



MARINE MAMMAL COMMISSION

19 February 2021

Mr. Michael Pentony, Regional Administrator
Greater Atlantic Regional Fisheries Office
National Marine Fisheries Service
55 Great Republic Drive
Gloucester, MA 01930–2276

Subject: Draft Biological Opinion on Greater Atlantic Region Fisheries

Dear Mr. Pentony:

On 15 December 2020, the National Marine Fisheries Service (NMFS) posted, for public review and comment, a draft Biological Opinion that addresses the potential impacts of several Greater Atlantic Region fisheries on species listed under the Endangered Species Act (ESA). Of particular interest to the Marine Mammal Commission (Commission) are the portions of the Biological Opinion that assess the impacts of the American lobster fishery on the North Atlantic right whale, an endangered species. The Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, provides the following comments and recommendations on the draft Biological Opinion.

Background

Reinitiation. In September 2017, NMFS reinitiated consultation under ESA section 7 on the impacts of several Greater Atlantic Region fisheries on North Atlantic right whales, based in part on new status information indicating that the population had been declining since 2011 (Pace et al. 2017), and because lethal incidental takes exceeded the level authorized in the most recent (2014) Biological Opinion, thereby triggering reinitiation. The specific focus of this letter is NMFS's Biological Opinion “on the authorization of these fisheries and their effects on ESA-listed species [including, importantly, the North Atlantic right whale] under NMFS jurisdiction.”

Proposed Action. The proposed action considered in the draft Biological Opinion is the authorization of several Greater Atlantic Region federal fisheries,¹ including the largest pot/trap fisheries—the American lobster and Jonah crab fisheries. NMFS clarifies the jurisdictional scope of the action and Biological Opinion, stating that—

As NMFS does not authorize, fund, or carry out fishing activities in state waters, these activities are not considered part of the proposed action in this Opinion. Consequently, this Opinion is evaluating effects from fishing activities (i.e., entanglement/bycatch) by vessels with federal permits in federal waters only. The

¹ American lobster, Atlantic bluefish, Atlantic deep-sea red crab, Jonah crab, mackerel/squid/butterfish, monkfish, Northeast multispecies, Northeast skate complex, spiny dogfish, and summer flounder/scup/black sea bass fisheries.

effects analysis will consider the effects to ESA-listed species of transits through state and federal waters to the fishing grounds in federal waters.

Concurrently, NMFS has proposed an amendment to the Atlantic Large Whale Take Reduction Plan (ALWTRP) and its implementing regulations to modify the American lobster and Jonah crab pot/trap fisheries in an effort to reduce the likelihood of North Atlantic right whales and other large whales becoming entangled in buoy/vertical lines and dying or being seriously injured. These proposed ALWTRP measures are analyzed in the Biological Opinion. The measures included in the proposed amendment include 1) ‘trawling up’ to reduce the number of buoy lines used in these fisheries, 2) time-area closures that would prohibit pot/trap fishing with persistent buoy lines in areas where right whales congregate seasonally, and 3) requiring use of weak links in buoy lines to increase the likelihood that entangled whales can break free thereby reducing the severity of injuries and number of deaths. Based on a risk assessment model, NMFS estimates that these measures, if as effective as predicted, should reduce North Atlantic right whale mortality and serious injury due to entanglement in these fisheries in federal and state waters by 60 percent, from 6.72 to 2.69 per year. Although reduced by 60 percent, the resulting annual mortality and serious injury level of 2.69 would still be 3.36 times greater than the current potential biological removal level of 0.8.

The proposed action identified in the Biological Opinion by NMFS also includes a conservation framework (the Framework) that describes a series of mitigation measures to be implemented in phases over the next decade.² In phase one of the 10-year implementation period, a rule implementing the final amendment to the ALWTRP will be promulgated in 2021. In phase two, NMFS will implement measures in 2023 to reduce mortality and serious injury in gillnet and other pot/trap fisheries (besides the American lobster and Jonah crab fisheries) by 60 percent. After implementing phases one and two, NMFS intends to evaluate the performance of those measures. Phase three, which NMFS intends to implement through rulemaking in 2025, is designed “to further reduce [mortality and serious injury] by 56% in all federal fixed gear fisheries...”³ Phase three will be followed by another evaluation period in 2025-2026. NMFS plans to implement phase four in 2030 with the goal “to further reduce [mortality and serious injury] ([by] up to 87%) in fixed gear fisheries.”

The Biological Opinion assesses the current level of right whale mortality and serious injury to be 4.94 whales per year due to fisheries operating in federal waters and an additional 1.78 in state waters. Assuming that measures implemented under the Framework have their intended effect, annual mortality and serious injury incidental to fisheries in federal waters will be reduced in phase one from its current level of 4.94 to 2.2, to 2.13 in phase two, to 0.85 in phase three, and finally to 0.11 in phase four (i.e., in 2030). While specific measures have been identified and proposed for phase one of the Framework, NMFS has not identified any specific measures that would be adopted under the latter phases to achieve the specified take reduction targets. NMFS notes that—

² <https://www.greateratlantic.fisheries.noaa.gov/public/nema/PRD/NARWConservationFrameworkGARFO.pdf>, and included in the Biological Opinion as Appendix I, pp 472-482.

³ The 60 percent reduction in mortality and serious injury expected to result from the measures in the proposed ALWTRP amendment would occur in both federal and state waters. Because most of the risk of mortality and serious injury occurs in federal rather than state waters, the risk reduction in federal waters will be slightly less than the overall target of 60 percent, namely 57 percent.

[T]he Framework does not specify particular measures to allow NMFS to consider input on these measures. The Framework is predicated on maximizing the likelihood of North Atlantic right whale recovery success. It recognizes that efforts to reduce M/SI⁴ from other sources are underway, that there is uncertainty associated with available data, and that environmental conditions are changing. To maintain the maximum likelihood of recovery success over time, the Framework utilizes an adaptive framework and allows for revisions as additional information becomes available or should any of the assumptions require revisions.

Additionally, NMFS explains that the “Conservation Framework specifies targets rather than particular measures to be implemented” and that NMFS is “committed to working with [its] partners on the implementation of measures to meet the goals of the Conservation Framework.” In the Framework, NMFS does list measures that could be employed, which include, but are not limited to, further trawling up, weakening of buoy lines, the use of “ropeless” gear, additional time-area closures for buoyed gear, and buoy line reduction, perhaps through an allocation program that would cap the numbers of lines.

Requirements of Section 7

Section 7(a)(2) of the ESA requires each federal agency (in this case NMFS), in consultation with “the Secretary” (in the case of North Atlantic right whales and other cetaceans, a responsibility delegated also to NMFS), to “insure that any action authorized, funded, or carried out by such agency [hereinafter referred to as an ‘agency action’] is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species...” In making such determinations, the agency is to use “the best scientific and commercial data available.” Under applicable regulations (50 C.F.R. § 402.02), the term “jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” In the draft Biological Opinion, NMFS observes that “[t]he [North Atlantic right whale] population size is small enough for the death of any individuals to have measurable effects in the projections on its population status, trend, and dynamics.” Yet, despite recognition that baseline effects (e.g., ship strikes) are likely to continue to result in the deaths of some right whales, NMFS preliminarily concludes that mortality and serious injury expected to result from its proposed fishery management measures within the Framework, in addition to removals resulting from other sources, are not likely to jeopardize the continued existence of the species. As discussed in detail elsewhere in this letter, the Commission disagrees with this conclusion and the information, projections, and rationale underlying it.

If, after consultation, NMFS determines that the requirements of section 7(a)(2) have been met (e.g., that the agency action is not likely to jeopardize the continued existence of the species), section 7(b)(4) directs the agency to include with the Biological Opinion an Incidental Take Statement (ITS) that—

- (i) specifies the impact of such incidental taking on the species,

⁴ Mortality and serious injury

- (ii) specifies those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize such impact,
- (iii) in the case of marine mammals, specifies those measures that are necessary to comply with section 101(a)(5) of the Marine Mammal Protection Act of 1972 with regard to such taking, and
- (iv) sets forth the terms and conditions (including, but not limited to, reporting requirements) that must be complied with by the Federal agency or applicant (if any), or both, to implement the measures specified under clauses (ii) and (iii).

However, section 7(b)(4)(C) also specifies that, if an endangered species or threatened species of a marine mammal is involved, the taking also must be authorized under section 101(a)(5) of the Marine Mammal Protection Act. Under ESA section 7(o), any incidental taking in accordance with the terms and conditions of the Incidental Take Statement will not constitute a violation of the ESA. In addition, applicable regulations (50 C.F.R. § 402.16(a)(1)) specify that consultation is to be reinitiated if the authorized level of incidental take is exceeded.

The draft Biological Opinion includes an Incidental Take Statement for right and other large whales. In pertinent part it states—

NMFS is including an incidental take exemption for non-lethal take of North Atlantic right, fin, sei, and sperm whales. At this time we are authorizing zero lethal take of these whales because the lethal incidental take of ESA-listed whales has not been authorized under section 101(a)(5) of the MMPA. Following the issuance of such authorizations, NMFS may amend this Opinion to adjust lethal incidental take allowance for these species, as appropriate. . . For these reasons, and based on our experience monitoring fisheries, we believe a 5-year time period is appropriate for meaningful monitoring of take with respect to the ITS. Table 81 displays the annual average take of these species over five years. In the case of North Atlantic right whales, take is specified as an annual percentage [11.04 % of the species population], as noted in the table.

The final section of the draft Biological Opinion states that “[i]n the event that the amount or extent of take is exceeded, NMFS, GARFO must immediately request reinitiation of formal consultation.” The Commission interprets this provision to mean that consultation would be reinitiated if the level of authorized take is exceeded.

Presumably, NMFS has tried to structure the Incidental Take Statement to overcome the adverse ruling in *Center for Biological Diversity (CBD) v. Ross*, in which the court invalidated the previous (2014) Biological Opinion for failure to include such a statement. The court encapsulated its logic as follows—

The ESA and its regulations require an ITS when the taking of an endangered species is anticipated. Take was anticipated here, and NMFS did not produce an ITS. The 2014 Biological Opinion therefore violates the ESA.

Notwithstanding the effort by NMFS to address this problem by including an Incidental Take Statement for non-lethal take of right whales, the Commission believes that the new Biological Opinion suffers from some of the same shortcomings.

Once again, incidental taking of endangered right whales is reasonably certain to occur under the action covered by the current proposed amendment to the ALWTRP and incorporated in the Framework, including taking by serious injury and mortality.⁵ Consistent with the ruling in *CBD v. Ross* and NMFS's regulations implementing ESA section 7 (50 C.F.R. § 402.14(g)(7)), this necessitates the inclusion of an Incidental Take Statement in the Biological Opinion. Although, technically, the Biological Opinion does include an Incidental Take Statement, that take statement does not cover all of the taking that is anticipated and, most importantly, excludes the most severe taking that is of the greatest concern (i.e., although reasonably certain to occur, the statement does not authorize lethal take). While NMFS may consider inclusion of such an Incidental Take Statement sufficient to address the court's adverse ruling invalidating the previous Biological Opinion, failure to account for lethal taking clearly runs counter to the spirit and intent of that ruling. As such, it will not be surprising if the attempt fails for the same reasons that the court invalidated the 2014 Biological Opinion. The Commission therefore recommends that NMFS adopt a common-sense interpretation of its responsibility to include an Incidental Take Statement that covers all situations where taking is reasonably certain to occur that is more consistent with the court's decision. That is, the Incidental Take Statement should include and address all of the taking that the agency believes is likely to occur, not just that which is, or arguably is, authorized under the MMPA.

A related concern is the fact that right whales are included in the Incidental Take Statement without such taking also having been authorized under section 101(a)(5) of the MMPA. This ignores the explicit prerequisite set forth in ESA section 7(b)(4)(C) that issuance of an Incidental Take Statement for a marine mammal requires a parallel authorization under section 101(a)(5). As acknowledged by NMFS in defending the 2014 Biological Opinion, the agency was unable to make a negligible impact determination under the MMPA given the level of serious injury and mortality. Given the projections in Table 79 of the draft Biological Opinion, the Commission thinks it highly unlikely that NMFS will be able to make a negligible impact determination⁶ for these federally regulated fisheries for at least another 10 years (in phase four), and then only if serious injury and mortality of right whales from other sources (e.g. fisheries in state and Canadian waters and ship strikes) are significantly reduced. In fact, even with a 100-percent entanglement risk reduction, achieved by closing all U.S. waters to lobster and Jonah crab fishing, thereby eliminating all serious injury and mortality of right whales incidental to these fisheries, the population would likely still be declining due to the impacts of Canadian fishing and ship strikes in both countries (Figure S3 in Linden 2021). Once again, NMFS seems to be straying from the clear guidance in the district court ruling on the 2014 Biological Opinion—

⁵ Table 79 in the draft Biological Opinion indicates that implementation of the proposed rule is expected to reduce serious injury and mortality of right whales in federal waters from 4.94 to 2.2 annually.

⁶ The applicable criteria are available at <https://media.fisheries.noaa.gov/dam-migration/02-204-02.pdf>.

NMFS's finding that the lobster fishery would have more than the "negligible impact" allowed by § 101(a)(5) of the MMPA meant that the fishery violated § 7(b)(4) of the ESA. This should have ended the agency's inquiry.

That same flaw persists in the draft Biological Opinion.

The Commission assumes that NMFS is operating based on a reading of the MMPA that authorization of non-lethal incidental taking of ESA-listed marine mammals in commercial fisheries is not needed or cannot be issued under section 101(a)(5)(E). On this point too, we disagree. MMPA section 118(a)(2) provides that, in the case of the incidental taking of marine mammals from species or stocks listed as endangered or threatened under the ESA, both section 118 and section 101(a)(5)(E) apply. There are two possible interpretations of this provision: incidental taking must be authorized under one, but not necessarily both provisions, or it must be authorized under both. Since incidental taking of both listed and non-listed marine mammals is broadly authorized under section 118(c)(2) and (3), subject to certain requirements, no authorization would ever be needed under section 101(a)(5)(E) if only a single authorization were required. Given the canon of statutory construction against rendering any provision superfluous, this would strongly favor the interpretation that incidental taking of ESA-listed species must be authorized under both section 118 and section 101(a)(5)(E).

A careful reading of section 101(a)(5)(E) supports the view that it applies to all incidental taking, although the issuance criteria are limited to assessing the impacts of incidental mortality and serious injury. Specifically, section 101(a)(5)(E)(i) applies generally to the "incidental, but not intentional, taking" of ESA-listed species by persons or vessels "engaging in commercial fishing operations." It does not differentiate between lethal and non-lethal taking. It is only when determining whether the fisheries are having a negligible impact on the species or stock that the assessment is limited to incidental mortality and serious injury. Thus, under a strict reading of section 101(a)(5)(E), an authorization is needed for both lethal and non-lethal taking, but neither can be issued unless NMFS determines that the lethal component (serious injury and mortality) would have a negligible impact. As such, the Commission recommends that NMFS refrain from authorizing *any* taking of right whales or other marine mammals in the section 7(b)(4) Incidental Take Statement provided with the Biological Opinion until it has issued a corresponding take authorization for that species or stock under section 101(a)(5)(E) of the MMPA.

In addition, the Commission is concerned about the lethal-take trigger for reinitiating consultation proposed in the draft Biological Opinion. The first trigger would be if "the amount or extent of incidental take is exceeded." The Commission interprets this to mean that consultation would be reinitiated whenever taking exceeds the level authorized in the Incidental Take Statement.⁷ Thus, any taking of a marine mammal from a species or stock for which no authorization has been provided would trigger reinitiation. The Commission recommends that this be clarified, and that the Biological Opinion specify that NMFS will reinitiate consultation any time an unauthorized taking of a right whale by serious injury or mortality occurs and that taking is linked to the covered fisheries.

⁷ Although the Commission has concerns about whether the authorization of sub-lethal takes of right whales comports with ESA section 7(b)(4)(C) and MMPA section 101(a)(5)(E), the Incidental Take Statement does authorize such take. Presumably, NMFS would reinitiate consultation if that authorized level of sub-lethal take were exceeded.

Further, the Commission notes that, on its face, the Incidental Take Statement applies to all sub-lethal takes, not just those resulting from entanglement in gear. This obviously presents additional problems, both in terms of detecting and quantifying these takes and triggering reinitiation. We note in particular that NMFS has adopted regulations that restrict approaches to within 500 yards of a right whale (50 C.F.R. § 222.32). These regulations were promulgated to reduce disturbance of right whales based, in part, on the concern that closer approaches would result in taking, or at least presented a fairly high probability that taking could occur.

No Jeopardy Determination

The most critical element of any Biological Opinion is its conclusion as to whether or not the agency action jeopardizes the survival and recovery of any listed species. As explained above, section 7(a)(2) of the ESA requires that the action agency “shall ... insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species....” There is little doubt or disagreement about the existential threat facing the North Atlantic right whale. Adult and juvenile North Atlantic right whales probably no longer die of ‘natural causes’. The only documented sources of mortality for those age classes are human sources, with entanglement and ship strikes accounting for the large majority of deaths. Between 1990 and 2010, the population had been increasing slowly, but since 2011, it has declined by roughly one percent per year (Pace et al. 2017). After centuries of whaling reduced the population from an estimated 9,000-21,000 whales (Monsarrat et al. 2015) to likely fewer than 100 animals by 1935, it had increased to nearly 500 animals by 2010. However, the latest estimate, using the Pace et al. 2017 method, puts the population at just 366 whales (95% credible interval: 353-377) as of January 2019. Since 2010, annual survival and fecundity rates have dropped, and females are dying at a faster rate than males. While sophisticated models, such as the mark-recapture model developed by Pace and colleagues, can provide precise and accurate population size estimates, it takes only a cursory look at the demographic data and rates to understand that the species is in serious trouble and that its status will continue to deteriorate rapidly if the human sources of mortality are not drastically reduced. At one level, population dynamics are very simple. Whether the population is increasing or decreasing depends solely on whether the average number of births exceeds deaths, or deaths outnumber births.⁸ From 2006 to 2011, births exceeded deaths every year by an average of 14.3 individuals per year. In contrast, from 2012 to 2017, deaths exceeded births every year but one, at an average rate of five individuals per year. In the six-year period ending in 2011, the population gained 86 individuals, but in the next six-year interval it lost 30, and there is little to suggest that the current trend will not continue. This situation is dire because of the multiple human-sources of mortality affecting the population and a severely reduced reproductive rate likely due to several factors, including the sub-lethal effects of entanglement injuries to females. The Biological Opinion sums up the situations succinctly in two statements—

The North Atlantic right whale population faces a high risk of extinction. The population size is small enough for the death of any individuals to have measurable effects in the projections on its population status, trend, and dynamics.

⁸ Assuming that immigration and emigration are not a factor, as is the case for the North Atlantic right whale, where the population constitutes the entire species.

The species has low genetic diversity, as would be expected based on its low abundance, and the species resilience to future perturbations is expected to be very low (Hayes et al. 2018). Furthermore, entanglement in fishing gear appears to have had substantial health and energetic costs that affect both survival and reproduction of right whales (van der Hoop et al. 2017).

It is reasonable and accurate to conclude from NMFS's analyses that any source of additional mortality and serious injury would "measurably" (which the Commission takes to mean 'significantly') increase the rate of decline of the population. NMFS estimates that even if the American lobster and Jonah crab fisheries stopped operating in federal waters, the combined impacts of state and Canadian fisheries and ship strikes in the United States and Canada alone would cause the population to continue to decline. Thus, any single mortality or serious injury caused by federal fisheries will only accelerate the decline and, applying NMFS's criteria, jeopardize the continued existence of the species.

NMFS's draft Biological Opinion, however, reaches a determination of 'no jeopardy'. NMFS used a population projection model (Linden 2021) to assess the impact of the action proposed in the Biological Opinion on the population on which the 'no jeopardy' determination is based. The model was used to compare 50-year stochastic population trajectories under different management scenarios. The key comparison was between the outcomes in the absence of the American lobster and Jonah crab fisheries, and with the fisheries operating over the next 50 years with the Framework measures implemented in the first ten years. Not surprisingly, NMFS found little difference in this comparison except in the first ten years. The Framework is intended to reduce entanglement mortality and serious injury due to the federal lobster and crab fisheries to near zero over ten years, which is what they would be in the absence of those fisheries. Under either of these scenarios, and assuming no changes in the other sources of mortality and serious injury, the number of females in the population is projected to decline by roughly 35-40 percent over the 50-year period.

Without any federal pot/trap fisheries, the Linden projection model estimates that the female population would decline from roughly 180 individuals now to 115 in 50 years, a loss of 64 females, or 36 percent of the female population (Figure S1, Linden 2021). The decline would be due largely to the impacts of state⁹ and Canadian fisheries, and to ship strikes in the United States and Canada. With continuation of the fisheries and full implementation of the Framework, the 50-year population estimate is 110 females, a 39-percent decline and just five fewer than under the scenario with no federal fishing. Based on there being a difference of only five fewer females at the end of fifty years, NMFS concluded that the American lobster and Jonah crab fisheries are not likely to jeopardize the continued existence of the North Atlantic right whale.

The Commission has several concerns about NMFS's rationale for the 'no jeopardy' determination. First, the determination defies logic and common sense. How could a fishery that, according to the best available science, has been responsible for mortality and serious injury rates far in excess of what the population can sustain under either ESA or MMPA standards, pose no jeopardy to an endangered species with such a small, declining population? This is particularly true for a species such as the North Atlantic right whale that is subject to unsustainable taking from

⁹ This scenario incorporates a 60-percent decrease in mortality and serious injury incidental to state pot/trap fisheries, due to the implementation of the proposed ALWTRP amendment.

other sources and has relatively low growth potential under the best of circumstances. By NMFS's own assessment, the species "faces a high risk of extinction" and the death of even a single individual would have "measurable effects in the projections of its population status, trend, and dynamics," which could only be negative.

Second, during the next ten years, the period over which the Framework would be phased-in, NMFS estimates that 15 whales will be killed or seriously injured due to entanglement and, as a result of all human impacts, 15 females will be lost. How can the loss of over eight percent of the female population be considered negligible under the MMPA or unlikely to reduce appreciably the likelihood of the species' survival and recovery (the ESA jeopardy standard)? The productivity of the population, and therefore its viability, is much more dependent on the number of breeding females than the number of males. Over a 50-year horizon, the difference between losing 65 versus 70 females might seem unimportant, but within the timeframe of the first 10 years, the loss of 15 females is significant. Equally important is the time frame over which jeopardy is assessed. Small population size intrinsically increases extinction risk. The recovery of a population is not simply a function of the size of the population and its intrinsic rate of increase. Small populations are more vulnerable to catastrophic anthropogenic or natural events (e.g., oil spills, disease, climate change), and "Allee effects", such as demographic stochasticity and genetic issues (e.g., inbreeding depression, or mate limitation) that can consign them to extinction. If North Atlantic right whales are to escape extinction, maximal protective measures must be implemented without further delay. Actions of uncertain efficacy implemented incrementally are a prescription for failure in small, declining populations. The vaquita is a sad demonstration of that fact. To delay more extensive protection for North Atlantic right whales, particularly where anticipated serious injury and mortality from the federal fisheries alone are expected to continue to exceed the species' potential biological removal level until phase four of the Framework is implemented, increases the likelihood of extinction and decreases the likelihood of recovery, thereby causing jeopardy. If the Framework performs as expected, then the federal fisheries may not jeopardize the population after it is fully implemented in ten years, but those fisheries certainly present a jeopardy situation now and are likely to continue to do so until at least 2030.

Third, the action proposed in the Biological Opinion, which is limited to federal fisheries, does not exist in a vacuum. Although efforts are ongoing by the states to reduce entanglements in fishing gear, by the federal government to reduce ship strikes, and by Canada to reduce both threats, deaths and serious injuries of right whales from those sources have continued and are almost certain to persist, as illustrated by the calf killed by a vessel strike this week in Florida. Thus, it is misleading to suggest that the population, even absent any fishing in federal waters, would not be declining at a substantial rate, or that a slight addition to that rate from federal fisheries, even a contribution as low as one additional death per decade, is unimportant. If the species is to be saved from extinction and allowed to recover to the point at which it no longer warrants listing under the ESA or to its optimal population size (the goal under the MMPA), then all sources of human-caused mortality and decreased fecundity need to be fully addressed immediately.

NMFS's rationale for its finding of 'no jeopardy' rests almost entirely on the full implementation of a Framework that is insufficiently specified, but which is intended to reduce mortality and serious injury risk to an insignificant level, over a period of 10 years. In essence, NMFS is basing its finding on speculative future actions, rather than on the effects of the action

actually being proposed—promulgation of regulations under phase one of the Framework. There are several problems with this approach.

First, it is unknown if the measures in the proposed amendment to the ALWTRP will have their desired effect. Static time-area closures are potentially a highly effective means to reduce the number of buoy lines in the water, but they only work as long as the whales continue to aggregate in those times and areas. Arguably, the North Atlantic right whale is in increased peril now because of an environmental regime shift that occurred over an unknown timespan around 2010, which resulted in the population's distribution shifting and increasing the risks to it from anthropogenic sources. There are no guarantees that climate-change driven shifts in distribution will not continue and reduce the effectiveness of time-area closures. Trawling-up as a means to reduce the number of buoy lines is an as yet unproven method to reduce entanglement frequency. Fishermen are well known for finding innovative and unanticipated ways to adapt to regulations that restrict their fishing practices. Often their best choice is to comply with the regulation, but sometimes they choose a legal option that does not change their practices as the regulators intended (i.e., in this case reducing the number of buoy lines in the water). NMFS could have avoided this uncertainty if they had selected a more predictable measure for reducing the number of buoy lines, such as placing caps on the allowed number of lines. The best available science (Knowlton et al. 2016) provides a strong expectation that weaker buoy lines will reduce the severity of entanglement injuries and the likelihood of deaths. However, much less is known about how large whales free themselves from entanglements by breaking entangling ropes. It is not known whether the complicated and varying schemes for weakening buoy lines in the proposed amendment to the ALWTRP will have the desired outcome. Experts have argued that numerous weak links placed in buoy lines every 40 feet or so, or rope that is weak throughout, should be the most effective at reducing entanglement, but even that is largely conjectural. We will not know to what extent the time-area closures, trawling-up requirements, and weak-line measures will work until they have been in widespread use for several years, and then, only with adequate monitoring. During those years, the expected risk reduction could fall far short of the expectations embodied in the Framework.

It is worth noting that NMFS has been attempting to achieve the “immediate” goal of section 118(f) of the MMPA for right whales—to reduce incidental mortality and serious injury to below the species’ potential biological removal level within six months of take reduction plan implementation—for 25 years. Since 1997, when it published the first take reduction plan for these fisheries, the agency has yet to achieve even that short-term goal, and has remained far from meeting the Act’s more ambitious longer-term goal of reducing incidental mortality and serious injury to insignificant levels approaching zero or from satisfying the negligible impact requirement necessary to obtain an incidental take authorization under section 101(a)(5)(E). In part, the agency’s efforts have fallen short due to overly optimistic assessments of the effectiveness of the take-reduction measures that it implemented. Given this track record, it is likely that the agency once again is overestimating the potential effectiveness of the measures being proposed in the Framework in lieu of adopting more stringent measures with a greater probability of success. It seems doubtful that similarly rosy projections concerning the effectiveness of the proposed measures assessed in the draft Biological Opinion will be realized or will satisfy the requirement of section 7(a)(2) that NMFS *insure* that authorization of the fisheries is not likely to jeopardize the continued existence of the North Atlantic right whale.

Second, even if take-reduction measures proposed under phase one of the Framework prove fully effective, reducing the risk to right whales enough to justify a ‘no jeopardy’ determination will require the implementation and effectiveness of additional measures in phases two, three, and four. However, those measures will not be implemented for some time and are identified only in vague terms—they will come from a list of options, which is only partially enumerated. NMFS states that it is committed to “implement[ing] measures that are necessary for the recovery of right whales....” However, it is nearly impossible to know at this point whether the measures that NMFS ultimately adopts will be sufficient to achieve that goal, which will entail mitigating more than entanglement risk. The Framework stresses that NMFS will have to engage in adaptive management to ensure that the Framework is successful. The Commission commends NMFS for recognizing this imperative, but much like the lack of details concerning prospective risk-reduction measures, the Framework provides scant information on what will be monitored, how data will be analyzed, or how the results will be used to fashion sufficiently effective measures or how such efforts will differ from similar, unsuccessful past efforts.

There is some suggestion (Pace et al 2017, Corkeron et al. 2018), but little hard evidence that past measures have had the intended effect or have been adequate in helping to meet the mandates of the ESA and MMPA. Given the large aggregations of whales that occur every year in the Massachusetts Restricted Area, which includes the right whale hotspots of Cape Cod Bay and the Great South Channel, there is reason to believe that existing time-area closures have prevented large numbers of entanglements, but there are no hard data to support that conclusion. In contrast, there are at least two objective metrics that demonstrate the measures have not been as effective as they need to be. As noted above, the ALWTRP is required to reduce the level of mortality and serious injury below the North Atlantic right whale stock’s potential biological removal (PBR) level within six months. Over the past 10 years, although documented fisheries-caused mortalities and serious injuries have been equal or close to PBR in two years (2010 and 2011), they have exceeded PBR in all other years by an average of 4.5 times PBR (range: 2.0-7.0). Furthermore, the extent to which mortality and serious injury has exceeded PBR has risen steadily over the ten years from 1.0 to 7.0 times PBR. The number of documented entanglements per year did not change significantly over the period from 1999 to 2009, but was more likely to have increased than decreased, contrary to the expected effect of the mitigation measures (Pace et al. 2014).

In the absence of strong evidence that past and current measures have been effective in reducing mortality and serious injury due to fisheries toward achieving management goals, or hard data to support NMFS’s conclusion that the Framework will be significantly more effective than current measures and capable of reducing mortality and serious injury in federal pot/trap fisheries from nearly five right whales per year to approximately one whale every ten years, that conclusion should be viewed with considerable skepticism. For the reasons noted above, the assumed effectiveness of the proposed management measures seems overly optimistic or, at the very least, not well supported other than by conjecture in the draft Biological Opinion and proposed ALWTRP amendment. This problem is amplified by the fact that many of the actions needed to meet the take-reduction goals of the MMPA and to support a ‘no jeopardy’ determination are future actions that have yet to be identified or vetted. Section 7(a)(2) of the ESA requires that a finding of ‘no jeopardy’ be based on a concrete agency action currently under review by the consulting agency, as opposed to nebulous measures to be developed and implemented over a 10-year timeframe. Because NMFS has made a concrete proposal only for phase one of the Framework, and in fact, would implement only that phase under the proposed rule, it should be the focus of the consultation. No measures have

been specified or assessed for implementing the remainder of the Framework. As such, it is not clear that currently unspecified measures constitute an agency “action” as that term is defined at 50 C.F.R. § 402.3 or that they are “reasonably likely to occur” and thus appropriate for inclusion in an assessment of the “effects of the action.”

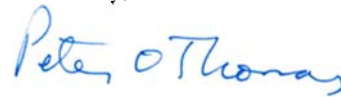
The following shortcomings with the draft Biological Opinion identified herein are particularly relevant to the Commission’s final recommendation—

- (1) the inclusion of an Incidental Take Statement for right whales and other marine mammals without also having authorized such take under section 101(a)(5)(E) of the MMPA;
- (2) the inclusion of speculative mitigation actions that are not reasonably certain to occur in the effects analysis;
- (3) the failure to consider adequately the environmental baseline and cumulative effects of future state and private activities¹⁰ (e.g., fishing and shipping) in its analyses; and
- (4) making a finding of “no jeopardy” despite predicting that an average of more than two right whales will be killed in federal fisheries every year for the next 10 years.

In light of these problems, the Commission recommends that NMFS (a) withdraw the draft Biological Opinion, (b) rectify or otherwise address the deficiencies described herein, and (c) expand the proposed action to include measures that will quickly reduce mortality and serious injury in federal pot/trap fisheries to insignificant levels, meaning on the order of one whale death in ten years.

We hope these comments and recommendations are helpful. Please contact me if you have questions regarding the Commission’s recommendations.

Sincerely,



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

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¹⁰ Although this is not discussed in detail above, regulations at 50 C.F.R. § 402.02 define the terms “environmental baseline” and “cumulative effects” as follows— “The *environmental baseline* includes the past and present impacts of all Federal, State, 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 which are contemporaneous with the consultation in process.” “*Cumulative effects* 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.”

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