deaths this year indicates that they are far from sufficient. The Commission commends NMFS for its efforts to work with Canada's Department of Fisheries and Oceans and Department of Transport, and for the way it has provided assistance, especially with survey efforts, as Canada struggles to eliminate the threats to right whales from shipping and fishing in its waters. The Commission recommends that NMFS at minimum continue its support of Canada's right whale protection efforts, and if possible increase the support, including the effort to obtain a more thorough understanding of the threats faced by the whales in all of eastern Canadian waters and a shared commitment to finding and supporting gear modification solutions. The Commission stands ready to assist in these efforts however it can.

### **Funding**

The recent right whale mortality crisis in the Gulf of St. Lawrence has significant implications for the budgets of both DFO and NMFS as they have responded by increasing aerial surveillance and stranding responses, as well as enhancing analytical, management, and policy efforts. Increases in entanglements and/or ship strikes resulting from future climate-change impacts could greatly increase demands on NMFS's budget. The acute and hopefully short-term crisis in Canada has diverted some attention and expenditures away from U.S. waters. While NMFS so far has been able to absorb the additional costs, the Commission has questions about their longer-term sustainability. We must not lose sight of the fact that identifying and implementing longer-term measures, including pursuit of new technologies such as ropeless gear, to put the right whale population on a strong trajectory toward recovery requires sustained effort and funding in both countries. The Commission is in a position to help NMFS convey messages about the budgetary implications of emergency responses and the effect that these may be having on the equally important longer-term recovery programs for right whales and other stocks at risk of extinction. To improve the Commission's understanding and ability to assist NMFS in securing support for right whale programs the Commission would appreciate periodic briefings on these matters from NMFS.


Mr. Chris Oliver

12 August 2019

Page 5

The Commission stands ready to assist NMFS in addressing both the current crisis and the longer term recovery of North Atlantic right whales. To help ensure that the Commission is as well informed as possible on new developments and enhance its ability to identify ways in which it can best support NMFS on this matter, the Commission requests that it be invited to participate in significant USG briefings and policy discussions, and in consultations between NMFS and Canadian Authorities on North Atlantic right whales.

Sincerely,



Peter O. Thomas, Ph.D.,  
Executive Director

cc: Sam Rauch, Deputy Assistant Administrator for Regulatory Programs  
Michael Pentony, Regional Administrator, Greater Atlantic Regional Fisheries Office  
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