

RECORD OF DECISION
for the
FINAL ENVIRONMENTAL IMPACT STATEMENT
on
AMENDMENT TO THE ATLANTIC LARGE WHALE TAKE REDUCTION PLAN:
RISK REDUCTION RULE

National Marine Fisheries Service
Greater Atlantic Regional Office

Introduction

This document comprises the record of decision (ROD) for approval of amendments to the Atlantic Large Whale Take Reduction Plan under the authority of Section 118 of the Marine Mammal Protection Act (MMPA). Pursuant to the National Environmental Policy Act (NEPA), NMFS prepared a Final Environmental Impact Statement (FEIS) to analyze alternative risk reduction measures intended to reduce mortality and serious injury to North Atlantic right whales and other large whales caused by entanglement in Northeast U.S. commercial trap/pot fisheries. The ROD is based on and incorporates, as described below, the FEIS, the Regulatory Flexibility Analysis, Regulatory Impact Review, and all other decision and analytical documents prepared for this action.

BACKGROUND

The North Atlantic right whale population has been declining since 2010, and the most recent estimate indicates a population of no more than 368 individuals in 2019¹. The decline has been exacerbated by an Unusual Mortality Event that began in 2017 during a period of low calving. While climate change and the availability and redistribution of prey appear to be contributing to the population's declining fitness, one of the primary causes of mortality and serious injury of North Atlantic right whales is entanglement in fishing gear. Most recent mortalities and serious injuries have occurred in the Gulf of St. Lawrence and, where gear has been recovered and identified, in Canadian fishing gear. However, entanglement-related serious injuries and mortalities first seen in U.S. waters have also persisted. With mortalities continuing to outpace

¹ Pace, (2021) provides a peer-reviewed population estimate that has not yet been incorporated into the annual Stock Assessment Reports that mark the formal adoption of a new population estimate. The new estimate was prepared through a transparent process that applied methods that NMFS has used for a number of years to estimate the population. Given that the analysis indicates a further decline in the population, NMFS is making a conservative assumption that this preliminary number will likely represent the final number in the stock assessment report and is using it when referring to the right whale population size.

Pace, RM. 2021. Revisions and further evaluations of the right whale abundance model: improvements for hypothesis testing. NOAA Tech. Memo. NMFS-NE 269.

births, the population decline is continuing, and further mitigation of entanglements that cause mortality or serious injury is required.

The MMPA establishes a potential biological removal (PBR) level of less than one right whale mortality or serious injury per year in U.S. commercial fisheries. When incidents exceed that level of mortality and serious injury, NMFS convenes a Take Reduction Team composed of stakeholders that make recommendations for reducing fishery-caused serious injury and deaths to below PBR. NMFS has previously implemented several regulations, developed with input from the Atlantic Large Whale Take Reduction Team (ALWTRT), to reduce the impacts of fishing gear on Atlantic large whales. The resulting Atlantic Large Whale Take Reduction Plan (Plan) includes area closures, gear configuration requirements, and gear marking rules. The most recent rulemaking conducted in 2014 and amended in 2015 sought to reduce the risk of entanglement by decreasing the number of buoy lines fished by Atlantic trap/pot fisheries managed under the Plan.

During the April 2019 meeting, the ALWTRT provided near-consensus recommendations to NMFS to reduce entanglements that cause right whale mortalities and serious injuries in trap/pot gear in New England waters by at least 60 percent to achieve the PBR level of less than one right whale per year in Northeast Region lobster and Jonah crab trap/pot fisheries. At the 2019 meeting, the ALWTRT discussed several management options to decrease the risk and severity of entanglements in these fisheries including: Vertical line reduction through trap or line limits and ropeless fishing technologies; gear modifications to reduce the breaking strength of ropes so whales could break free; and seasonal area closures where right whales can be predicted to aggregate seasonally. Ultimately, all but one ALWTRT member present recommended a framework of jurisdiction-specific measures that included reducing the number of lines in the water and reducing mortality and serious injury in remaining lobster and Jonah crab trap/pot buoy lines by specifying a low (no greater than 1,700 pounds/771 kilograms) maximum breaking strength for buoy lines through the use of engineered weak rope or by regular weak inserts within the buoy line. In addition to changes in line numbers and strength, the ALWTRT strongly supported expansion of gear marking requirements to reduce uncertainty about where and in which fisheries large whales are entangled. The Team recognized the increasing value of the Massachusetts Restricted Area at protecting spring aggregations of right whales particularly in Cape Cod Bay, and agreed that continued protection of that area merited credit toward the target risk reduction.

Scoping meetings to prepare the Environmental Impact Statement identified the general targets for line reduction and weak rope measures provided in the framework agreement, which were not as specific to analyze or describe as specific regulatory actions. On August 2, 2019, NMFS published a Notice of Intent to draft an environmental impact statement (84 FR 37822) with a 45 day comment period. In August and September of 2019, we received over 89,000 written comments and held eight public meetings attended by over 800 stakeholders. Additionally, given the strong support for a jurisdictional approach, New England states were given the lead in scoping with stakeholders in their states and developing measures and implementation details related to the Team's framework recommendation. Maine, New Hampshire, Massachusetts, and Rhode Island conducted scoping before and after the April 2019 Team meeting and provided proposals to NMFS. Lacking a state jurisdictional counterpart, NMFS also worked closely with

the Atlantic Offshore Lobstermen's Association on measures for the offshore federal Lobster Management Area (LMA) 3.

The MMPA directs NMFS to adopt take reduction teams' recommended plan modifications as regulations, or to identify and explain why measures different from what the team recommended were implemented. The alternatives proposed by the states, the alternatives analyzed in the Draft Environmental Impact Statement (DEIS), and the final regulatory alternatives detailed in the FEIS are not the same as the recommendations provided by the Team. The framework provided by the April 2019 meeting shaped the overarching goals. However, as a general framework, the Team's recommendations were not directly translatable into implementing regulations. The scoping conducted by NMFS and the states after the Team's input informed the further development of region-specific approaches to risk reduction. These measures were further refined based on stakeholder feedback, feasibility, improvement of risk reduction estimate modeling, and public scoping that were used to develop alternatives in the DEIS and proposed rule. A 60 day comment period was announced in the Notice of Availability of the DEIS (85 FR 86919) and notice of the proposed rule (85 FR 86878). NMFS received extensive comments on the DEIS and proposed rule that resulted in further modifications to the alternatives analyzed and associated changes in the final rule. The final rule is informed by improvements in the analytical tools used to develop and assess risk reduction of the alternatives, as well as regional operational concerns and safety or vessel capacity-related details regarding longer trawls. These details provided by states and fishermen, described as "conservation equivalencies," were also considered in determining the final measures.

As detailed in Table 1, Alternatives 2 and 3 analyzed in the FEIS align with the basic principles within the Team's framework recommendations in that they were estimated by the Decision Support Tool to achieve at least 60 percent risk reduction in the Northeast Region lobster and Jonah crab trap/pot fisheries, distributed across jurisdictions. They both apply broad based line reductions through trawling up and reduction of line strength through the use of weak rope or weak inserts. One large change from the Team's recommendations is that Alternatives 2 and 3 include new seasonal restricted areas, closed to lobster and Jonah crab buoy lines in areas where right whales are known to aggregate based on the best available data. The addition of restricted areas were necessary to reduce the co-occurrence of right whales and buoy lines to supplement the other measures in meeting the risk reduction goal, as well as in response to public input related to areas of high whale use. Existing and new seasonal restricted areas were modified to allow fishermen to fish without persistent buoy lines, under authorizations that would conditionally exempt them from fishery management surface marking requirements. Additionally, the FEIS considers measures implemented by the state of Massachusetts to reduce state fishery impacts on right whales.

ALTERNATIVES CONSIDERED IN THE FEIS

The FEIS describes and analyzes a range of alternatives informed by recommendations of the Atlantic Large Whale Take Reduction Team (Team), scoping input, and proposals from New England state fishery management agencies, input from public commenters, published literature, and fishery and whale distribution data. MMPA Section 118 directs NMFS to develop take reduction plans to reduce the incidental mortality and serious injury of marine mammals

incidentally taken by U.S. commercial fishing operations to levels less than the Population Biological Removal level (PBR) for the marine mammal stock. For right whales, PBR is currently 0.8 mortalities and serious injuries per year.

Evaluating right whale entanglements in U.S. commercial fisheries is difficult, as they occur from Florida through Canadian waters, and entangled right whales are often not detected for several months after the incident when they are miles from the initial entanglement site. For the purposes of creating a risk reduction target, NMFS assigned half of all documented right whale entanglement incidents of unknown origin to U.S. fisheries. Under this assumption, a 60 percent reduction in serious injury or mortality would be the minimum needed to reduce right whale mortality and serious injury in U.S. commercial fisheries from an observed annual average of 2.2 to a PBR (2010 - 2018) of less than one whale per year. Although even less is known about the location or cause of estimated but unobserved right whale mortalities, NMFS determined that most are likely human-caused and, based on observed mortalities, some are caused by U.S. commercial fisheries. NMFS provided the Team with an upper risk reduction target of 80 percent, assuming that about half of undetected mortalities were caused by fishing and half of those occurred in U.S. fisheries, while acknowledging the uncertainty within the assumptions in development of the target.

To compare the effectiveness of state and federal regulatory elements in reducing the risk of entanglement to right whales relative to the status quo, a Decision Support Tool (DST) was developed by the Northeast Fisheries Science Center. The DST aids in the comparison of spatial management measures by calculating right whale entanglement risk based on three components: the density and location of buoy lines in the water, the distribution of whales, and a gear threat model to determine the relative threat of gear based on gear strength and configuration.

Table 1 (below) summarizes the alternatives considered in the FEIS.

Table 1: A summary of the regulatory elements of the risk reduction alternatives analyzed in the FEIS, arranging the requirements by lobster management area and geographic region (where appropriate). The dark gray highlighted text represents regulations that will be implemented by a state or through ongoing or upcoming fishery management practices. OC = Outer Cape

Component	Area	Alternative 2 (Preferred)	Alternative 3
Restricted Areas	All existing and new closures become closed to buoy lines	Allow trap/pot fishing without buoy lines. Will require exemption from fishery management regulations requiring buoys and other devices to mark the ends of the bottom fishing gear.	Allow trap/pot fishing without buoy lines. Will require exemption from fishery management regulations requiring buoys and other devices to mark the ends of the bottom fishing gear.
	LMA 1 Restricted Area, Offshore ME LMA 1/3 border, zones C/D/E	Oct – Jan	Oct – Feb
	South Island Restricted Area	Feb – April: Area from Non-preferred A in DEIS.	Feb – May: L-shaped area closed to buoy lines.
	Massachusetts Restricted Area	Credit for Feb-Apr, state waters in MRA have a soft opening until May 15, until no more than three whales remain as confirmed by surveys	Federal extensions of restricted area throughout MRA and LMA 1/OC state waters unless surveys confirm that right whales have left the area.
	Massachusetts Restricted Area North	Feb-Apr: Expand MRA north in MA state waters to NH border	Feb-Apr: Expand MRA north in MA state waters to NH border
	Georges Basin Restricted Area	-	Closed to buoy lines May through August.
Line Reduction	ME exemption line – 3 nm (5.6 km), Zones A, B, F, G	3 traps/trawl	-
	ME exempt area – 3 nm (5.6 km), Zones C, D, E	Status quo (two traps/trawl)	-
	ME 3 (5.6 km) – 6 nm*, Zone A West**	8 traps/trawl per two buoy lines or 4 traps/trawl per one buoy line	Line allocations capped at 50 percent of average monthly lines in federal waters
	ME 3 (5.6km) – 6 nm*, Zone B	5 traps/trawl per one buoy line	
	ME 3 (5.6 km) – 6 nm*, Zones C, D, E, F, G	10 traps/trawl per two buoy lines or 5 traps/trawl per one buoy line	Same as above
	ME 3–12 nm (5.6 km–22.2 km), Zone A East**	20 traps/trawl per two buoy lines or 10 traps/trawl per one buoy line	Same as above
	ME 6* – 12 nm (22.2 km), Zone A West**	15 traps/trawl per two buoy lines or 8 traps/trawl per one buoy line	Same as above
	ME 6* – 12 nm (22.2 km), Zone B, D, E, F	10 traps/trawl per two buoy lines or 5 traps/trawl per one buoy line (status quo in D, E, & F)	Same as above
	ME 6* – 12 nm (22.2 km), Zone C, G	20 traps/trawl per two buoy lines or 10 traps/trawl per one buoy line	Same as above
	MA, NH LMA 1, 6* – 12 nm (22.2 km)	15 traps/trawl	Same as above

Line Reduction Continued	OC 3 – 12 nm (5.6 – 22.2 km)	15 traps/trawl	Same as above
	LMA 1 over 12 nm (22.2 km)	25 traps/trawl	Same as above
	LMA 3, North of 50 fathom line on the south end of Georges Bank	Year-round: 45 traps/trawl	May - August: 45 trap trawls;
	LMA 3, South of 50 fathom line on the south end of Georges Bank	Year-round: 35 traps/trawl,	Same as above
	LMA 3, Georges Basin Restricted Area	Year-round: 50 traps/trawl,	Same as above
	LMA3	Increase maximum trawl length from 1.5 nm (2.78km) to 1.75 nm (3.24 km)	Increase maximum trawl length from 1.5 nm (2.78km) to 1.75 nm (3.24 km)
Other Line Reduction	LMA 2	Existing 18% reduction	-
	LMA 3	Existing and anticipated 12% reduction in buoy lines	-
Buoy Weak Link	Northeast Region	For all buoy lines incorporating weak line or weak insertions, remove weak link requirement at surface system	Retain current weak link/line requirement at surface system but allow it to be at base of surface system or, as currently required, at buoy
Weak Line Or Weak Insertion	ME Exempt State Waters	1 weak insertion 50% down the line	Full weak rope in the top 75% of both buoy lines
	ME exemption line – 3 nm (5.6 km)	1 weak insertion 50% down the line	Same as above
	MA State Waters	Weak inserts every 60 ft (18.3 m) or full weak line in top 75 %	Same as above
	NH State Waters	1 weak insertion 50% down the line	Same as above
	RI State Waters	Weak inserts every 60 ft (18.3 m) or full weak line in top 75% of line	Same as above
	ME Zone A West**, B, C, D, E; federal waters 3 – 12 nm (5.6 – 22.2 km)	2 weak insertions, at 25% and 50% down line	Same as above
	ME Zone A East**, F, and G; federal waters 3 – 12 nm (5.6 – 22.2 km)	1 weak insertion 33% down the line	Same as above
	MA and NH LMA 1 , OC; federal waters 3 – 12 nm (5.6 – 22.2 km)	2 weak insertions, at 25% and 50% down line	Same as above
	LMA 1 & OC over 12 nm (22.2 km)	1 weak insertion 33% down the line	Same as above
	LMA 2	Weak inserts every 60 ft (18.3 m) or full weak line in top 75% of line	Same as above
LMA 3	One buoy line weak year round to 75%	May - August: one weak line to 75% and 20% on other end. Sep – Apr: two weak “toppers” down to 20%	

Gear Marking	State Waters	One 3 ft (91.4 cm) long state-specific colored mark in surface system within 2 fa of buoy in addition to at least two 1 ft (30.5 cm) marks that must be changed to state color	One 3 ft (91.4 cm) long state-specific colored mark in surface system within 2 fa of buoy and require identification tape indicating home state and fishery woven through buoy line
	Federal waters, except LMA3 ***	Add one 3 ft (91.4 cm) long state specific colored mark within 2 fa of the buoy, at least three 1 ft (30.5 cm) marks that must be changed to state color, and four 1 ft (30.5 cm) long green marks must be added within 6 in. of each state specific mark	One 3 ft (91.4 cm) long state-specific colored mark in surface system within 2 fa of buoy and require identification tape indicating home state and fishery woven through buoy line
	LMA3	Add one 3 ft (91.4 cm) long black mark within 2 fa of the buoy line to existing three 1 ft (30.5 cm) marks in black and add four 1 ft (30.5 cm) long green marks within 6 in. of each black mark	One 3 ft (91.4 cm) long black mark in surface system within 2 fa of buoy and require identification tape indicating home state and fishery woven through buoy line

*Notes: See 50 CFR 229.32 for delineations of regulated waters and associated terms, such as exempted waters. The 6 mile line refers to an approximation, described in 50 CFR 229.32 (a)(2)(ii).

**Maine Zone A East is the portion of Zone A that is east of 67°18.00' W and Maine Zone A is west of this longitude.

*** For dual permitted vessels, state regulations will determine whether green marks can remain on gear being fished in state waters.

SUMMARY OF SELECTED ALTERNATIVES

Based on the analysis completed in the FEIS, NMFS selected management alternatives that the DST estimated would reduce the risk of mortality and serious injuries to North Atlantic right whales by at least 60 percent. NMFS is approving and implementing the following management measures, estimated to reduce risk to right whales by 60 to 69 percent, as modifications to the regulations found in 50 CFR part 229.32 for the Northeast Region (Maine through Rhode Island) American lobster and Jonah crab trap/pot fisheries and, for consistency, the Atlantic Coastal Fisheries Cooperative Management (ACFCMA) regulations at 50 CFR Part 697.21.

Under 50 CFR part 229.32, this rule:

- Increases the minimum number of traps per trawl based on area fished and distance fished from shore in the Northeast Region;
- Modifies existing restricted areas from seasonal fishing closures to seasonal closures to fishing with persistent buoy lines;
- Expands the geographic extent of the Massachusetts Restricted Area to include Massachusetts state waters north to the New Hampshire border;
- Establishes two new restricted areas that are seasonally closed to fishing for lobster or Jonah crab with persistent buoy lines;

- Requires buoy lines to be modified to incorporate rope engineered to break at no more than 1,700 lb (771.1 kg) or weak insertion configurations that break at no more than 1,700 lb (771.1 kg) at specified locations on the rope; and
- Requires additional marks on buoy lines to differentiate vertical buoy lines by principal port state, includes unique marks for federal waters, and expands requirements into areas previously exempt from gear marking. For dual permitted vessels, state regulations will determine whether the unique federal marks can remain on gear being fished in state waters.

Under 50 CFR Part 697.21, this rule:

- Allows up to ten traps per trawl to be fished with one buoy line in Maine Lobster Management Zones based on a Maine Department of Marine Resources request for conservation equivalencies; and
- Extends the maximum length of lobster trawls in Lobster Management Area 3 to allow trawls of up to 1.75 miles (3.24 km) to accommodate the requirement for more traps to be fished between buoy lines.

FACTORS CONSIDERED IN MAKING A DECISION ON THE FINAL ACTION

The Center for Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA require agencies to not only state the outcome of the decisions, but also to discuss how the decision was affected by the preferences among alternatives and to identify and discuss all factors that led to the decision. In making a decision regarding approval of the Plan amendment, NMFS considered the analysis of alternatives contained within the FEIS, associated environmental impacts, the extent to which the impacts could be mitigated, and the agency's consideration of the objectives of the final action as they relate to the Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA). NMFS has also considered the public and agency comments received during the NEPA and proposed rule comment periods. NMFS analyzed the conservation benefit of the action versus the costs to the fishing industry, both economically and from a safety standpoint.

Under the MMPA, NMFS is required to establish and convene take reduction teams to develop and implement take reduction plans for reducing the levels of mortality and serious injury of strategic stocks of marine mammals in Category I and II fisheries (i.e., those with frequent or occasional mortality and serious injury of marine mammals, respectively). The MMPA defines a strategic stock as a marine mammal stock: (1) For which the level of direct human-caused mortality exceeds the PBR level; (2) which, based on the best available scientific information, is declining and is likely to be listed as a threatened species under the ESA within the foreseeable future; or (3) which is listed as a threatened or endangered species under the ESA or as depleted under the MMPA. North Atlantic right whales and fin whales are strategic stocks because they are listed as endangered under the ESA. Because these stocks interact with Category I and II fisheries, a take reduction plan is required to assist in the recovery of these large whale species. PBR, as defined by the MMPA, means the maximum number of animals, not including natural mortalities that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. Pursuant to Section 118 of the MMPA, NMFS is required to assemble a take reduction team composed of representatives from the fishing

industry, fishery management councils, state and Federal resource management agencies, the scientific community, and conservation groups. In general, the purpose of the take reduction team is to provide recommendations and assist NMFS in developing management measures for inclusion in a take reduction plan. After a plan is implemented, the take reduction team provides NMFS with recommendations on implementation activities, feedback on the effectiveness of current management measures, and strategies for modifying the plan as necessary.

With respect to the ESA, Section 7 requires Federal agencies conducting, authorizing, or funding activities that may affect threatened or endangered species to ensure that those impacts do not jeopardize the continued existence of listed species or result in the destruction or adverse modification of habitat determined to be critical. Consultation on the Atlantic Large Whale Take Reduction Plan was reinitiated on May 3, 2021, including the potential impacts of the alternatives on ESA-listed species. Consultation concluded on May 25, 2021, finding that the Plan will have wholly beneficial effects and is not likely to adversely affect ESA-listed species or designated critical habitat.

The effects of federal fisheries regulated under the Plan are fully considered under the section 7 consultations conducted for the fishery management plans, and incidental take attributed to federal fisheries is authorized under those consultations. ESA consultations on NMFS authorization of fisheries managed under federal fisheries management plans (FMPs) and federal regulations compatible with interstate fisheries management plans have been conducted a number of times since the Atlantic Large Whale Take Reduction Plan was initiated. On October 17, 2017, an ESA 7(a)(2)/7(d) memo issued by NMFS stated a consultation had been reinitiated on the federally permitted Atlantic deep sea red crab and American lobster fisheries, as well as other fisheries that use fixed gillnet and trap/pot gear. In January and February of 2018, four environmental organizations filed two lawsuits in the U.S. District Court for the District of Columbia alleging violations of the ESA and MMPA, and the two lawsuits were consolidated into a single case. On April 9, 2020, the Court ruled against NMFS on the parties' cross motions for summary judgment, finding that the 2014 Biological Opinion (Opinion) on the lobster fishery was legally deficient. On August 19, 2020, the Court issued an order that vacated the 2014 Opinion, but stayed the vacatur until May 31, 2021, by which date NMFS anticipated issuing a new final Biological Opinion and concluding the consultation that was initiated in 2017 for the federal American lobster fishery and other federal fisheries.

Pursuant to section 7 of the ESA, NMFS issued a Biological Opinion on May 27, 2021, that considered the effects of the NMFS' authorization of ten federal fisheries, NMFS' North Atlantic Right Whale Conservation Framework, and the New England Fishery Management Council's Omnibus Essential Fish Habitat Amendment 2 on ESA-listed species and designated critical habitat. The ten federal fisheries considered in the Opinion include: (1) American lobster; (2) Atlantic bluefish; (3) Atlantic deep-sea red crab; (4) mackerel/squid/butterfish; (5) monkfish; (6) Northeast multispecies; (7) Northeast skate complex; (8) spiny dogfish; (9) summer flounder/scup/black sea bass; and (10) Jonah crab. The American lobster and Jonah crab fisheries are permitted and operated through implementing regulations compatible with the interstate fishery management plans (ISFMP) issued under the authority of the Atlantic Coastal Fisheries Cooperative Management Act; the other eight are managed under federal FMPs issued under the authority of the Magnuson-Stevens Fishery Conservation and Management Act.

The North Atlantic Right Whale Conservation Framework considered in the Opinion specifies reduction targets for right whale mortality and serious injury in the federal fisheries. Amendments to the Atlantic Large Whale Take Reduction Plan are anticipated to contribute to progress towards the ESA goals included in the Conservation Framework. The proposed rule for this action (released December 31, 2020) is considered Phase 1 within the Conservation Framework. The actions in this final rule achieve the same or more risk reduction than the proposed rule and are, therefore, consistent with the measures considered in the Section 7 consultation and in the May 27, 2021 Opinion.

The Opinion determined that the actions under those management plans and as mitigated by the Conservation Framework may adversely affect, but are not likely to jeopardize, the continued existence of North Atlantic right, fin, sei, or sperm whales; the Northwest Atlantic Ocean distinct population segment (DPS) of loggerhead, leatherback, Kemp's ridley, or North Atlantic DPS of green sea turtles; any of the five DPSs of Atlantic sturgeon; the Gulf of Maine DPS Atlantic salmon; or giant manta rays. The Opinion also concluded that the proposed action is not likely to adversely affect designated critical habitat for North Atlantic right whales, the Northwest Atlantic Ocean DPS of loggerhead sea turtles, or the U.S. DPS of smalltooth sawfish, Johnson's seagrass, or elkhorn and staghorn corals. An Incidental Take Statement (ITS) was issued in the Opinion. The ITS includes reasonable and prudent measures and their implementing terms and conditions, which NMFS determined are necessary or appropriate to minimize impacts of the incidental take in the fisheries assessed in this Opinion.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

As required by CEQ NEPA implementing regulations, NMFS shall identify the "alternative or alternatives which were considered to be environmentally preferable (40 CFR Part 15.05.2(b))." The environmentally preferred alternative is the alternative which causes the least damage to the biological and physical environment, and which best protects, preserves and enhances historic, cultural and natural resources. NMFS has determined that, overall, the measures being implemented represent the environmentally preferable alternative when considering the balance of environmental effects that might accrue from these measures in the complex and diverse fisheries affected.

NMFS has identified Alternative 2 as the preferred alternative in this FEIS. The alternative includes measures largely drawn from proposals from the Team, New England states, input from fishermen, and public comments. Measures were evaluated using the DST, which estimated that Alternative 2 would reduce risk of mortality and serious injury from entanglement by a minimum of 60 to 69 percent in the Northeast Region lobster and Jonah crab trap/pot fisheries by reducing co-occurrence of whales and buoy lines and by reducing the threat of severe entanglement through the introduction of weak rope or inserts into buoy lines. Risk reduction evaluated under Alternative 2 includes concurrent fishery management measures and measures that have been implemented by Massachusetts regulations (in state waters) and will be implemented by Maine regulations (in exempt waters) that would also reduce entanglement risk to right whales.

These biological benefits to whale populations have socioeconomic implications for the general public. Society places real (and potentially measurable) economic value on simply knowing that large whale populations are flourishing in their natural environment (often referred to as “existence value”) and will be preserved for the enjoyment of future generations. Whale conservation enhances intrinsic values that society holds for healthy, flourishing whale populations. Increasing whale populations would have a positive impact on the consumer surplus derived from whale watching (a use benefit) and may increase producer surplus for operators of whale watch vessels. Finally, healthy whale populations provide important ecosystem services, driving marine nutrient recycling that can increase primary productivity in areas where whales are present in high density (Martin et al., 2021; Ratnarajah et al. 2014; Roman and McCarthy 2010²; Smith et al. 2013³). This includes contributions to ocean carbon cycle, which has potential implications for climate change (Martin et al. 2021⁴). North Atlantic right whales’ feces contain nitrogen and phosphorous, both of which are essential nutrients for phytoplankton growth, which is likely an important part of the nitrogen cycle in the Gulf of Maine (Roman and McCarthy 2010, Roman et al. 2016⁵). Before whaling, it was estimated that the whale nitrogen pump was estimated to introduce three times the amount of nitrogen compared to the atmosphere (Roman and McCarthy 2010). Thus, rebuilding North Atlantic right whale populations could benefit ocean health.

² Roman, J., & J. J. McCarthy. (2010). The Whale Pump: Marine Mammals Enhance Primary Productivity in a Coastal Basin. *PLoS ONE*, 5(10): e13255. <https://doi.org/10.1371/journal.pone.0013255>

³ Smith, L. V., A. McMinn, A. Martin, S. Nicol, A. R. Bowie, D. Lannuzel, & P. van der Merwe (2013). Preliminary investigation into the stimulation of phytoplankton photophysiology and growth by whale faeces. Vucetich, J. A., Bruskotter, J. T., & Nelson, M. P. (2015). Evaluating whether nature’s intrinsic value is an axiom of or anathema to conservation. *Conservation Biology*, 29(2), 321–332. <https://doi.org/10.1111/cobi.12464>, 446: 1–9. <https://doi.org/10.1016/j.jembe.2013.04.010>

⁴ Martin, A. H., H. C. Pearson, G. K. Saba, & E. M. Olsen. 2021. Integral functions of marine vertebrates in the ocean carbon cycle and climate change mitigation. *One Earth*. 4(5): 680–693. <https://doi.org/10.1016/j.oneear.2021.04.019>

⁵ Roman, J., J. Nevins, M. Altabet, H. Koopman, & J. McCarthy. 2016. Endangered Right Whales Enhance Primary Productivity in the Bay of Fundy. *PLoS ONE*, 11(6): e0156553. <https://doi.org/10.1371/journal.pone.0156553>

Table 2: The summary of all quantitative measures for each alternative, including the percent change in annual buoy lines, reduction in co-occurrence, and change in line strength and gear threat due to weak line measures. The risk reduction and co-occurrence estimates with and without the credit for the implementation of the Massachusetts Restricted Area (MRA) are shown (with the upper and lower bound estimates provided for weak inserts)

Alternative:	1 <i>(i.e. baseline)</i>	2 <i>(Preferred)</i>	3 <i>(Non-preferred)</i>
Line Reduction		% Reduction	% Reduction
Risk Reduction		60%	72%
Risk Reduction (with MRA Credit)		69% – 73%	
Line Reduction		7%	7%
Co-Occurrence		% Reduction	% Reduction
Right Whale		54%	60%
Right Whale (with MRA Credit)		65%	
Humpback Whale		12%	19%
Fin Whale		14%	17%
Weak Line			
Mean Line Strength	2162	1976	1753
Change in Line Strength		9%	19%
Change in Gear Threat		17%	29%

Relative risk reduction benefits:

Alternative 2, detailed in Table 1, achieves an estimated 69 percent risk reduction through measures derived primarily from proposals submitted by the states, extensive scoping with fishermen, and from the Massachusetts Restricted Area (MRA). Note that the Team recommended giving credit for this seasonal closure to buoy lines because it was not fully implemented until 2015, two years before the 2017 baseline year, and because in recent years it has attracted a larger portion of the right whale population, increasing its value towards reducing co-occurrence. Along with a new restricted area in LMA 1, Alternative 2 provides benefits due primarily to a reduction in co-occurrence between right whales and buoy lines at rates nearly as high (without credit for MRA) or higher (with MRA) than Alternative 3, which includes more restricted areas and longer seasonal closures (see Table 1). Both alternatives demonstrate comparable line reduction; however, the line cap allocation approach in Alternative 3 cannot be easily implemented due to inconsistent effort reporting across states and related uncertainty regarding how fishing histories would be identified and allocations applied. Such measures would take more time to implement, likely several years before the conservation benefits could be provided, at a time when additional conservation measures for right whales are urgently needed. There is additional uncertainty about how fishermen would react to line cap allocations, with possible shifting seasonal fishing patterns to make up catch loss during traditional high effort seasons that could increase effort in months where effort has been historically low. For both Alternatives, the broad use of line reduction and weakened line across most vessels that fish in the Northeast Region would be resilient to the potential shifts in right whale distribution and density. This may have a higher benefit in Alternative 3. As indicated in Table 3, the implementation costs of the risk reduction measures in Alternative 2 are at least two thirds lower than the costs of Alternative 3.

Table 3: A summary of initial compliance costs associated with trawling up, buoy line closures, and a line cap (2020 dollars) compared to co-occurrence reduction for each alternative without the MRA credit.

	Alternative 2	Alternative 3
Trawling Up Lower	\$1.6 million	\$1.0 million
Trawling Up Upper	\$8.8 million	\$2.0 million
New Buoy Line Closure Lower	\$1.3 million	\$3.0 million
New Buoy Line Closure Upper	\$2.0 million	\$4.1 million
Line Cap Lower		\$3.9 million
Line Cap Upper		\$13.4 million
Total Lower	\$2.9 million	\$7.8 million
Total Upper	\$10.8 million	\$19.5 million
Co-occurrence Reduction Score	54%	60%

In achieving the goal of reducing takes below PBR, the MMPA does not require NMFS to take into account the economics of the fishery. However, in choosing between two Alternatives that will accomplish the goal of reaching PBR, the MMPA does not prohibit the consideration of economics. Here, the agency’s choice of the preferred measures to include in the final rule balances various factors including economics, but does not do so at the expense of the risk reduction target to reach PBR. In addition to the cost effectiveness of the risk reduction measures in Alternative 2, the gear configuration components of these measure were derived from proposals submitted by the states, as well as input during the scoping and public comment periods, and were well informed by research on the amount and location of forces on rope during commercial fishing as well as extensive outreach with fishermen in those states and in the LMA 3 offshore fleet. Incorporating measures developed with input from the regulated community results in measures that are operationally feasible, safer, and more likely to result in higher compliance because of fishermen’s input in their development.

NMFS believes that Alternative 2, the preferred alternative, addresses the Purpose and Need for Action stated in the FEIS and incorporates measures that will help to conserve large whales by reducing the potential and severity of interactions with commercial fishing gear. Included are region-wide measures that will be resilient to shifting right whale distribution, that were informed by stakeholders and therefore considered feasible, that include seasonal restrictions to protect predictable aggregations of right whales, and were supplemented by state conservation measures that will be implemented before or simultaneously by Massachusetts and Maine. Alternative 2 provides these benefits with more certainty and likely in a shorter timeframe than Alternative 3, at a point when delay and uncertainty in risk reduction is not a desirable outcome, given the perilous state of right whales. On this basis, NMFS believes that Alternative 2 (Preferred) offers the best option for achieving compliance with MMPA requirements and represents the environmentally preferred alternative.

Changes made in the preferred alternative and final rule as a result of comments on proposed rule, DEIS, and FEIS

Changes were made to the preferred alternative to include adoption of conservation equivalencies in Maine LMA 1 waters, LMA 2 and LMA 3 waters to mitigate the potential economic costs caused by the regulation.

Where risk reduction was sufficient, conservation equivalencies requested through public comments on the DEIS and Proposed Rule to mitigate operational and safety concerns were accepted and are included in this final rule. These include conservation equivalencies in Maine LMA 1 waters, LMA 2, and LMA 3 waters. To enable the Maine LMA 1 conservation equivalencies, this rule also modifies regulations implementing the Atlantic Coastal Fisheries Cooperative Management Act at 50 CFR 697.21(b)(2), increasing the maximum number of traps on a trawl with a single buoy line from three to ten in some Maine Zones. This would allow vessel operators to trawl up to a 20-trap trawl with two buoy lines, or to use two 10-trap trawls with one buoy line. Additional changes made to accommodate conservation equivalency measures offered by the Maine Department of Marine Resources and supported by commenters from the Maine fishing industry, including modifications to the number of traps on a trawl or the number of weak insertions based on Maine fishery zones and distance from shore out to 12 nm (22.2 km). This rule also implements conservation equivalency recommendations submitted by Rhode Island and supported by Rhode Island fishermen, modifying the LMA 2 measures with more expansive weak insert requirements throughout the LMA rather than trawling up requirements that challenged the capacity of some Rhode Island vessels. Additionally, this rule implements some of the conservation equivalency recommendations submitted by the Atlantic Offshore Lobstermen's Association as public comments on the DEIS and Proposed Rule for LMA 3. This rule implements three management areas in LMA 3 with three different trawling up requirements, requiring more traps/trawl in the Georges Basin area where there is more risk to right whales. This increase in number of traps per trawl of Georges Basin was offset by a lower number of traps required within the Northeast Region south of the 50 fathom (91.4 m) depth contour on the south end of Georges Bank.

All these conservation equivalencies were created with input from fishermen from these areas, informed by their knowledge of measures that would best fit their economic, operational or safety needs. For LMA 2 vessels, the weak rope alternative implemented has less impact on catch and landings and therefore, could have a lower economic impact compared to the LMA 2 measures analyzed in the IRFA.

This rule also modifies existing seasonal restricted areas that were closed to lobster and Jonah crab trap/pot fishing to allow ropeless fishing with exempted fishing permits (EFP). Under a revised restricted area definition, trap/pot fishermen could fish with trap/pot gear using "ropeless" methods, although an EFP would be required to exempt fishermen from surface marking requirements under other laws. Since 2018, NOAA has invested a substantial amount of funding in the industry's development of ropeless gear, in specific geographic areas and in general. We anticipate that these efforts to facilitate and support the industry's development of ropeless gear would continue, pending appropriations, and would be essential to defray costs for early adopters.

In addition to changes made to the preferred alternative in response to comments related to economic or operational concerns and intended to improve the likelihood of compliance, additional changes were made to increase the likelihood of achieving sufficient risk reduction and to increase gear marking to improve the chances of differentiating the area of origin of recovered gear.

In response to comments requesting that the rule be changed to increase the likelihood of achieving increased risk reduction, updated right whale distribution data, peer reviewed updates related to estimated right whale mortality, and updated population numbers demonstrating a decrease in the population that was greater than had been documented in recent stock assessments, analyses of the restricted areas considered in the DEIS were reevaluated. The updated right whale distribution data demonstrated that the largest restricted area originally analyzed within Alternative 3 of the DEIS better encompassed the most recent distribution of right whales in southern New England waters south of Cape Cod. Adoption of that larger area into the preferred alternative, along with the inclusion of Massachusetts regulations adopted in 2021 changing weak rope and expanding state water closures, resulted in an estimate of 60 percent risk reduction for right whales even when not including the risk reduction value of the current Massachusetts Restricted Area.

Finally, the state of Massachusetts requested additional green federal water gear marks to increase the likelihood that gear retrieved from entangled whales could be identified to either state or federally permitted fisheries. Additionally, gear retrieved with a six inch orange mark during 2021 that may have been Canadian compelled a change to require larger marks to increase the likelihood that U.S. gear marks could be distinguished from Canadian marks. The final rule increases the length of a proposed green mark in the surface system of gear fished in federal waters from six inches to 12 inches. Three additional green gear marks are also required in the final rule for buoy lines fished in federal waters, in addition to the green mark in the surface system that was in the proposed rule, to better distinguish gear fished in Federal waters. The state of Maine, Maine stakeholders and the Maine delegation, during the FEIS cooling off period claimed that this green federal gear mark would require dual permitted fishermen to purchase and have onboard a second set of buoy lines for when they move between state and federal waters, rather than inserting and removing marks on the same buoy lines during transit. The final rule specifies that, for dual permitted vessels that fish in both state and federal waters, state regulations will determine whether green marks can remain on gear being fished in state waters. This allows states to make the determination and, in the future if Maine determines that this distinction is necessary, new federal rulemaking will not be necessary.

MITIGATION AND MONITORING

CEQ NEPA regulations require that agencies identify in the ROD whether all practical means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why. The regulations further state that a monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation. Mitigation measures are the practical means to avoid, minimize, and reduce impacts, and to compensate for unavoidable impacts.

No significant environmental harm is expected to result from the implementation of amendments to the Plan; therefore, specific management measures to mitigate environmental impacts are not necessary. As directed by the Team, NMFS has included a number of monitoring strategies that will inform annual Team deliberations:

1. **Enforcement and associated compliance monitoring:** Compliance support and monitoring is achieved through outreach and enforcement efforts that inform fishermen of the regulatory requirements to support their ability to comply, as well as through active inspection of gear and associated enforcement actions. In state waters, NMFS supports enforcement related to marine mammal protection through funding for joint enforcement agreements in Maine, New Hampshire, Massachusetts and Rhode Island. NMFS, in coordination with the U.S. Coast Guard and state enforcement personnel, have developed an offshore enforcement plan that combines traditional enforcement practices with the use of new technologies such as underwater remotely operated vehicles and electronic monitoring to support enforcement throughout the EEZ. An overview of that plan is appended to the FEIS (See appendix 3.5).
2. **North Atlantic right whale population monitoring:** In 2019, NMFS convened an Expert Working Group to develop recommendations to: (1) Improve right whale population status by identifying and tracking essential population metrics; and (2) improve our understanding of distribution and habitat use. Recommendations from the Working Group (Oleson et al. 2020) will be used to modify surveys on a three-year monitoring cycle that includes an annual report to the Team, including a report every three years to evaluate and reconsider seasonal restricted areas. The monitoring cycle report results will be considered by the Team to recommend changes in timing or dimensions of restricted areas, openings, or further area management. The data included in monitoring plans will include whale abundance and distribution, as well as other environmental characteristics that impact whale habitat use and population health, including copepod abundance and oceanographic parameters.
3. **Fishery monitoring and reporting:** Lobster trap/pot gear makes up the vast majority of buoy lines fished in the Northeast Region. The ASMFC adopted Addendum XXVI in February 2018 to improve harvester reporting and biological data collection in both state and federal waters. This Addendum improves the spatial resolution of harvesting data, improves and expands fishery effort data, and obtains better data on the offshore fishery and lobster stock through biological sampling. NMFS is working on a proposed rule at this time that would require 100 percent harvester reporting by federal permit holders as early as 2022. Maine, currently the only New England state that does not require 100 percent harvester reporting, has committed to 100 percent reporting by no later than 2023 and is actively seeking funding to support harvester reporting efforts. Additionally, ASMFC has piloted a vessel tracking study with the intention of requiring vessel tracking in federal waters. NMFS is working with the ASMFC, through their open and public process, to develop additional high resolution spatial data collection objectives and requirements, while balancing the financial burden to industry. Fishery data will be used to monitor effort and distribution of the lobster and Jonah crab fisheries and inform Team discussions.

Response to Public Comments on the FEIS

During the 30 day cooling off period following the publication of the Notice of Availability for the FEIS, and during Office of Information and Regulatory Affairs listening sessions under their E.O. 12866 review, comments were received from the Atlantic Offshore Lobstermen's Association, Maine Division of Marine Resources, Maine Lobstermen's Association, Environmental Protection Agency, Conservation Law Foundation, Center for Biological Diversity, Defenders of Wildlife, Whale and Dolphin Conservation, and Oceana.

Comment 1: Atlantic Offshore Lobstermen's Association (AOLA) requests individual vessel exceptions for smaller vessels in Area 3 for safety reasons. AOLA urges NMFS to allow smaller vessels, such as those 65' or less, in Area 3 to fish 40 trap trawls in the 45 trap trawl zone in order to avoid placing crew within feet of the open stern when setting gear.

Response: The Final Rule establishes varying trawl lengths (traps per trawl) based on measures proposed by the ALWTRT, states, conservation equivalencies requested, and comments received during scoping and rulemaking. Configurations by area were considered likely to parallel vessel sizes, with smaller vessels operating closer to shore. In their proposal and comments on the proposed rule, AOLA requested a provision to allow permit conditions that would exempt smaller vessels from some trawling up conventions. However, there is no simple way to administer permit-specific requirements related to vessel size or configuration, nor can such a requirement be evaluated toward achieving the goal of this rulemaking. In addition to being difficult to implement and evaluate, individual vessel requirements would be difficult to enforce. A similar question was also addressed in comment 12.4 in Volume II, Appendix 1.1 of the FEIS for additional information.

Comment 2: The Maine Department of Marine Resources (ME DMR) and the Maine Lobstermen's Association (MLA) identified a need for a regulatory mechanism that would allow measures of equal or greater risk reduction value to be exchanged for existing regulatory measures. Comments from these stakeholders reiterate their support for flexible "conservation equivalencies," and for a streamlined/new review process to allow the use of equivalent measures without a lengthy notice and comment process.

Response: The MMPA requires NOAA Fisheries to convene Take Reduction Teams and develop Take Reduction Plans. While this process can be time consuming, it provides a framework for developing mitigation measures and clear goals for the Plan. The ALWTRT has the discretion to recommend mitigation measures that are flexible and adaptable. As participating members on the ALWTRT, ME DMR and MLA can work with the Team to identify methods of incorporating flexible conservation equivalency measures with the ALWTRP. See also comment/response 7.2 in Volume II, Appendix 1.1. In the FEIS.

Comment 3: The MLA remains concerned with the assumptions in the underlying analysis in the final rule that they say result in underweighting entanglement risk of Canadian fisheries while imposing new restrictions on the Maine lobster fishery unsupported by the observed evidence of entanglements in Maine gear. MLA urges NMFS to fully account for observed

trends in right whale deaths and to provide the Biden Administration with the best available science in support of comparable protections from Canada. NMFS has not adequately addressed these issues in the FEIS.

Response: Under the MMPA, NMFS is responsible for U.S. fisheries and protected species within our borders and on the high seas. We work closely with our Canadian partners through bilateral meetings, coordinated disentanglement efforts, sharing distribution and abundance data, health assessment, and gear analysis. In recent years, gear has only been retrieved from about 54 percent of the detected right whale entanglement events. The majority of the entangling line retrieved is of unknown origin. Out of approximately 1.24 million buoy lines within the Northeast waters from Rhode Island to Maine, we estimate that 72 percent of buoy lines were unmarked under current ALWTRP gear marking guidelines, although that percentage was reduced when Maine required gear marks on lobster trap buoy lines beginning in September 2020.

It is important to consider that most right whale mortalities are never seen. Entanglement incidents detected in the Gulf of St. Lawrence in recent years from May to early November may reflect some observer bias as the result of the extensive survey effort since late summer 2017 in an enclosed water body. During most of that 2017 season, the whereabouts of the remaining two-thirds of the population that were not detected in the Gulf of St. Lawrence remains largely unknown. Acoustic detections indicate that right whales are present in U.S. waters year round, and the entire population could be present in U.S. waters from December through April. U.S. fisheries fish many more buoy lines than Canadian fisheries. That exposure to U.S. fisheries is balanced, however, by the many broad scale gear modifications in place, as well as seasonal restricted areas implemented under the Plan. However, lacking an actual estimate of the proportion of the right whale population's exposure to U.S. or Canadian fisheries each year, in 2019 NMFS apportioned unknown mortality using a 50/50 split that recognized that more whales may be exposed over more months to fishing gear in U.S. waters (suggesting higher opportunity for entanglement) but broad-based U.S. conservation measures would reduce mortality and serious injury. This apportionment also recognizes that mortality is occurring on both sides of the border, and that U.S. and Canadian measures are needed to reduce human-caused mortality to this transboundary species to recover the population. For more, see FEIS Section 2.1.5 for risk reduction associated with different country apportionments. Additional detailed responses are also provided to questions 1.1, 1.2, and 1.3 in Volume II, appendix 1.1 of the FEIS for more details.

Comment 4: The Conservation Law Foundation (CLF), Center for Biological Diversity (CBD), and Defenders of Wildlife (DOW) indicated that this rulemaking cannot satisfy the MMPA's requirement to immediately bring mortality and serious injury below the right whale's potential biological removal (PBR) level and impermissibly puts off that goal for a full decade longer under the agency's "Conservation Framework." Under the MMPA, NMFS should have already adopted measures to reduce SI/M to "insignificant levels approaching a zero mortality and serious injury rate" (i.e., ZMRG) two decades ago.

Response: Under section 118 of the MMPA, NMFS is required to meet both the short and long-term take reduction plan goals of reducing mortality and serious injury incidental to commercial

fishing operations. The short-term goal is to reduce mortality and serious injury to below a stock's PBR, while the long-term goal is to reduce mortality and serious injury to insignificant levels approaching a zero mortality and serious injury rate (i.e., ZMRG, defined as 10 percent of PBR in 50 CFR 229.2), taking into account the economics of the fishery, availability of existing technology, and existing state or regional fishery management plans.

For the purposes of creating a risk reduction target, NMFS assigned half of the right whale entanglement incidents of unknown origin to U.S. fisheries, an observed annual average of 2.2 per year. To get to the PBR of less than one right whale per year, a 60 percent reduction in serious injury or mortality is necessary. The measures in this rule are expected to achieve a 60-69% risk reduction for entanglement of right whales in U.S. lobster/Jonah crab gear, as required by the MMPA. See Chapter 2 of the FEIS for our revised analysis of PBR. The MMPA created a framework for developing and issuing take reduction plans, monitoring the plans regularly, meeting with take reduction teams regularly, and making amendments if necessary to meet the goals of the MMPA. NMFS' actions have been consistent with the process laid out by the MMPA. NMFS will continue to discuss future plan modifications with the ALWTRT and has already reconvened the Team in light of these goals. For additional details, see answers to questions 5.6 and 5.7 in Volume II, Appendix 1.1 in the FEIS. The complete Conservation Framework adjoining the recent Biological Opinion is beyond the scope of the FEIS and final rule.

Comment 5: CLF, CBD, DOW, and Whale Dolphin Conservation (WDC) stated their opinion that the 60 percent risk reduction target is wholly inadequate based on the most recent data, new population estimates, a new PBR, and new cryptic mortality estimates. NMFS recognizes that it cannot get SI/M below PBR (let alone ZMRG) and the risk reduction target is egregiously low given recent information on population status and estimates of cryptic mortalities that NMFS acknowledges in the FEIS. NMFS lowered this target to 60 percent without an adequate explanation of why it aimed for the lower bound that did not account for cryptic mortality.

Response: The Purpose and Need chapter of the FEIS states that the measures need to achieve a risk reduction of at least 60 percent, rather than an exact risk reduction target, and therefore, was not meant to constrain the risk reduction to a specific number. Rather, this is the minimum target needed. Both of the action alternatives considered in the FEIS met the Purpose and Need. See Volume I, Chapter 2 for more details on the calculations and the response to question 5.10 in Volume II, Appendix 1.1 for further information.

Comment 6: CLF, CBD, DOW: Using NMFS's own methodology and updated data, the FEIS acknowledges that PBR is 0.8 and the risk reduction target required to reduce mortality and serious injury in U.S. fisheries may exceed 90 percent. New information noted in the FEIS, including an updated paper from Pace et al. (2021) that determined that the observed mortality detection rate was only 29 percent of total mortality, leaves 71 percent of mortalities undetected. Modifications to the risk reduction measures in Alternative 2, including the expansion of the seasonal restricted area south of Cape Cod, do not meet the mandatory and non-discretionary legal requirements of the ESA and MMPA.

Response: The application of cryptic mortality estimates in determining annual entanglement serious injury and mortality rates relative to the PBR level was a new concept when first introduced to the ALWTRT in 2019 and during the associated development of this action. The recent paper by Pace et al. (2021) on cryptic mortality and the more recent analysis in the current population estimate (Pace 2021) now provide more support for the 80 percent target than at the time the ALWTRT undertook its efforts to develop recommendations. Our understanding of cryptic mortality will affect management decisions going forward as new stock assessments and PBR calculations incorporate this new science. Further efforts by NMFS to estimate serious injury and mortality and to apportion the estimates to country and mortality source will be included in guidance to the ALWTRT to support their development of recommendations of further amendments to the ALWTRP.

NMFS tasked the ALWTRT with developing measures to reduce risk of entanglement in order to comply with the MMPA's mandate that fisheries impacts should be below PBR. It is not within the agency's discretion to disregard PBR, and the current rulemaking is the agency's attempt to reduce the risk of serious injury and mortality from the Northeast lobster and Jonah crab trap/pot fisheries to comply with the MMPA. That such measures in and of themselves may not result in recovery of the right whale population does not mean that NMFS can disregard the statutory direction of the MMPA. See Volume I, Chapter 2, responses to questions 5.8 and 7.16 in Volume II, Appendix 1.1 of the FEIS.

Comment 7: Oceana suggests that trap reductions be used to reduce overall line in the final rule, and that trawling up as a way of reducing vertical line creates additional risk of whale injuries due to heavier weight for entangled whales.

Response: Despite collaborating closely with New England state managers during the scoping period for rulemaking, NMFS was unable to develop substantial line reduction measures that could be rapidly developed and implemented via trap reductions, similar to the Atlantic States Marine Fisheries Commission. This is because of insufficient reporting from some areas such that it is not known if trap reduction would result in line reduction as it is unclear what the baseline of traps in the water would be. Moreover, without trawling up in conjunction with trap reductions, there is no certainty that vertical buoy line numbers would decrease. Adhering to the Team's goal of at least 60 percent risk reduction, alternative risk reduction measures geared toward reducing co-occurrence including trawling up and seasonal restricted areas were expanded to achieve similar or greater risk reduction.

Comment 8: ME DMR questions the absence of their conservation equivalency proposal for waters outside of the 12 nautical miles and requested NMFS provide either a table or information showing the difference in risk reduction outside 12 nm between the conservation equivalency proposal and the preferred alternative in the FEIS.

Response: Further offshore where gear poses more risk, we could not demonstrate conservation equivalency of ME DMR's proposed modifications. The measures Maine proposed for the area outside 12 nm achieved slightly less risk reduction than the measures within the proposed alternative analyzed in the FEIS. Additionally, the measures proposed by Maine were not adopted because the proposed trawl lengths would have resulted in less line reduction in waters

adjacent to the LMA1 restricted area, where vessels displaced during the LMA1 seasonal restricted areas may shift/begin fishing between October and January. In order to restrain risk just outside an identified hotspot, we maintained the trawl lengths and associated line reduction from the DEIS.

Comment 9: ME DMR questioned removal of DEIS Table 3.4 from the FEIS. While Volume II of the FEIS provides Decision Support Tool model runs, these are aggregate model runs of multiple management measures and so it is not clear how much each measure reduces risk. Thus, while it appears possible to calculate total risk reduction from all seasonal closures (as an example), it is not possible to discern the risk reduction associated with one closure versus another. This makes it impossible for stakeholders to understand the relative effectiveness of different management measures.

Response: While the FEIS does not contain the same table (Table 3.4 in the DEIS), Table 3.1 in the FEIS provides comparable information. The same level of detail was not included in the FEIS because comments received on the DEIS and during review demonstrated misunderstandings regarding the non-additive relationship between the different types of measures. Individual risk reduction associated with one measure is not as accurate as the combined risk reduction of measures implemented together because it does not account for changes in line numbers or distribution associated with other measures nearby. Instead, we provided a step-wise approach to show relative proportions of each measure type to avoid misinterpretations of the data. We did provide individual risk reduction estimates when appropriate for the analyses or discussion. See FEIS Chapters 3 and 5.

Comment 10: ME DMR noted that in the FEIS that, in using data from 2010-2018 as opposed to 1998-2017, the LMA1 hotspot is less important for right whales in the current right whale density model. However, there is no figure comparing the outputs of the right whale density model in the LMA1 Restricted Area between these two model iterations to demonstrate this change nor is there a table outlining the new, presumably lower, risk reduction achieved with this closure. It is not until Volume II, where the FEIS responds to comments received in the public comment period that the FEIS suggests the risk reduction associated with the LMA 1 Restricted Area is approximately 6.6 percent.

Response: The LMA 1 risk reduction estimates for each of the new right whale models by year range are provided below. These model runs used the Northeast lobster and Jonah crab trap/pot line model from 2017. As stated in the FEIS, there was a decline in risk reduction from the first to the second time period, but this area still remains a hotspot for the Northeast region during the months the restricted area would be in effect (see the next question for more details on the hot spot analyses).

Year Range	Risk Reduction
2003 - 2018	7.9%
2003 - 2009	9.1%
2010 - 2018	6.6%

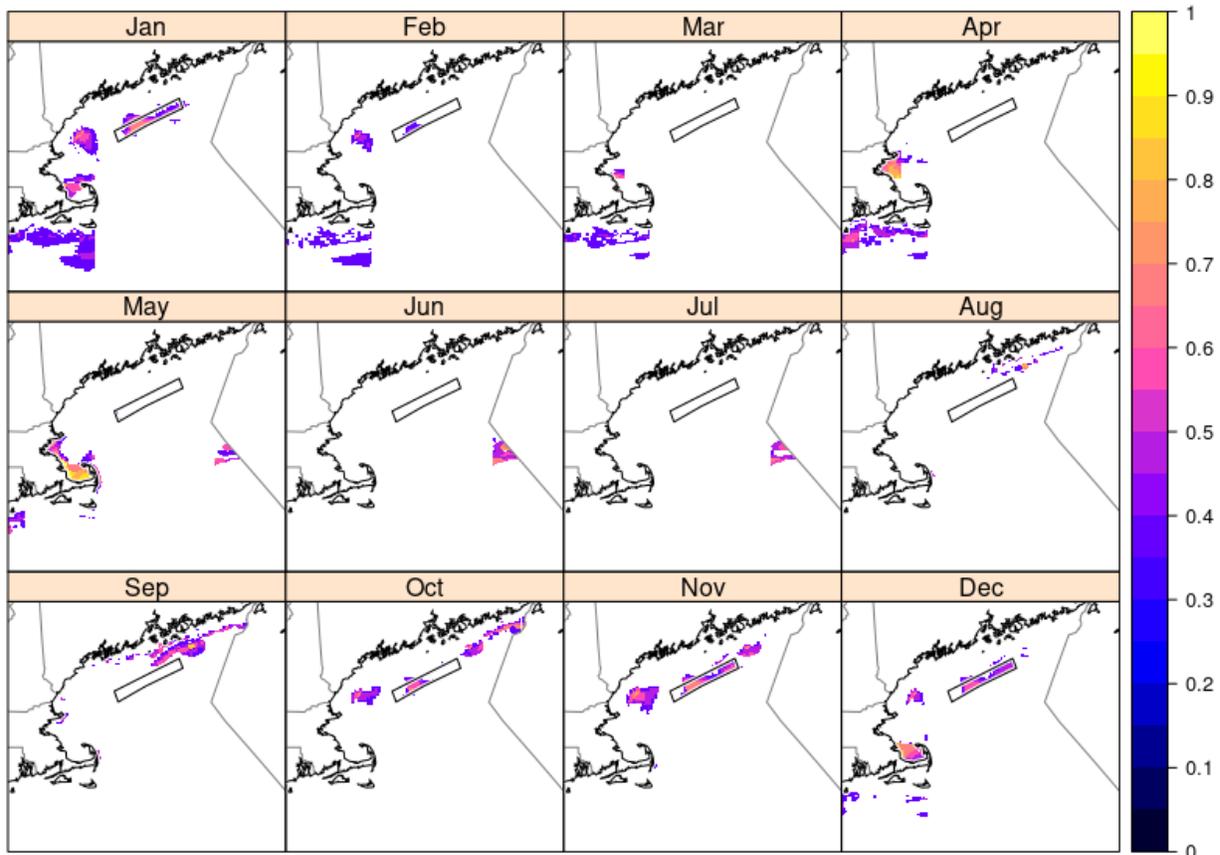
Comment 11: ME DMR and MLA raise objections to the LMA1 seasonal restricted area for the following reasons: (1) NMFS does not provide a complete picture of spatial and temporal data to support the closure, or provide comparisons to other portions of LMA1 (ME DMR/MLA); (2) Lack of hotspot data (in Figure 3.2) to support closures in Zones C, D, and E, particularly in December and January (ME DMR/MLA); (3) Closure should align with hotspots, not with zone boundaries (MLA); (4) Different methods were used for identifying the Massachusetts Restricted Area and South Island Restricted Area (“areas and seasons where persistent aggregations of right whales appear to be seasonally predictable”) and the LMA1 Restricted Area (“co-occurrence hotspot analysis”) (MLA/ME DMR). Although not suggested during the public comment period on the proposed rule and therefore not analyzed in the FEIS, during a listening session with OMB, ME DMR suggested the LMA1 seasonal restricted area should have only included Zones C and D.

Response: As described in FEIS Chapters 3 and 5 (Section 5.1), the seasonal restricted areas that are being implemented through the final rule are based on the best available information, including recent and historical right whale and other large whale sightings data, acoustic monitoring data, and data on prey distribution. The FEIS includes analysis based on updated data that have become available since we drafted the DEIS; however, we did not include a new whale map with the updated hotspot analysis in the FEIS. Given the data we already had on predicted whale density in this area according to the new 2010 to 2018 model provided by Duke (in zones C, D, and E), the estimated buoy line density, the associated risk reduction in the updated Decision Support Tool, and supplementary acoustic data, NMFS determined that this area was still an important area for spatial management in the Northeast region.

The following is an updated hotspot analysis for the entire Northeast trap/pot management region 2017 baseline (before any measures were implemented) with all 12 months as requested. The DST does not indicate substantial risk reduction from restricted areas implemented in the spring or summer months. The DST indicates that October through January demonstrate the most effective risk reduction to right whales. Despite shifting right whale distribution and a slightly lower risk reduction using the new whale density model, the area identified in LMA1 for a restricted area is still showing up as a hotspot within the lobster and Jonah crab fisheries in the region. The value of the LMA1 Seasonal Restricted Area remains an important piece of the risk reduction for Maine-permitted fishermen.

Though a rerun of the LMA1 Restricted Area only including Zones C and D still estimated a 6.1 percent risk reduction, Zone E is still showing up as a hotspot during all months of the closure. Decreasing the size of the restricted area could likely push additional lines into the hot spot in Zone E, potentially increasing the risk of entanglement in this area during this time period. Furthermore, smaller areas are less resilient to changing whale distributions so reducing the size will likely reduce the effectiveness of the closure. See Chapters 3 and 5 in Volume I of the FEIS and responses to comments 9.9, 9.11, 9.12, 9.13 and 9.16 in Volume II, Appendix 1.1 of the FEIS.

Hotspot analysis for top 60% of risk



Comment 12: ME DMR commented that if the LMA1 Closure is included in the final rule, resources must be allocated to monitor and survey this area throughout the months of the seasonal closure. Fishermen are incurring significant financial costs because of this closure, so benefits to right whales must be clearly demonstrated. Surveys are also necessary to monitor this area for changes in right whale distribution. If the risk reduction associated with this closure continues to decline, the closure should be reconsidered.

Response: Following the recommendations of the NMFS Expert Working Group, which reviewed the right whale surveillance and monitoring programs (Oleson et al. 2020), the NEFSC anticipates a three-year surveillance and review cycle. Related to those recommendations, NMFS is currently developing updated monitoring plans and agrees that monitoring across the Northeast is a priority. ME DMR's chief right whale scientist is also a member of the Right Whale Recovery Plan Northeast Implementation Team and is leading their effort to review right whale monitoring. NMFS will update the Team annually on monitoring planning and results, and at least every three years will specifically ask the Team to consider modifications to seasonal restricted areas. We anticipate that the team will continue to make annual recommendations to amend the Plan. For additional information, see responses to questions 9.8 in Volume II, Appendix 1.1 of the FEIS.

Comment 13: MLA indicated that the LMA1 closure was not presented for public review during the Take Reduction Team or scoping process for the DEIS.

Response: The LMA1 Seasonal Restricted Area was created to supplement the risk reduction contribution of the lobster fishery in the LMA1/Maine area to the overall 60-80 percent risk reduction for the Northeast Trap/Pot Management Area, following the ALWTRT's recommendation in April 2019 to spread risk reduction across jurisdictions. The original recommendation approved by the Maine caucus achieved that level of risk reduction primarily through a 50 percent line reduction. However, after the ALWTRT meeting, the ME DMR and the MLA members on the Team withdrew their support for such extensive line reduction measures. ME DMR developed alternatives and used an alternative risk reduction calculation to demonstrate their belief that their alternative, which included broad use of weak insertions and some trawling up to reduce vertical buoy line numbers, achieved a 60 percent risk reduction. NMFS' analysis of the Maine risk reduction measures for the DEIS estimated that the Maine DMR revisions were insufficient to achieve 60 percent risk reduction for Maine-permitted fishermen in LMA 1. In discussions regarding preliminary analyses with ME DMR prior to their submission of alternatives, NMFS suggested a closure along the LMA1 Seasonal Restricted Area border with LMA 3 to improve the risk reduction calculation for that area during winter months when right whales have been demonstrated to aggregate in offshore waters. While the TRT provides recommendations, and NMFS makes every effort to incorporate those recommendations, it is ultimately NMFS' responsibility to meet the mandates of the MMPA.

Comment 14: MLA commented that NMFS should reconsider Alternative 1-B in the Proposed Rule that would go into effect only if the rule's other protective measures are not sufficiently effective at reducing risk of entanglement. Alternative 1-B can be accommodated while achieving the 60 percent risk reduction because the preferred alternative achieves 68.8 percent to 72.7 percent risk reduction across the entire lobster fishery, with the LMA1 restricted area contributing 6 to 7 percent.

Response: Real time data are not available for NMFS to develop an effective trigger for restricted areas. To reduce risk to right whales, the LMA 1 area will be implemented as a closure to lobster/Jonah crab fishing with buoy lines from October through January each year. The LMA1 Seasonal Restricted Area was created to supplement the risk reduction contribution of the Maine lobster fishery to the overall 60-80 percent risk reduction for the Northeast Trap/Pot Management Area, following the ALWTRT's recommendation in April 2019 to spread risk reduction across jurisdictions. NMFS' analysis of the Maine risk reduction measures for the DEIS estimated that the Maine DMR revisions were insufficient to achieve 60 percent risk reduction for Maine-permitted fishermen in LMA 1. Additionally, the FEIS provided a range of risk reduction estimates for the preferred alternative given the uncertainty and the unique addition of a risk reduction credit, which spanned from 60 percent on the lower end without the credit from 69 percent to 73 percent on the upper end. Given the large range of estimated risk reduction, comments received on the DEIS, and other newly available information on the right whale population including cryptic mortality assumptions, the data do not support removing any of the restricted areas from the final rule. See responses to comments 9.10 and 9.11 in Volume II, Appendix 1.1 of the FEIS.

Comment 15: MLA stated that contrary to NMFS's assumptions, lobstermen will not be able to relocate gear to other, equally productive fishing grounds during the seasonal restricted area and they are unable to shift gear further offshore due to the boundary with LMA 3.

Response: NMFS understands that it is likely that lobstermen will not be able to relocate to equally productive habitat outside of the restricted area. To account for this, we assumed lobstermen would move shoreward and experience a 5 to 10 percent catch reduction for all lobster vessels fishing outside of 12 nmi in these zones. See the economic analyses in Chapter 6 of the FEIS for details on these calculations.

Comment 16: CLF, CBD, and DOW stated that the final rule and FEIS should be withdrawn, and NMFS should take emergency action as requested in their December 2, 2020 petition. Commenters point to the Emergencies provision of NEPA (40 C.F.R. § 1506.12), and argue that NMFS has adequate authority to take emergency action without the NEPA analysis.

Response: This was addressed in the response to comments in Volume II, Appendix 1.1 of the FEIS. Please see the answers to questions 7.5 through 7.8 that discuss emergency rulemaking. As noted in the response to Comment 7.5, we believe that the final rule will provide the fastest relief and longest-lasting protections for right whales, so we are not planning to take emergency action at this time.

Furthermore, as previously stated, emergency provisions do not waive other procedural requirements that agencies are subject to when undertaking a rulemaking, like NEPA, the Paperwork Reduction Act (PRA), or EO 12866. The NEPA regulations at 40 CFR 1506.12, for example, allow agencies to consult with the Council on Environmental Quality to develop "alternative provisions" in addressing an emergency situation, but agencies are expected to "limit such arrangements to actions necessary to control the immediate impacts of the emergency." NMFS generally views emergency actions to be appropriate where a clearly identifiable problem can be addressed with directed, focused measures, and such measures will effectively address the emergency in the timeframes to which such authorities are limited. NMFS has not identified a geographic location or discrete temporal period within which emergency action would address a specific entanglement concern, and therefore, NMFS believes that the complex issues associated with right whale fishery interactions are better addressed through the comprehensive approach in the final rule.

Comment 17: CLF, CBD, and DOW: NMFS has not responded to the CBD et al. Petition for emergency action in the FEIS or in any other context.

Response: The petition is a separate administrative process and is outside of the scope of the current rulemaking.

Comment 18: CLF, CBD, and DOW: NMFS must prepare a supplemental EIS that incorporates best available science, including: Stewart et al. (2021); Fortune et al. (2021); Graham et al. (2021); Quintanna-Rizzo et al. (2021); Moore et al. (2021); Pace et al. (2021).

Response: The FEIS did cite Pace et al. (2021) and Moore et al. (2021), and we agree the findings in these papers are important. Though the FEIS was not able to include some of the more recent papers on sublethal impacts given the urgency for rulemaking, such as Fortune et al. (2021), Graham et al. (2021), Quintanna-Rizzo et al. (2021), and Stewart et al. (2021), we do discuss the sublethal impacts of entanglement and other human-caused stressors in FEIS Chapters 2, 4, and 8. The Cumulative Effects Analysis in Chapter 8 further discusses the sublethal impacts of concurrent exposure to multiple stressors and the implications for reproductive and nutritional health. The inclusion of additional papers on sublethal stress would not change the conclusion of the FEIS that the modifications to the Plan would result in a net positive impact on large whales compared to the baseline or that the preferred alternative reduces serious injury and mortality as required by the MMPA and outlined in the Purposes and Needs (Chapter 2). The preferred alternative will reduce the number and strength of lines in areas where right whale aggregations are predicted to be highest, which should result in a reduction in associated sublethal effects. For additional analysis of sublethal stressors, see the recent Biological Opinion published on May 27, 2021, which addresses sublethal impacts under the Endangered Species Act.

Comment 19: CLF, CBD, and DOW stated that the weak line and insert measures analyzed in the FEIS are unproven to reduce mortality and serious injury in use, and thus cannot guarantee any risk reduction target. They also state that new research on whale size casts new doubts on the use of weak line must be fully considered before NMFS makes any final decisions.

Response: The 1,700 lb breaking strength cutoff was identified in Knowlton et al. (2016) based on information from adults as well as juveniles and calves, as observed in Figure 2 in the paper and the Supplemental Information (shown in pounds rather than kN). Though not all individuals will benefit from weak inserts, particularly neonates and small calves, line strength data in Knowlton et al. (2016) do suggest that calves and juveniles tend to be found in slightly weaker gear on average, with the median above 1,700 lbs, while adults (9 years or older) all had rope strengths far above the 1,700 lb cutoff, including several from 2000 through 2010 that were likely already smaller than those observed in the 1980s according to Stewart et al. (2021). Data in Arthur et al. (2015) also suggest that even shorter whales should have the maximal strength to break at least 1,700 lb rope. In Figure 3, a whale length of 9 to 10 meters would have a maximal strength similar to that estimated for humpback whales, which is also estimated to be above 1,700 lbs. Thus, a 1,700 lb maximum breaking strength was already set below any anticipated changes in size estimated in Stewart et al. (2021).

However, it is also likely true that, even if the maximum force output for right whales is likely sufficient to break line at that breaking strength, a whale's ability to break free from an entanglement is also somewhat dependent on additional factors, such as the complexity of the entanglement configuration (van der Hoop et al. 2017). This is why weak rope is primarily a precautionary measure that increases the chances that a line will break if a whale encounters it, but cannot guarantee an outcome because there are additional factors that determine whether an individual will be able to break the line.

We agree that risk reduction to whales depends on the frequency of weak insertions in a line. The greater the number of weak points on a line, the greater the likelihood that a weak point will be

located below where the whale encounters the line, and that there will be a weak insertion outside of the mouth where the whale may have a better chance of breaking free from the entanglement. We evaluated risk reduction under the assumption that weak rope is not zero risk to whales and that a few insertions do not provide the risk reduction benefits of fully weak rope or weak rope with insertions every 40 feet. As a result, weak rope measures only account for a very small proportion of risk reduction within the preferred alternative. However, in concert with the other measures in the final rule, NMFS believes that it will achieve the required levels of risk reduction and applies a precautionary measure across the Northeast Region. For more on our analysis, see Section 3.3.4, Appendix 3.1, and 13.3 in Volume II, Appendix 1.1.

Comment 20: CLF, CBD, and DOW argue that the measures in FEIS Alternative 2 are highly unlikely to meet the risk reduction target because of revisions related to measures analyzed in the DEIS, such as the conservation equivalencies proposed in public comment that allow for the increased trawl length requirements analyzed in the DEIS to be exchanged for more expansive weak insert requirements in LMA 2 (Vol I at p. 34).

Response: As discussed in FEIS Chapter 3, the option to allow the use of full weak line or regular weak inserts in the top 75 percent of all buoy lines in LMA 2 was selected because it offered more risk reduction than the trawl length requirements included in the DEIS. This difference stems from the fact that most of the fishery is already trawling up to the lengths that would have been required by the DEIS, so these measures did not provide additional risk reduction. NMFS does not expect vessels in this area to re-rig their gear to shorten trawl lengths if they are already fishing longer trawls. This also allows the few boats that are still fishing shorter trawls to continue to fish while using weaker lines to reduce the current risk.

Comment 21: CLF, CBD, and DOW state that the measures in FEIS Alternative 2 are highly unlikely to meet the risk reduction target because of revisions related to measures analyzed in the DEIS, such as requirements for a weak link at the buoy, were removed from FEIS Alternative 2 (Vol I at p. 34).

Response: The weak link requirement in the surface system was removed for buoy lines that have a weak insert somewhere else along the buoy line. However, weak links in the surface system are not prohibited, and fishermen will not be required to remove them.

Comment 22: CLF, CBD, and DOW state that the measures in FEIS Alternative 2 are highly unlikely to meet the risk reduction target because of revisions related to measures analyzed in the DEIS, such as the conservation equivalencies proposed in public comment for the Maine Exempted Area, all areas 3-12 nm from shore, and LMA3 that will allow for a reduction in the number of weak inserts required (Vol I at p. 34).

Response: There were no changes to the number of weak inserts required inside Maine Exempt Waters or in LMA 3 in the FEIS. Maine Exempt Waters will still require the use of one weak insert in the middle of the buoy line. The DEIS and FEIS both included full weak line in the top 75% of one buoy line LMA 3, though regular weak inserts is one option available where weak line is required. The only change to weak inserts in LMA1 between 3-12 nm in Maine occurred in areas where ME DMR proposed longer trawl lengths than in the DEIS, up to 20 traps per

trawl. Because of the additional line reduction in this area, the equivalent risk reduction this provides, and concerns regarding operational feasibility of additional weak inserts on longer trawls in this area, NMFS incorporated ME DMR's proposed conservation equivalencies between 3 and 12 nm.

Comment 23: ME DMR and MLA state that changes in gear marking that require longer federal marks in a greater number reduce flexibility for dual-permitted (state and federal) fishermen, and may require those fishermen to have two sets of lines. The economic cost of these changes was not adequately analyzed in the FEIS, and this change was not discussed during scoping or in the DEIS.

Response: The green mark was introduced to distinguish buoy lines between federal and state waters, rather than exempt and non-exempt waters, during the development of DEIS. In Section 3.2.2.2, Table 3.3 clearly indicates that an additional 6-inch green mark would be required in federal non-exempt Maine waters. For the state portion of the non-exempt waters, only three state-colored marks would be required. The FEIS analyzed 1-foot green marks adjacent to each state color mark following the suggestion of Massachusetts Division of Marine Fisheries (MADMF) and some fishermen to better differentiate between state and federal waters and in order to increase the distinction between U.S. gear from Canadian gear marks, (Canadian marks are shorter.) Without the extra green marks, the lower portion of federal water buoy lines could not be distinguished from state water lines.

For fishermen that move between state and federal waters, we applied two scenarios to calculate their gear marking costs. The lower end costs assume that fishermen use duct tape to mark the ropes at the dock, both tape cost (\$0.04/ft) and fishermen's time (20 min per line + 2 min per mark) are considered. The higher end costs assume that fishermen use twine to mark the rope at sea. The twine costs (up to \$0.5/twine) and fishermen's labor costs (20 min per line + 10 min per mark) are included in the costs. The labor rate is at \$25.75/hour based on 2006 GMRI fishermen's alternative occupation survey data and updated with 2018 BLS Occupational Employment Statistics and 2020 GDP deflator. We are not sure how many fishermen would conduct markings at the dock or at sea, so we had to use both to represent the range of our estimates. We consulted with our gear specialists about the possibility of marking rope at sea, and they agreed that most Maine fishermen could do it and would not have to prepare two sets of ropes.

In response to ME DMR and MLA's concerns, however, the final rule makes clear that it is up to the states whether fishermen will be permitted to fish in state waters with gear marked with the green federal mark.

Comment 24: ME DMR: The black sea bass trap/pot fishery in the South Atlantic uses purple as one of its gear marking colors. In a letter sent to the Regional Administrator on July 10, 2019, ME DMR indicated its intent to use purple as a Maine gear mark and requested NMFS confirm no other fisheries use a purple mark. This would have been an opportune time for NMFS to indicate other fisheries in the South Atlantic use a purple gear mark. While NMFS states there are multiple colors used in the black sea bass fishery and this should help distinguish between the

two fisheries, there is no doubt that the use of repeated colors undermines the ability to distinguish between gear types.

Response: ME DMR was made aware of the shared use of purple marks in the black sea bass fishery in 2019 after they informed NMFS of their intent to use purple gear marks. Megan Ware and Erin Summers at Maine DMR were notified via email from Colleen Coogan on September 20, 2019, that their chosen color (purple) was already being used in the black sea bass fishery in the Southeast. Megan Ware responded on September 22, 2019, stating they were retaining the use of purple in addition to green marks, and noted that purple, green, and orange marks appeared to be used in the black sea bass fishery. ME DMR cannot credibly claim that they were not aware of the use of purple in another fishery. They moved forward with publishing a state rule, with full knowledge of this overlap, to require purple marks with a 6-inch green mark in non-exempt waters in September of 2020 before the DEIS was released.

The black sea bass fishery currently requires three 12-inch purple marks, three 6-inch green marks, and three 6-inch orange marks, adjacent to the green marks. There are still some differences between the gear that could be used to distinguish the gear if the entire mark was retrieved, such as the longer 12-inch green mark near the purple mark on Maine vessels in federal waters compared to the shorter green with the addition of an orange mark on Southeastern black sea bass gear. The 3-foot long mark also further distinguishes this gear if the surface system is retrieved. There are currently a maximum of 31 black sea bass permits and approximately 5,000 Maine lobster permits. Additionally, NMFS will likely be discussing gear marking to increase the spatial resolution of marks in the remaining fisheries during Phase 2 of the modifications to the Atlantic Large Whale Take Reduction Plan, and the Team can work to further distinguish gear if needed.

Comment 25: MLA identifies an error on page 59 of the FEIS that states, “According to incident data, 77 percent of all incidents (from 2010-2019) are a result of entanglement mortality and serious injury so we then assume 77 percent of 7.25 unknown or unobserved incidents were the result of an entanglement, or 5.6 per year.” While the NMFS incident data shows that 77 percent (41 of 53) of all entanglements are from unknown sources, only 55 percent (53 of 96 cases) of all incidents are attributed to entanglement.

Response: NMFS acknowledges the wording on this sentence is unclear; however, the calculations are correct. The data used to determine the percentage of cases resulting from entanglement included all incidents with a known cause of injury that resulted in a mortality or serious injury (not including disentangled individuals), which is 53 out of 69 individuals between 2010 and 2019 (76.8 percent).

Comment 26: The U.S. Environmental Protection Agency (EPA) reviewed the Atlantic Large Whale Take Reduction Plan (ALWTRP) Final Environmental Impact Statement pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. We found the FEIS responsive to our comments and recommendations related to the consideration of alternatives, weak line provisions, and ropeless fishing and we appreciate the work by your project team to highlight the responses to our comments. The FEIS acknowledges the anticipated

economic impacts to fishermen from a conversion to weak lines and indicates that some funds have been reprogrammed to support fishermen in complying with gear modification change. We support those efforts and encourage NMFS to continue to pursue additional funds over time.

Response: We appreciate the feedback and support.

Comment 27: Some commenters expressed concern that NMFS inappropriately rejected alternatives for being unpopular with stakeholders, but it was unclear who is considered a stakeholder in this process.

Response: The development of the final rule was the result of an extensive public process involving many different important stakeholders, including industry, NGOs, state managers, and the public. We agree that the phrasing of this justification was imprecise and did not convey the full reasoning behind these rejections. This was primarily used for measures where NMFS was concerned about compliance or safety concerns by industry stakeholders specifically. Some measures were eliminated from further consideration because there was strong opposition from the regulated community that would further extend the rule development, delay the implementation timeline, and compromise compliance. Given the urgency of the action and the necessity of compliance for meaningful risk reduction, NMFS pursued other measures that could be implemented in a timely manner and reliably achieve risk reduction.

Changes to the Regulatory Impact and Final Regulatory Flexibility Act Analyses

NMFS submitted the final rule and a standalone Regulatory Impact and Final Regulatory Flexibility Analysis to the Office of Information and Regulatory Affairs (OIRA) within the Office of Management and Budget on July 19, 2021. Under Executive Order 12866, OIRA reviews all regulatory actions that are considered to be “significant,” including the analysis of the costs and benefits of rules for the purpose of, to the extent possible under the laws, ensuring that the benefits of rulemaking justify the costs. The standalone document was extracted from Chapter 9 of the combined Final Environmental Impact Statement, Regulatory Impact Review, and Final Regulatory Flexibility Analysis for Amending The Atlantic Large Whale Take Reduction Plan (FEIS/RIR/FRFA) that was released on July 2, 2021, to allow public review of the Final Environmental Impact Statement during a 30 day cooling off period required under CEQ NEPA regulations. Changes to the standalone RIR and FRFA document relative to chapter 9 of the FEIS/RIR/FRFA were made to provide additional context and information but do not change the results of the analyses. Changes include:

Addition of an Executive Summary, Table of Contents, and some reformatting to better support a standalone document.

Some differentiation of the economic impacts to distinguish costs (gas, gear, time) from lost profits (due to catch loss).

Change of economic values from 2017 dollars to 2020 dollars.

Addition of the economic analysis methods to better inform readers about costs estimation.

Amplification of the qualitative information regarding the value of recovery of the North Atlantic right whale and other large whales, including ecosystem benefits that large whales provide.

Addition of information on benefits to other protected species contained in the FEIS, but not in Chapter 9.

Significance under E.O. 12866 is described as: having an annual effect on the economy of \$100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, jobs, the environment, public health or safety, or State, local, or tribal governments or communities. In Chapter 9, we determined that the preferred alternative/final rule was significant because it affects a significant number of small entities, which was considered “a sector of the economy.” OIRA recommended a change in that determination to not be economically significant because the rule would have an overall effect on the economy of less than \$100 million.

Added further description of the changes to the preferred alternative and final rule made as a result of public input related to safety and economic impact improvements.

CONCLUSION

After careful review of the proposed measures, the associated analyses, and the public comments that NMFS received on the amendments to the Plan, NMFS is approving the amendments in the FEIS final preferred alternative. This final action seeks to reduce the risk of large whale entanglement in Northeast Region lobster and Jonah crab trap/pot fisheries by implementing two new seasonal restricted areas that reduce the co-occurrence of right whales and buoy lines, reducing the number of buoy lines by increasing the minimum number of traps fished between buoy lines, modifying existing restricted areas from seasonal fishing closures to seasonal closures to fishing with persistent buoy lines, expanding the geographic extent of the Massachusetts Restricted Area to include Massachusetts state waters north to the New Hampshire border, and requiring buoy lines to be modified to incorporate rope engineered to break at no more than 1,700 lb (771.1 kg) or weak insertion configurations that break at no more than 1,700 lb (771.1 kg). It will also implement measures that will inform future rulemaking by requiring additional marks on buoy lines to differentiate vertical buoy lines by principal port state, including unique marks for federal waters, and expanding requirements into areas previously exempt from gear marking. These changes are designed to reduce right whale entanglement-related mortalities and serious injuries in U.S. commercial fisheries. NMFS has determined that, overall, the measures being implemented represent the environmentally preferred alternative when considering the balance of environmental and economic effects that might accrue from these measures within the context and strictures of the MMPA and ESA. In addition, NMFS has determined the preferred alternative will promote the national environmental policy as discussed in Section 101 of NEPA. NMFS also concludes that all practical and legally justifiable means to avoid, minimize, or compensate for environmental harm from the final action have been adopted.

NMFS has considered all applicable public comments received on the amendments to the Plan. Responses to all comments on the DEIS are available in the final rule and Volume II of the FEIS.

Further information concerning this Record of Decision may be obtained by contacting Jennifer Anderson, Jennifer.Anderson@noaa.gov, NMFS Greater Atlantic Regional Fisheries Office, 55 Great Republic Drive, Gloucester, MA 01930, (978) 281-9226.

Janet Coit
Assistant Administrator for Fisheries

Date