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March 1, 2021

Via Federal eRulemaking Portal

Michael Pentony, Regional Administrator
NMFS, Greater Atlantic Regional Fisheries Office
55 Great Republic Drive
Gloucester, MA 01930

RE: Proposed Amendments to Regulations Implementing the Atlantic Large Whale Take Reduction Plan, NOAA-NMFS-2020-0031

Dear Mr. Pentony:

The Maine Lobstermen's Association ("MLA") provides these written comments in response to the National Marine Fisheries Service's ("NMFS") proposed rule to amend the regulations implementing the Atlantic Large Whale Take Reduction Plan ("TRP") and NMFS's associated draft environmental impact statement ("DEIS"). *See* 85 Fed. Reg. 86,878 (Dec. 31, 2020) ("Proposed Rule"). MLA appreciates NMFS's consideration of these comments.[1]

The MLA was founded in 1954 and is the oldest and largest fishing industry association on the east coast. The MLA advocates for a sustainable lobster resource and the fishermen and communities that depend on it. The MLA engages in advocacy, education, stewardship and sustainable resource management, collaborative research, and cultural exchange. For more than 65 years, the MLA has ably represented the interests of the Maine lobster industry and educated the public, regulators, and elected officials about the importance of this industry.

[1] In a letter dated February 19, 2021, the MLA, in conjunction with other fishing associations, submitted written comments in response to NMFS's Draft Biological Opinion on 10 Fishery Management Plans in the Greater Atlantic Region and the New England Fishery Management Council's Omnibus Amendment 2 (released Jan. 15, 2021) ("Draft BiOp"). The February 19, 2021 comment letter on the Draft BiOp ("Draft BiOp Comment Letter") is attached to this comment letter as Addendum 1 and is hereby incorporated by reference.

The MLA is committed to supporting both the continued viability of the Maine lobster fishery and the improvement of the health of the western North Atlantic stock of the North Atlantic right whale ("NARW") through management measures that accurately address documented risks to the NARW based on the best available science. Maine lobstermen are world leaders in conservation and stewardship. We take pride in our longstanding sustainable fishing practices, which include the implementation of successful measures for over two decades to protect the NARW. Since NMFS formed the Atlantic Large Whale Take Reduction Team ("TRT") in 1997, the MLA has been fully engaged in working to reduce the potential risks to the NARW from entanglement in U.S. fishing gear.

We provide the comments below to inform and improve NMFS's development of a final rule and preparation of a final EIS. As an important initial matter, we wish to emphasize that MLA opposes the proposed LMA1 restricted area, which is the product of a legally, scientifically, and factually deficient process. The TRT did not recommend (or even discuss) the LMA1 restricted area. No LMA1 closure of any kind was presented for public review and input in the scoping process for the DEIS. Consequently, the proposed LMA1restricted area has not been sufficiently vetted and, indeed, NMFS has substantially underestimated the economic impact of this proposal. A mere 60 days for public input is not adequate to assess and inform a proposal that (1) will have adverse economic, operational, safety, and social impacts on the fishery and (2) in the normal course, would have been comprehensively investigated and informed through the statutorily mandated Marine Mammal Protection Act ("MMPA") take reduction planning and National Environmental Policy Act ("NEPA") scoping processes.

In the short period of time that has been given, MLA has worked diligently to assess the proposed LMA1 restricted area as best as possible under the circumstances. Notwithstanding MLA's opposition, if NMFS decides to implement the LMA1 restricted area, then MLA strongly recommends that NMFS: (1) shift the closure period to September through December; (2) reconfigure the restricted area as specifically described in the comments below; and (3) select Alternative 1-B (the "trigger" option). These recommendations would significantly reduce the economic, operational, safety, and social impacts of the closure without compromising conservation benefits to NARW. Additionally, the "trigger" implementation option would also allow NMFS to both implement the restricted area if and when it becomes necessary, and properly investigate temporal and geographic options for the restricted area based on full input from the fishery and other stakeholders. Our detailed comments and recommendations regarding the LMA1 restricted area are set forth in Section II.D below.

The other key points and recommendations addressed in Section II below are summarized briefly as follows:

- The Proposed Rule unjustifiably targets the Northeast lobster fishery. There have been no observed serious injury or mortality entanglements associated with the fishery since a comprehensive suite of protective measures was implemented in 2009. *See* Section II.A.

- The 60% risk reduction target is flawed because it arbitrarily assigns only 50% of unknown entanglements to Canadian fisheries when the best available data show that a much higher percentage of entanglements occur within Canadian fisheries. Within U.S.

fisheries, NMFS arbitrarily assigns all risk for unknown entanglements to trap/pot gear when the best available science suggests that NARWs are twice as likely to be entangled in other types of gear. Accordingly, we recommend that NMFS take a consistent probabilistic approach for all apportionments that are made for purposes of determining risk reduction, specifically to base apportionment on observed data. *See* Section II.B.

- The Proposed Rule fails to account for the full benefits of weakening vertical lines to reduce mortality and serious injury from entanglements. The full benefits should be taken into account in the development of a final rule. *See* Section II.C.

- The MLA strongly recommends that NMFS include conservation equivalencies in its final rule to allow lobstermen as much flexibility as possible in implementing risk reduction measures, particularly when some of those measure will not be practicable for many lobstermen. *See* Section II.E.

- The MLA supports the Proposed Rule's gear-marking provisions. *See* Section II.F.

- The Proposed Rule underestimates economic impacts. When actual impacts are considered, the Proposed Rule is economically significant under E.O. 12866 and must be evaluated as such. *See* Section II.G.

- The MLA recommends that NMFS adopt a phased-in implementation schedule for a final rule because lobstermen cannot reconfigure and mark gear in the middle of the fishing season. *See* Section II.H.

- The final EIS must present a full analysis of all of the technological, operational, economic, safety, and enforcement concerns that must be resolved for a ropeless gear fishery to be viable. *See* Section II.I.

- Alternative 3 exceeds legal requirements, is impracticable, and fails to maximize net benefits. NMFS should therefore not adopt Alternative 3 or any portions of Alternative 3. *See* Section II.J.

- The TRT process leading up to the TRP recommendations that form, in part, a basis for the Proposed Rule was rushed and flawed. This undermines both the TRP recommendations and the Proposed Rule. *See* Section II.K.

I. BACKGROUND

A. The Maine Lobster Fishery.

The Maine Lobster Fishery has long been an integral part of the state's—and the New England region's—culture, heritage, and economy. Lobstering income serves as the foundation of Maine's coastal economy and is the economic engine that keeps many small rural towns alive.

Maine's lobster fleet directly supports more than 10,000 jobs: 3,670 captains, up to 5,750 crew, and 1,095 students.[2]

The Maine Lobster Fishery generates more than $1.5 billion annually in sales and distribution supply chain revenue to the region's economy,[3] and is made up of a diverse collection of small businesses that are located in small, rural communities. Maine lobstermen live along more than 3,500 miles of coastline in 120 rural communities, including 15 year-round islands.[4] These coastal communities lack traditional economic opportunity and instead are highly dependent on self-employment: 23% overall, with a 38% level in year-round island localities (compared to 13% nationwide).[5] The median household income for Maine lobstermen is $39,395, compared to the national median of $44,389.[6]

By law, every Maine lobsterman is a self-employed business owner. Each runs his or her own boat and lives, works, and spends his or her earnings locally. Maine's Department of Marine Resources ("DMR") assigns a commercial lobster license and a maximum 800-trap tag allocation to a vessel. The vessel is owned and operated by the captain.[7] There is no corporate ownership in the Maine lobster fleet. Licenses and trap tags can be sold only by the state of Maine; no sale or transfer by private parties is permitted.[8] In 2018, Maine DMR issued 4,830 commercial lobster licenses and 1,095 student licenses.[9]

The Maine Lobster Fishery has been hit hard by the economic fallout of the COVID-19 pandemic. Illness and lockdowns resulted in substantial constriction of the food service and entertainment sectors, where approximately 70% of American lobster has traditionally been sold.[10] Lobster is particularly vulnerable to price deflation due to the tremendous risk in holding

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[2] This is based on a calculation of potential crew and categories of lobster licenses sold. In 2018, there were 1,390 Class I licenses (29% no crew allowed), 1,891 Class II licenses (39% one crew member allowed), and 1,549 Class III licenses (32% up to four crew members allowed). *See* ME. REV. STAT. tit. 12, § 6421.

[3] Michael Donihue, *Lobsters to Dollars: The Economic Impact of the Lobster Distribution Supply Chain in Maine,* at 1, 3, 12 (June 2018), www.colby.edu/economics/lobsters/Lobsters2DollarsFinalReport.pdf.

[4] WAYPOINTS: LIVELIHOODS ON MAINE'S COAST AND ISLANDS, www.islandinstitute.org/waypoints-livelihoods (last visited Mar. 1, 2021).

[5] *Id*.

[6] GULF OF ME. RESEARCH INST., A SOCIOECONOMIC SURVEY OF NEW ENGLAND LOBSTER FISHERMEN, at 27 (2008), http://www.lobstermen.com/wp-content/uploads/2009/10/RES_DH_reports_Lobster-Socioec-Survey.pdf.

[7] ME. REV. STAT. tit. 12, § § 6431-G.

[8] *Id*. § 6421.

[9] ME. DEP'T MARINE RES., LOBSTER ZONE LICENSE AND TRAP TAG ANNUAL SUMMARY (2008–18), https://www.maine.gov/dmr/science-research/species/lobster/documents/2008-Current%20Licenses%20and%20Tags.pdf.

[10] Letter from Marianne Lacroix, Exec. Director, Maine Lobster Marketing Collaborative, to Patrice McCarron, Exec. Director, Me. Lobstermen's Ass'n, Inc. (Apr. 22, 2020) (on file with recipient).

and moving live product. For example, the price paid to lobstermen for their catch dropped from $6.00 to $3.50 per pound between Memorial Day and early June 2020 as demand fell, putting lobster businesses at risk of failing.

For more than a century, the Maine Lobster Fishery has been a stable presence along New England's waterfronts. It is an icon of the region, and a vital part of the region's culture, traditions, and economy. The future of many of Maine's coastal communities, and economic opportunity for children growing up in these communities, depends on the continued success of the Maine Lobster Fishery.

B. Successful Regulation of the U.S. Northeast Lobster Fishery Under the TRP.

Sections 117 and 118 of the MMPA establish the mechanisms by which NMFS regulates the interactions of commercial fisheries with marine mammals. Section 117 requires NMFS to, *inter alia*, estimate annual levels of "human-caused mortality and serious injury" ("M/SI") of marine mammal stocks and to report those estimates in annual stock assessment reports ("SAR").[11] Under Section 118, those M/SI estimates are used as the basis for various regulatory mechanisms. As relevant here, NMFS's implementation of the MMPA's take reduction planning provisions is based upon the level of M/SI by commercial fisheries compared to a marine mammal stock's "potential biological removal" level ("PBR").[12]

Commercial fisheries interactions with marine mammals that do not result in M/SI do not "count against" PBR.[13] Accordingly, take reduction plans can include measures intended to reduce the severity of marine mammal interactions such that they do not result in M/SI.[14] The MMPA's take reduction planning short-term and long-term goals can therefore be achieved by both minimizing marine mammal interactions and ensuring that any interactions that do occur result in non-serious injuries.

Under the guidance of the TRT and implementation of the TRP, the NARW population growth trajectory was favorable for many years. Collaborative work by lobster harvesters, researchers, fishery managers, and other stakeholders contributed to scientific knowledge of NARW behavior and interaction with fishing gear and other human activities across its migratory range.[15] This work included harvesters working alongside fishery regulators, whale

[11] 16 U.S.C. § 1386.

[12] *See id.* § 1387(f).

[13] *See id*. § 1387(f)(2) (both take reduction planning goals refer only to reducing M/SI).

[14] *See, e.g.*, 50 C.F.R. § 229.37(c) (2012) (Hawaii false killer whale take reduction regulations requiring weak hooks, strong branch lines, and training to remove hooks and trailing gear from hooked whales, resulting in non-serious interactions).

[15] The MLA and its members have collaborated with scientists in developing and testing fishing gear to reduce the risk of entanglement. The MLA partnered with the NMFS gear team in the 1990s to measure gear profiles, test weak links, and explore gear modifications; worked with researchers in the 2000s to establish methods and standards to deploy weak links, develop buoy line marking methods, and deploy remotely operated vehicles and sensors to measure groundline rope profiles; and tested a variety of vertical line modifications, such as weak rope, stiff rope, glow rope, and time tension line cutters. Since

scientists, and the private sector to develop innovative fishing practices and gear deployment strategies intended to reduce the frequency and severity of interactions between whales and fishing gear. This work led to a series of enhanced measures to mitigate risk to the species from the U.S. Northeast Lobster Fishery (the "Lobster Fishery").

Specifically, regulations developed and imposed at the state and federal level, including those implemented under the TRP, have significantly reduced both (1) the amount of lobster-related rope in the water, and (2) the risk of a severe outcome (*i.e.*, a M/SI determination) if a NARW encounters such gear (*see* Table 1 below). The principal elements of these protective measures are summarized below.

- Sinking groundline requirement. The 2009 TRP regulations preclude the use of "floating groundlines" connecting lobster traps and, instead, require the use of "sinking groundlines." This eliminates the potential for whale entanglement in floating lines near the ocean bottom. This regulation removed over 27,000 miles of floating groundlines from New England waters.[16]

- Vertical line reduction. The 2014 TRP regulations established minimum traps per trawl based on geographic area and distance from shore, resulting in the removal of approximately 2,740 miles of rope from the water.

- Massachusetts Restricted Area. In 2015, TRP regulations established a 3,000 square mile area spanning Cape Cod Bay, Massachusetts Bay, and outer Cape Cod, which has been closed to lobster gear from February 1 to April 30 annually, eliminating entanglement risk for up to three-quarters of the NARW during these months. The state waters portion of this closure is managed by the Massachusetts Division of Fisheries ("DMF"), which has extended applicability to recreational fishermen and moved the closure date beyond April 30 as appropriate.

- Gear Marking. Federal fixed gear fishermen regulated under the TRP are required to mark vertical lines to aid in identifying the source of gear involved in an entanglement. In 2020, Maine implemented new regulations to require unique and expanded gear markings.

2010, MLA and its members have worked with scientists to publish a resource describing lobster gear and configurations deployed in the Lobster Fishery, map lobster fishing effort, develop a fishing gear/right whale risk model, document wear issues associated with sinking groundlines and recommendations to improve wear of that line, describe options for best fishing practices, test colored vertical lines, measure the breaking strength of existing vertical lines, test new versions of weak rope, and update time tension line cutters. In addition, individual MLA members have collaborated with researchers and developers seeking to design a viable system for ropeless fishing.

[16] *See* Brief for Me. Lobstermen's Association as Intervenor-Defendants', Decl. of Glenn Salvador at 5, *Ctr. for Biological Diversity v. Ross*, 2020 U.S. Dist. LEXIS 149837, Civil Action No. 18-112 (JEB)(Aug. 19, 2020) (Attached to Draft BiOp Comment Letter as Addendum C) [hereinafter Salvador Decl.].

- Weak Links. The TRP requires the incorporation of 600-lb. weak links (1,100 lbs in LMA3) in the top of a buoy line and to any attachments along the buoy line.

- Universal Gear Requirements. The TRP regulations establish a suite of gear modifications to reduce entanglement risk to NARW, prohibiting the use of floating line at the surface and wet storage of gear for more than 30 days.

- Protections in Maine's Exempt Waters. In addition to the Universal Gear Requirements, the state of Maine requires lobster gear fished in Maine's exempt waters where NMFS has determined there is minimal risk to NARW to implement whale protective measures. Exempt gear must have at least one of the following modifications: (1) sinking or neutrally buoyant rope for all buoy lines, (2) sinking or neutrally buoyant rope for all groundlines, or (3) a 600-lb. weak link attached to the top of the buoy line.[17] As of September 2020, this gear must be marked with three purple marks (36" at the top and 12" at the middle and bottom on of the line).

- Gear Marking. Federally regulated fixed gear fishermen are required to mark vertical lines to aid in identifying the source of gear involved in an entanglement. In 2020, Maine implemented new regulations to require unique and expanded gear markings.

- Effort Reduction. The Lobster Fishery has reduced effort across all jurisdictions since the inception of the TRP. Area 3 has implemented mandatory annual trap allocation limits of 5% per year, Massachusetts has a long-standing moratorium on lobster licenses, and Maine has established a limited-entry and apprentice Program, all of which have resulted in a significant reduction in the risk of entanglement to NARWs.

In sum, implementation of additional protective measures by lobstermen under the TRP has removed nearly 30,000 miles of rope and significantly lowered the risk profile of lobster gear and fishing practices. MLA has been a key participant in the TRT process, helping to develop and successfully implement these enhanced protections for NARW with demonstrated success (Table 1).[18] Since 2009, there has been a sustained downward trend in observed entanglement and M/SI of NARW in American lobster gear, attributable to the comprehensive actions taken under the TRP. This must be (but is not) fully accounted for in the DEIS and Proposed Rule.[19]

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[17] 188-75-02 ME. CODE R. § A(2) (2021).

[18] TRT members include MLA's Executive Director, Patrice McCarron (more than 15 years); MLA President and commercial fisherman, Kristan Porter; MLA Vice-President and lobsterman John Williams; MLA Director and lobsterman Michael Sargent; and former MLA Board member and lobsterman, Dwight Carver.

[19] NOAA law enforcement has reported excellent compliance rates with fishery regulations, including measures required by TRP. *See, e.g.,* NAT'L OCEANIC & ATMOSPHERIC ADMIN., ENFORCEMENT REPORT (Oct. 2018), https://archive.fisheries.noaa.gov/garfo/protected/whaletrp/trt/meetings/October%202018/noaa_fisheries_enforcement_presentation.pdf (compliance rates for all fisheries was 92% in 2017).

II. COMMENTS ON PROPOSED RULE

A. The Proposed Rule Unjustifiably Targets the Lobster Fishery.

The MLA supports risk reduction measures that are based on the best available science, appropriately designed to achieve applicable legal standards, and accurately reflect the risk posed by each commercial fishery's co-occurrence with NARW. The MLA is disappointed that NMFS's management recommendations in the Proposed Rule have prioritized additional mitigation measures in the Lobster Fishery even though the most significant documented threats to NARW originate elsewhere. As described in the comments below, NMFS is not sufficiently addressing other, more substantial sources of NARW M/SI. NMFS must address the entanglement risk posed by *all* commercial fisheries in order to fulfill its legal obligations.

Additionally, NMFS has not sufficiently presented and analyzed available data showing that the Lobster Fishery has substantially reduced the risk it presents to NARW over the past decade through implementation of risk reduction measures that have proven to be effective. Instead, as explained in the comments below, NMFS has artificially inflated the risk of the Lobster Fishery based solely on the number of lines fished, and has not appropriately taken into account indisputably relevant factors such as location-specific whale density, whale behavior, and the threat levels associated with different types of fishing gear.

As illustrated in Table 1, continuous enhancements of whale protective measures have been followed by significant declines in NARW entanglements attributed to the Lobster Fishery. From 2000 to 2010, American lobster gear comprised 45% of known cases of such entanglements (6 cases out of 13). However, since 2010, lobster gear comprises only 0.04% of known cases (1 case out of 25).[20] Since 2014, there has been only one entanglement (a non-serious injury) in New England lobster gear. During this same time period, no NARW is known to have died or suffered serious injury arising from entanglement in gear attributed to lobster fishing.[21] This is significant since efforts to monitor and study NARW, including expanded survey effort, have substantially improved since the beginning of the TRT process and increased the likelihood to detect and identify sources of harm.

Table 1.
Confirmed American Lobster Entanglement 1997-2019

1997-2000	2000-2010	2010-2019
4 Non-serious injuries	1 Mortality; 4 Non-serious injuries	1 Non-serious injury

The MLA therefore continues to object to NMFS's prioritization of the Lobster Fishery for immediate management action. The level of risk reduction sought by NMFS is not consistent with the fishery's demonstrated lack of confirmed entanglements and M/SI with NARW since 2010.

[20] Salvador Decl., *supra* note 16, at 8.

[21] *Id.*

B. The Risk Reduction Target of 60% Is Flawed and Inconsistent with the Best Available Science.

The MLA continues to object to the 60% risk reduction goal upon which the Proposed Rule is premised because it is not consistent with the best available science. The MLA instead urges NMFS to adopt a uniform probabilistic approach, giving full weight to observed data, to appropriately apportion unknown human causes of NARW M/SI. When available, additional data, information, and expert judgment should be used to refine those proportions. This methodology should apply to apportionment of (1) entanglements of unknown origin between U.S. and Canada, and (2) entanglements occurring within the U.S. of unknown fishing gear type.

1. NMFS ignores trends in observed data in assigning unknown-origin entanglements to U.S. fisheries.

A core premise of the 60% risk reduction target is NMFS's assignment of *half* of all entanglements of unknown origin to U.S. fisheries.[22] NMFS makes this assumption "[f]or the purposes of developing a conservative target" despite observational data showing a significantly higher proportion of entanglements with Canadian fisheries.[23] This 50-50 assumption is very significant because 96% of all mortality attributed to the Lobster Fishery results from entanglements of unknown origin. As detailed below, the 50-50 assumption is flawed and inconsistent with the best available science.

First, NMFS's 50-50 allocation is not consistent with recent observational data showing the disproportionate lethality of Canadian snow crab gear. As illustrated by Table 2 below, from 2016 to 2019, the data show a disturbing trend in which Canadian gear accounts for 31% of known entanglements and 36% of M/SI. However, NMFS improperly discounts the value of this observed data in the DEIS, stating that entanglements "can rarely be identified to a specific fishery" and "[i]t is impossible to confirm the country of origin for every incident."[24] NMFS's own data show that identifying causation is not uncommon, with 37% of entanglement cases confirmed to a country from 2016 to 2019. Moreover, no confirmed M/SI from entanglements with U.S. fisheries have been observed over the last five years through 2019. Indeed, on February 23, 2021, the Atlantic Scientific Review Group ("ASRG") prepared a consensus statement recommending that NMFS "reassess the 1:1 apportionment of mortality between the US and Canada *based on recent observed M/SI.*" (Emphasis added.)

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[22] Taking of Marine Mammals Incidental to Commercial Fishing Operations; Atlantic Large Whale Take Reduction Plan Regulations; Atlantic Coastal Fisheries Cooperative Management Act Provisions; American Lobster Fishery, 85 Fed. Reg. at 86,880 (Dec. 31, 2020) (to be codified at 50 C.F.R. pt. 229, 697).

[23] *Id*.

[24] NAT'L MARINE FISHERIES SERV., DRAFT ENV'T IMPACT STATEMENT, at 2-30 (Dec. 30, 2020) [hereinafter "DEIS"].

Table 2. Summary of Entanglement Incidents – US-Canada Comparison				
	2000-2019		2016-2019	
	Entanglement	MSI	Entanglement	MSI
All events	114	52	51	25
CN	18 (16%)	9 (17%)	16 (31%)	9 (36%)
US	8 (7%)	2 (4%)	3 (6%)	0 (0%)
Unknown	88 (77%)	41 (79%)	32 (63%)	16 (64%)
Source: Adapted from Draft BiOp, Table 56				

Second, although the data presented above may not be statistically significant,[25] it is arbitrary to ignore the stark differences in confirmed U.S. and Canadian entanglements. There are underlying factors that strongly suggest a divergence with respect to both entanglement risk associated with the trap/pot gear profiles used in each country and the risk of encounter based on the recent shift in whale migratory behavior to the Gulf of St. Lawrence during the snow crab fishing season. The combination of foraging behavior, which exposes whales to greater risk, and proximity to heavy snow crab fishing gear has proved deadly in recent years. Indeed, Canada had few, if any, risk reduction measures in place prior to 2017.[26]

Meanwhile, beginning in 2009, both U.S. fisheries and maritime transportation sectors implemented a series of regulatory enhancements to reduce NARW M/SI U.S. waters.[27] U.S. fisheries implemented additional measures in 2014 to reduce the number of vertical lines. This set of regulatory improvements, coupled with the shift of NARW migratory habits that exposes the animals to Canada's more lethal snow crab gear, explain the differences in the most recent data.

Glenn Salvador, who spent more than two decades as a gear specialist at NMFS, examined NMFS's entanglement data over the 2000-2018 period to assess the effects of the protective measures implemented in the U.S. (but not in Canada) starting in 2009.[28] Specifically, Mr. Salvador reviewed data available for 138 documented entanglement cases in U.S. and Canadian fisheries of all types, and concluded that there has been a significant decline in NARW entanglements in U.S. lobster gear since 2010. Moreover, he noted that, since 2014, there has

[25] Based on a Student's T-Test (2-tailed), the difference is not significant at $p < 0.05$. RONALD E. WAPOLE & RAYMOND H. MYERS, PROBABILITY & STATISTICS FOR ENGINEERS & SCIENTISTS (7th Ed. 2006).

[26] *Examining Threats to the North Atlantic Right Whale Before the Subcomm. on Water, Oceans, & Wildlife of the H. Comm. on Natural Resources*, 116th Cong. 6 at 26 (2019), https://www.congress.gov/116/meeting/house/109022/documents/CHRG-116hhrg35462.pdf (Chris Oliver, Assistant Administrator for NOAA Fisheries, noting coordination began in 2017).

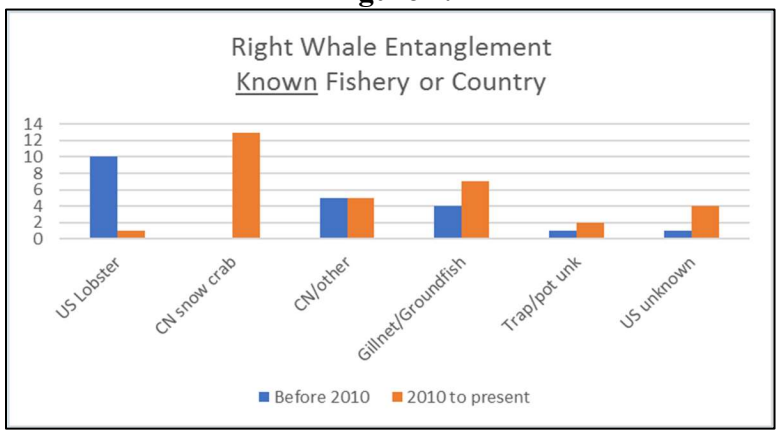
[27] *See supra* Section I.A. Although increased NARW migration into the Gulf of St. Lawrence was observed as early as 2015, Canadian regulators did not implement enhanced protective measures for vessels until 2017 and fisheries until 2018. *See* NARW sightings data at https://apps-nefsc.fisheries.noaa.gov/psb/surveys/MapperiframeWithText.html.

[28] Salvador Decl., *supra* note 16, at 5.

been only a single, non-serious entanglement attributed to the Lobster Fishery for which Maine was ruled out as the origin of the gear involved.[29] Mr. Salvador also observed that rope removed from entangled whales since 2014 is not characteristic of ropes used in the Lobster Fishery.[30] Based on these findings, he concluded that "the decline in lobster gear entanglement is due to the success of whale protection measures implemented by lobstermen and a significant distributional shift of NARW into Canadian waters where they encounter Canadian fishing gear."[31] Mr. Salvador further concluded that "[t]he largest entanglement threat is now posed by Canadian snow crab gear trap/pot gear."[32] The data supporting his conclusion are illustrated in Figure 1 below.

MLA has identified a pronounced trend in NMFS's data on gear of unknown origin, with the proportion of cases with no gear present increasing significantly beginning in 2015 coincident with the increase in confirmed entanglement in Canadian snow crab gear. This raises significant unanswered questions about the responsibility of Canadian fisheries for these entanglements.[33]

Figure 1.



Third, to determine what percentage of the unknown sources are U.S. versus Canadian fisheries, NMFS also considered "assigning those seen first in U.S. waters to U.S. gear" and determined this approach "would suggest that a two- or threefold reduction is necessary to achieve PBR."[34] However, as noted in the NARW stock assessment, "[t]he date sighted and

[29] Email from Patrice McCarron, Exec. Director, Me. Lobstermen's Ass'n, Inc., to Dave Morin, NOAA Greater Atl. Reg'l Fisheries Office ("GARFO') Large Whale Disentanglement Coordinator (Aug. 15, 2019). (attached as Addendum 2).

[30] *Id.*

[31] *Id.*

[32] *Id*.

[33] The MLA first raised this issue with NMFS in an August 30, 2019 letter to Chris Oliver. Letter from Me. Lobstermen's Ass'n, Inc. to Chris Oliver, Assistant Administrator NOAA Fisheries (Aug. 30, 2019) (attached as Addendum 3).

[34] DEIS, *supra* note 24, 2-38.

location provided…are not necessarily when or where the serious injury or mortality occurred; rather, this information indicates when and where the whale was first reported beached, entangled, or injured."[35] According to NMFS's entanglement data, at least four entanglements confirmed in Canada gear were first sighted in U.S. waters. Yet NMFS continues to erroneously cite data on entangled whales first sighted in U.S. waters as a justification for the need for management action in the U.S.[36]

Fourth, the DEIS states "that much of the North Atlantic right whale population is believed to spend more time exposed to fisheries in U.S. waters than in Canadian waters,"[37] yet there are *no* data available to support this assumption.[38] Moreover, residency time in U.S. waters is generally irrelevant for the purpose of ascertaining the entanglement risk of commercial fisheries. NMFS should instead compare the time spent by NARW in the portion of U.S. waters *where the lobster fishery operates* to inform its assumptions to apportion unknown whales among fisheries. Residency time in more southern locations, for example, is not indicative of the entanglement risk of the Lobster Fishery. This same concern was expressed in the Center for Independent Experts' ("CIE") review of the Decision Support Tool ("DST").[39]

Fifth, neither the Proposed Rule nor the DEIS addresses the difference in observation effort between Canadian and U.S. waters. Survey effort has historically been significantly greater in U.S. waters, as NMFS has conducted aerial surveillance operations on nearly a year-round basis for many years. As a result, entanglement events in Canadian waters were likely under-sampled prior to 2017, the year when survey effort in Canada was increased with the assistance of NMFS.[40] Greater survey effort in the U.S. relative to Canada increases the likelihood that an

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[35] NAT'L OCEANIC & ATMOSPHERIC ADMIN., U.S. ATL. AND GULF OF MEXICO MARINE MAMMAL STOCK ASSESSMENTS, at 72 (2019), https://media.fisheries.noaa.gov/dam-migration/2019_sars_atlantic_508.pdf [hereinafter 2019 Stock Assessments].

[36] The fact that NARW carcasses entangled in Canadian snow crab gear started to show up in U.S. waters since 2015 indicates that entanglements first sighted in the U.S. without the entangling gear present must be assigned some probability that the entanglement originated in Canada.

[37] DEIS, *supra* note 24, at 2-38.

[38] Email from NOAA Greater Atl. Reg'l Fisheries Office to Nat'l Marine Fisheries Serv. Atlantic Large Whale Take Reduction Team (Apr. 18, 2019) (Introducing the 50:50 US/CN apportionment, GARFO states: "Because our Stock Assessment Reports have not included a determination on the fraction of time North Atlantic right whales spend in U.S. and Canadian waters, we do not have a data-based residency estimate to apply at this time."); *see also* Draft BiOp Comment Letter, Addendum D.

[39] W.D. BOWEN ET AL., CTR. FOR INDEP. EXPERTS, INDEPENDENT PEER REVIEW SUMMARY REPORT: REVIEW OF THE NORTH ATLANTIC RIGHT WHALE DECISION SUPPORT TOOL (Dec. 2019), https://www.st.nmfs.noaa.gov/Assets/Quality-Assurance/documents/peer-review-reports/2019/2019_12_Bowen_North_Atlantic_right_whale_DST_review_report.pdf [hereinafter BOWEN ET AL.]

[40] NMFS data presented at the October 2018 TRT meeting shows that while surveillance in Canada increased significantly in 2017 and was greater than U.S. efforts (95 hours in Northeastern US, 152 hours in CN), surveillance efforts were similar in 2018 (150 hours Northeastern U.S. vs. 152 hours in Canada). NAT'L MARINE FISHERIES SERV. ATL. LARGE WHALE TAKE REDUCTION TEAM Meeting, Providence, RI, Oct. 9-12, 2018.

entanglement event would be observed. A small number of additional observed entanglements in Canadian waters would be sufficient to make the difference between the U.S. and Canada statistically significant. This factor also undermines NMFS's 50-50 allocation.[41]

Sixth, similar to the concerns recently expressed by the ASRG, NMFS's earlier peer review of the DST called into question the 50-50 allocation. Specifically, the peer review report states:

> The current approach for apportioning human-caused mortality by country may not be the most appropriate approach. There has been a clear recent shift in the spatial distribution of NARW which has been coupled with a shift in the source of known serious injuries or mortalities to more Canadian records. Therefore, a different method from the 50:50 split of unknowns to US and Canadian fisheries should be examined. [42]

Reviewer Jason How acknowledged the lack of a scientific basis for the 50-50 split and offered a different approach to address the uncertainty:

> The current 50% apportionment of unknowns to U.S. fisheries does not reflect the current shift in NARW distribution and the recent increase in Canadian fisheries involvement in SI-M. Discussions between industry and government should therefore be entered into to find a compromise solution, whereby the recent shift in NARW abundance is accounted for, but fishers are still required to address the SI-M issues which likely arise from their fisheries noting the large number of unknown SI-M which can't be attributed to a particular country.[43]

In sum, NMFS arbitrarily assigns a 50-50 allocation between U.S. and Canadian fisheries rather than using a probabilistic approach informed by observed entanglements from 2010-2019. This is not consistent with the best available science, and artificially inflates the presumed impacts of U.S. fisheries, and the Lobster Fishery specifically, which, in turn, calls into question NMFS's 60% risk reduction target. NMFS must revise the risk reduction target to correctly reflect an allocation of risk between Canada and the U.S. that is supported by the best available science.

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[41] MARTIN CRYER, CTR. FOR INDEP. EXPERTS, INDEPENDENT PEER REVIEW NORTH ATLANTIC RIGHT WHALE MODEL POPULATIONS, at 5 (May 2020) (stating the 50:50 allocation "does not seem to have much supporting evidence in the documentation provided.").

[42] BOWEN ET AL., supra note 39, at 13.

[43] *Id*. at 18.

2. The best available science does not support an assumption that all unknown gear entanglements involve U.S. commercial trap/pot fisheries.

NMFS's assumption that the U.S. commercial trap/pot fisheries must reduce risk by 60% is further compromised by NMFS's mistaken premise that it must focus on the fisheries "representing the highest number of endlines in the U.S. Atlantic."[44] The Draft BiOp shows that this premise stems from NMFS's assumption that "all of the presumed U.S. entanglements in unknown gear were from trap/pot gear (2016 IEC, unpublished data)."[45] This misallocation of all M/SI entanglements of unknown gear type to U.S. trap/pot fisheries has the effect of making these fisheries responsible for an additional 38%[46] of entanglements with no evidence of the fisheries' involvement in those entanglements. This is arbitrary for a number of reasons.

First, the best available data suggest that NARWs are more often entangled in gear types other than lobster gear. Where the type of gear involved in an entanglement event is *known*, and Canadian trap/pot incidents are excluded, the ratio between non-trap/pot gear and trap/pot gear is 1.75:1. *See* Table 3 below.[47] In other words, observations involving confirmed gear type suggest that NARW are *nearly twice as likely* to be entangled in gear other than commercial trap/pot fisheries. We understand that gear is recovered in a relatively small proportion of entanglement incidents, and that the gear type is identified in even fewer incidents. However, to completely discount the distinction in observed data and assign *all* entanglements of unknown gear type to trap/pot fisheries for the purpose of assigning responsibility for an allegedly needed risk reduction is without scientific support and is arbitrary.

[44] DEIS, *supra* note 24, at 2-34.

[45] NAT'L MARINE FISHERIES SERV., DRAFT BIOLOGICAL OPINION ON 10 FISHERY MANAGEMENT PLANS, at 224 (Jan. 15, 2021), https://www.greateratlantic.fisheries.noaa.gov/public/nema/PRD/DraftFisheriesBiOp011421.pdf.

[46] 76% of M/SI are unknown; NMFS allocates half of this to the U.S. *See* DEIS, *supra* note 24, at 2-34.

[47] Email attachment from Colleen Coogan, NOAA Greater Atl. Reg'l Fisheries Office Marine Mammal & Sea Turtle Branch Chief, to Patrice McCarron, Exec. Director, Me. Lobstermen's Ass'n, Inc. (Dec. 24, 2020); *see* Draft BiOp Comment Letter, Addendum E.

Table 3. Summary of Entanglement Incidents – By Gear Type -- 2000-2019		
	Entanglement	MSI
All events	114	52
Gear known	25	12
Trap/pot	18	10
trap/pot – CN crab	14	8
trap/pot – US	2	1
trap/pot – US lobster	1	0
trap/pot – Unknown	1	1
Non-trap	7	2
Non-trap – US	1	0
Non-trap – country unknown	6	2
Gear unknown	89	40
No gear present	52	18
Gear not recovered	33	19
Gear undetermined	4	3
Source: NMFS NARW Entanglement Data 2000-2019		

Second, although most of the lines in U.S. waters are from trap/pot fisheries, NMFS recognizes that not all lines pose the same risk to NARW. NMFS developed the DST to assess the variable threat from different gear types and configurations in its risk assessment. A methodology is under development to assess risk of lobster lines based on the type of rope fished (*i.e.*, strength based on diameter) and the configuration of the gear (*i.e.*, length of line, length of trawl).[48] Even with an incomplete understanding of the threat of various gear types, early results of the DST show that line density alone is not a reliable indicator of risk to whales. For example, the state of Maine, using the DST, determined that 70% of the risk to NARW from Maine lobster gear occurs in an area where only 10% of lines are fished.[49]

Third, the best available data show that both the entanglement risk and potential of a severe entanglement differ between trap/pot and non-trap gear. Just as encounters with strong, large diameter line fished in Canadian trap/pot fisheries have been responsible for the majority of NARW M/SI in recent years, it is likely that a NARW encountering non-trap gear fished in wide strings would have a higher likelihood of entanglement than a vertical line occupying less than

[48] *See* NAT'L MARINE FISHERIES SERV. ATL. LARGE WHALE TAKE REDUCTION TEAM Meeting, Presentation on Risk Reduction Tool (Apr. 16, 2019), https://archive.fisheries.noaa.gov/garfo/protected/whaletrp/trt/meetings/April%202019/02_presentation_on_risk_reduction_tool.html.

[49] Letter from Erin Summers, Director of Biomonitoring & Assessment Division of Me. Dep't Marine Resources, to Patrice McCarron, Exec. Director, Me. Lobstermen's Ass'n, Inc. (Feb. 12, 2021) (on file with recipient); *see also* DEIS, *supra* note 24, at 3-105 (with preliminary risk analysis: "Maine federal waters from the 3- mile line out to 12 miles constitutes 11% of Maine's annual NARW occurrence and 88% of Maine's NARW presence is contained beyond 12 miles.").

an inch across the water column.[50] The Woods Hole Oceanographic Institute has developed a methodology in collaboration with the fishing industry to attribute risk to gear based on proportion of water column occupied.[51] This information must be considered in this rulemaking.

Fourth, neither the Proposed Rule nor the DEIS addresses the potential for a whale to shed trap versus non-trap gear, which is highly relevant considering that fishing gear is shed in the majority of incidents. Two-thirds of all entanglement events are minor,[52] meaning that whales frequently shed fishing gear, avoiding serious injury. It is reasonable to assume that the entanglement profile of fishing gear influences the likelihood of its being shed, and ultimately, the probability of a resulting serious or non-serious entanglement. The DEIS does not analyze differences between trap and non-trap fisheries with respect to the potential to cause M/SI. Instead, NMFS simply assigns all M/SI resulting from unknown gear type to trap/pot fisheries rather than using a probabilistic approach informed by observed entanglements. In so doing, NMFS fails to accurately address the highly important legal distinction between entanglements that result in M/SI (which count toward PBR) and entanglements that result in non-serious injuries (which do not count toward PBR).

Fifth, NMFS has not taken account of significant variances in NARW behavior. The scientific literature demonstrates that NARW diving depth depends on the distribution of prey (especially *C. finmarchicus*) (Baumgarten *et al*. 2017). Floating groundlines, which have been prohibited in federal waters since 2009, pose a particular threat in areas where NARW are known to dive to the seafloor (Hamilton and Krause 2019[53]). Foraging behavior exposes baleen to entanglements, which subsequently interfere with successful feeding (Cassoff *et al*. 2011[54] and Johnson *et al*. 2005[55]). There is ample scientific documentation of feeding grounds within U.S. waters,[56] and fishing gear deployed in those areas must be considered to pose higher risk of M/SI than elsewhere. Specifically, NARW are known to forage in areas off the coast of Massachusetts

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[50] NAT'L OCEANIC & ATMOSPHERIC ADMIN., LIST OF FISHERIES, https://www.fisheries.noaa.gov/national/marine-mammal-protection/northeast-sink-gillnet-fishery-mmpa-list-fisheries (last visited Mar. 1, 2021).

[51] *See* HAUKE L. KITE-POWELL ET AL., THE SPATIAL AND TEMPORAL DISTRIBUTION OF RISK TO RIGHT WHALES FROM LOBSTER FISHING GEAR OFF THE COAST OF MAINE (*forthcoming*).

[52] PHILLIP K. HAMILTON ET AL., MAINTENANCE OF THE NORTH ATLANTIC RIGHT WHALE CATALOG, WHALE SCARRING AND VISUAL HEALTH DATABASES, ANTHROPOGENIC INJURY CASE STUDIES, AND NEAR REAL-TIME MATCHING FOR BIOPSY EFFORTS, ENTANGLED, INJURED, SICK, OR DEAD RIGHT WHALES, at 50 (Oct. 2020).

[53] PHILLIP K. HAMILTON & SCOTT D. KRAUS, FREQUENT ENCOUNTERS WITH THE SEAFLOOR INCREASE RIGHT WHALES' RISK OF ENTANGLEMENT IN FISHING GROUNDLINES (July 2019), https://www.int-res.com/articles/esr2019/39/n039p235.pdf.

[54] RACHEL M. CASSOFF ET AL., LETHAL ENTANGLEMENT IN BALEEN WHALES (Oct. 2011), https://www.int-res.com/articles/feature/d096p175.pdf.

[55] AMANDA JOHNSON ET. AL, FISHING GEAR INVOLVED IN ENTANGLEMENTS OF RIGHT AND HUMPBACK WHALES (Oct. 2005), https://www.bycatch.org/sites/default/files/Johnson_etal_2005.pdf.

[56] 2019 Stock Assessments, *supra* note 35; NAT'L OCEANIC & ATMOSPHERIC ADMIN. Technical Memo. NMFS-NE-264.

and the Gulf of St. Lawrence where large aggregations congregate for significant periods of time. By contrast, NARW in Maine waters are generally transiting from south of Maine to Canadian waters where their prey is found.[57] Thus, the risk of M/SI to NARW from Maine fishing gear is lower than the risk posed by fishing gear in waters where NARW foraging occurs based on both density of whales present and whale behavior.

The Proposed Rule is arbitrarily premised upon a scenario that inflates the assumed frequency and severity of NARW entanglements with trap/pot fisheries based solely on presence of rope. If this mistake is not corrected, the Proposed Rule and NMFS's subsequent regulatory efforts with respect to non-trap/pot fisheries could fail to benefit NARW because they will not adequately address entanglement with gear that is most likely to result in M/SI.

We therefore strongly recommend that NMFS take a consistent probabilistic approach for all apportionments that are made for purposes of determining risk reduction, specifically to base apportionment on observed data. This approach should also consider additional data, information, and expert judgment, as appropriate, and apply them in a manner that refines the allocations based on observed data.

C. The Proposed Rule Underestimates the Risk Reduction Benefits from Non-Closure Measures.

1. The DST is fundamentally flawed and must be updated.

The DST's calculations of entanglement risk equally weight whale abundance, gear density, and gear type. Independent reviewers expressed concerns with this approach and made numerous suggestions to refine it.[58] Based on the reviewers' comments and input MLA has received from its members, NMFS cannot support the assumption that the likelihood of entanglement of NARWs is based equally on these factors.[59] Instead, the DST must consider whale behavior in addition to whale density and develop a gear threat tool that more accurately reflects the risk of different gear types including size and strength of gear, and gear configurations and rigging techniques that inform relative threat of gear to NARW.

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[57] Note that the study of NARW foraging tagged a small number of whales around Jeffrey's Ledge and no individuals elsewhere within waters offshore of Maine. Most of the foraging whales were located offshore Massachusetts and in the Bay of Fundy. MARK F. BAUMGARTNER ET AL., NORTH ATLANTIC RIGHT WHALE FORAGING ECOLOGY AND ITS ROLE IN HUMAN-CAUSED MORTALITY, Fig 1. (OCT. 2017), https://doi.org/10.3354/meps12315 [hereinafter Baumgartner, et al.].

[58] *See* BOWEN ET AL., supra note 38.

[59] JULIE VAN DER HOOP, CTR. FOR INDEP. EXPERTS, REVIEW OF THE NORTH ATLANTIC RIGHT WHALE DECISION SUPPORT TOOL, at 13 (Dec. 2019) ("The challenge is that we know little about how a co-occurrence becomes an entanglement."); BOWEN ET AL., *supra* note 38, at 9 ("Little is known about the circumstances that lead right whales to become entangled or those that result in the whale becoming disentangled."); JASON HOW, CTR. FOR INDEP. EXPERTS, CENTER FOR INDEPENDENT EXPERTS INDEPENDENT REVIEW OF THE NORTH ATLANTIC RIGHT WHALE DECISION SUPPORT TOOL, at 2 (Dec. 2019) ("Currently there is too much uncertainty regarding the mechanisms surrounding an entanglement and how these are likely to be impacted by changes to gear configuration and whale size etc.").

Improved information on whale behavior and the threat of various gear types and configurations is especially important to designing mitigation measures that achieve risk reduction targets. Making these improvements will ensure that economic impacts are optimized with respect to reducing entanglement risk, and that the Lobster Fishery receives full credit for its actions. As presently designed, the DST imposes tremendous cost on the Lobster Fishery without commensurate risk reduction or properly calculating risk reduction.

There is a significant range in DST estimates of risk reduction from measures in the Proposed Rule. Specifically, the DEIS estimates the effectiveness of the Proposed Rule to range from 47.1 to 79.4 percent (DEIS Table 3.4). Excluding the LMA1 restricted area, the estimated effectiveness varies between 36.1 and 67.7 percent, with a central estimate of 57.3 percent. The effects of some of the risk reduction measures may exceed the upper bound of effectiveness, let alone the central estimate, as discussed below for the weak line requirements.

Were the measures in the Preferred Alternative to achieve their maximum estimated effectiveness, the proposed LMA1 restricted area would not be necessary to meet the Lobster Fishery's risk reduction target. NMFS may account for this uncertainty in effectiveness when structuring its regulations to implement conservation measures in phases. In light of the recommendations made by independent experts to further refine the DST, which we fully support, we believe NMFS should use a phased approach to risk reduction rather than immediately implementing a closure (the LMA1 restricted area) that may not be necessary.[60]

2. The Proposed Rule does not account for the full benefits of weakening vertical lines.

The proposed mitigation measures that eliminate line in the water (*e.g.*, trawling up or a closure) would reduce the risk of entanglements of all degrees. Although weak points inserted in rope do not reduce the risk of a NARW *encounter*, there is a rational basis to assume that weak-point insertions effectively reduce the likelihood of a severe (*i.e.*, M/SI) entanglement. NARW are likely to break free of gear rigged with weak point insertions by applying enough force to break the line and swim free. However, the DEIS does not sufficiently consider the benefit that weak point insertions are more likely to result in minor, rather than severe entanglement, and therefore inaccurately estimates the total benefit of weakening lines to be only 14 percent.

NMFS's 14% estimate is contrary to the best available science, which suggests that NARW are capable of applying enough force to break ropes weakened with insertions of 1700-pounds or less,[61] and that those encounters rarely result in a severe entanglement. Indeed, actions that reduce severe entanglements may be sufficient to reduce the M/SI rate to below PBR.

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[60] MLA is aware that NMFS has recently re-run the DST model. MLA's comments are provided based upon the information presented in the Proposed Rule and the associated record presented for public review. Any new DST model runs are not part of the administrative record and cannot form the basis for a final rule under the Administrative Procedure Act ("APA").

[61] LOGAN H. ARTHUR ET. AL., ESTIMATING MAXIMAL FORCE OUTPUT OF CETACEANS USING AXIAL LOCOMOTOR MUSCLE MORPHOLOGY (May 2015), https://doi.org/10.1111/mms.12230.

Knowlton *et al*. (2015)[62] found that, "broad adoption of ropes with breaking strengths of ≤7.56 kN (≤1700 lbsf) could reduce the number of life-threatening entanglements for large whales by at least 72%, and yet could provide sufficient strength to withstand the routine forces involved in many fishing operations. The authors concluded that "[a] reduction of this magnitude would *achieve nearly all the mitigation legally required for U.S. stocks of North Atlantic right and humpback whales*." *Id*. (emphasis added).

The DEIS takes an overly conservative approach by crediting risk reduction for only the portion of the line above the lowest weak insertion. In taking this approach, NMFS assumes that a NARW is equally likely to encounter any section of the line, and therefore equally likely to be entangled at any section of a line. Although this assumption may be correct in areas where NARW forage and are therefore diving to greater depths (Baumgartner *et al.* 2017), this assumption is unsupported in areas where NARW spend the majority of time in transit (such as waters offshore of Maine).[63] The DEIS does not explain why migrating NARW are equally likely to encounter line at the surface and seafloor. This assumption is particularly relevant to Maine fisheries because NARW have primarily used these waters since 2010 for transiting rather than foraging. Based on the best available information, NMFS should apply more risk reduction for weak line in areas where NARW transit and are therefore less likely to encounter line at greater depths.

Finally, in stark contrast to Canadian snow crab gear, lobster gear already incorporates many weak points in vertical lines through the routine rigging of multiple ropes into a single line with knots and splices. A NMFS gear specialist characterized snow crab gear as "heavy traps on knot free and fairly uniform large diameter ropes."[64] The lack of weak points in this Canadian gear provides a likely explanation of why snow crab gear, and not lobster gear, is routinely found on entangled whales and commonly associated with M/SI. The addition of 1700-pound weak points in a line will further reduce NARW M/SI and exceed the current estimate of 14 percent risk reduction.

Successful take reduction planning under the MMPA does not occur solely through mechanisms intended to *avoid* all marine mammal interactions. Weakening lines is a promising and well-supported method to *reduce the severity of interactions* and thereby convert NARW entanglements that might otherwise result in M/SI to non-serious encounters. The final rule must more accurately account for this important and effective method for reducing NARW M/SI, which will achieve more than a 14% risk reduction in the overall plan. Maine DMR developed an independent methodology to assess the reduction from weak rope. The result of this analysis was that weak points adopted within the Maine Lobster Fishery, as proposed in the DEIS's Preferred Alternative, reduced risk by 25%, compared to the NMFS estimate of 11.8% credit for Maine.[65]

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[62] AMY KNOWLTON, EFFECTS OF FISHING ROPE STRENGTH ON THE SEVERITY OF LARGE WHALE ENTANGLEMENTS (July 2015), https://doi.org/10.1111/cobi.12590.

[63] BAUMGARTNER ET. AL., *supra* note 57.

[64] DEIS, *supra* note 24, at 2-40.

[65] DEIS, *supra* note 24, at 3-98.

D. The Proposed LMA1 Restricted Area is Unwarranted.

1. MLA opposes the proposed LMA1 restricted area because it was not recommended by the TRT and lacks a rational basis.

The MMPA places significant emphasis on the judgment and recommendations of take reduction teams.[66] When amending take reduction plans, as NMFS is proposing to do here, the Secretary "shall" take a team's recommended plan into consideration and must provide a written "explanation of the reasons" for any changes the Secretary makes to the recommended plan when issuing implementing regulations.[67] Here, NMFS has proposed the LMA1 restricted area, but the TRT did *not* consider or recommend the LMA1 restricted area *or any other restricted area in Maine offshore waters*. NMFS fails to sufficiently address this significant discrepancy or explain the reasons why it is proposing to alter the risk reduction approach set forth in the TRT's near-consensus recommendation. This violates the MMPA and, in light of the deficiencies identified above and below, falls short of the rational basis for agency rulemaking required by the APA. The MLA therefore opposes the LMA1 restricted area.

2. The DEIS significantly underestimates the cost of the LMA1 restricted area.

NMFS estimates that the LMA1 restricted area will reduce catch by 5 to 10 percent. NMFS bases this estimate on the following assumptions: (1) there is no additional cost to fishermen to reconfigure their gear to meet the minimum trawl length required in any area to which they relocate; (2) fishermen would fish the same number of end lines and traps as they used in the closed area; (3) fishermen will relocate to productive ground; and (4) fishermen will continue to make the same number of fishing trips. This assessment is deficient for the following reasons.

First, NMFS presented no data to support its catch reduction estimate in LMA1 and has failed to address this data gap as required by law. NMFS admits that "[t]he data required to develop a rigorous estimate of potential catch impacts are not available."[68] This information is plainly "essential to a reasoned choice among alternatives" as NMFS itself has presented three options for the LMA1 restricted area and two of those options (automatic closure and triggered closure) were *not* recommended by the TRT or presented to the public for input during the NEPA scoping process.[69] Accordingly, NMFS was required to obtain the data and include it in the DEIS if the "overall costs of obtaining [the data] are not unreasonable."[70] Alternatively, if NMFS determined that the costs of obtaining the data are unreasonable, it must present, in the

[66] *See* 16 U.S.C. § 1387(f)(7).

[67] *See id*. § 1387(f)(7)(B–F).

[68] DEIS, *supra* note 24, at 6-212.

[69] The NEPA implementing regulations establish a specific, detailed scoping process, which "shall be an early and open process for determining the scope of issues to be addressed and for identifying *the significant issues* related to a proposed action." 40 C.F.R. § 1501.7 (emphasis added). The LMA1 restricted area is plainly a "significant issue" but was never addressed during scoping.

[70] 50 C.F.R. § 1502.21(b).

DEIS, the analysis required by 50 C.F.R. § 1502.21(c).[71] The DEIS is legally deficient because it entirely fails to comply with 50 C.F.R. § 1502.21.

Second, NMFS's assumptions regarding how fishermen will respond to the LMA1 restricted area are not supported by the best available information, and the agency provides no evidence or rationale to support those assumptions. Contrary to NMFS's assumptions, many fishermen are unlikely to relocate to other, equally productive fishing grounds. An essential element of any lobstering business plan is to fish the most productive bottom available in the most cost-effective manner. Since the proposed LMA1 restricted area is located on the outer most edge of LMA1, lobstermen would not pay the high operating expense to steam that far offshore unless they are accessing the most productive fishing grounds. The LMA1 restricted area presents the combined adverse impact of losing access to the most highly productive fishing bottom while having to compete with other lobstermen fishing in less productive lobstering areas.

Third, Maine lobstermen cannot simply take up all their gear and shift it to the most productive fishing bottom. Under Maine's lobster zone management program, lobstermen are significantly limited in where they can fish. Lobstermen must declare a home zone where they are required to fish a majority of their lobster traps, making it illegal to move all of their lobster gear to another fishing ground of choice. This significantly limits the spatial footprint of the Maine Lobster Fishery. Maine lobstermen bear the additional burden of having to double tag any lobster gear fished outside of their home zone.[72]

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[71] Specifically, 50 C.F.R. § 1502.21(c) requires:

> (c) If the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are unreasonable or the means to obtain it are not known, the agency shall include within the environmental impact statement:
>
> (1) A statement that such information is incomplete or unavailable;
>
> (2) A statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment;
>
> (3) A summary of existing credible scientific evidence that is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment; and
>
> (4) The agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community.

[72] 188-25-08 ME. CODE R. § A(5) (2021) ("A person who holds a Class I, Class II or Class III lobster and crab fishing license may not fish more than 49% of that person's lobster traps in a limited entry zone unless that person's license identifies that zone as the declared lobster zone.").

Furthermore, the Maine Lobster Fishery is highly territorial and lobstermen fiercely protect productive fishing bottom. Many fishing areas are dominated by lobstermen from particular harbors or towns or by members of a fishing lineage. It can take multiple years for a lobsterman to establish a fishing presence in a new area, and many attempts to do so end in failure. For those who are successful, it can take even more time to earn access to the most productive fishing bottom within a fishing territory.

Fourth, increasing fishing intensity in those areas where lobstermen relocate gear will not result in lowering catch by 5 to 10 percent compared to catch that would have otherwise been generated from operating in the LMA1 restricted area. During the closure period, all LMA1 lobster catch will be forfeited and overall catch reductions could be significant. Given the large number of participants in the Maine Lobster Fishery, NMFS must assume that lobstermen are already fishing areas to maximize catch within state and federal waters. Even with some spillover of lobsters at the closure boundaries, total catch is likely to be similar in areas surrounding the proposed LMA1 closure. Relocating fishing effort during the seasonal closure will result in more fishermen chasing fewer lobsters, producing less efficient fishing effort, lower catch shares for individual lobstermen, and declines in operating margins. Any potential for cost savings to result from reduced fuel usage will be lost as gross monthly revenue declines. As a result, some vessels will continue to operate at the lower margin while others will take fewer trips as it may be difficult to cover costs.

When fishermen re-enter the proposed LMA1 restricted area at the end of the seasonal closure, it is unlikely that they will fully make up lost catch. Some lobster will have migrated out of the area to deeper waters into Area 3 where Maine lobstermen are not permitted to fish. And there will be an incentive for Area 3 boats to significantly intensify fishing effort along the edge of the LMA1 closure while it is in place. The DEIS also fails to account for natural mortality that will reduce the abundance of lobster, including predation by cod, haddock, seals, and cannibalism by other lobsters. For the purpose of modeling lobster abundance in the Gulf of Maine, the American Lobster Technical Committee has used a natural mortality rate of 0.15.[73] All of these contributing factors result in lower harvest and lower value within LMA1 throughout the year as a result of a four-month closure.

Fifth, the estimate of a 5 to 10 percent reduction in catch not only has no evidentiary basis, but also fails to account for historic trends in the value of lobster. December and January are two of the highest months for the price of lobster; the five-year average is $4.55/lb. and $5.05 /lb., respectively.[74] The prices are significantly higher than, for example, August and September when the price is $3.77/lb. and $4.02/lb., respectively. Not only is the price of lobster greater during December and January, but LMA1 is disproportionately more important to lobstermen in terms of landings during these months.

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[73] Memorandum from the Am. Lobster Tech. Comm. to the Am. Lobster Mgmt. Bd., *Report on the GOM/GBK Stock*, at 27 (Jan. 12, 2017), 589a2d25AmLobsterTC_GOM_GBKStockReport_jan2017.

[74] Maine Department of Marine Resources, *see* https://www.maine.gov/dmr/commercial-fishing/landings/documents/LobByCntyMoZone.pd

The MLA conducted a survey to solicit feedback on the assumptions in the DEIS to assess economic impacts of the Proposed Rule, and received 147 responses (Addendum 4). A total of 62 percent of respondents to MLA's survey of lobstermen (Table 3, Addendum 4) reported an anticipated 50 to 100 percent loss of revenue during December as a result of the LMA1 closure. This number rises to 72 percent of respondents in the month of January, with 40 percent estimating between 75 and 100 percent loss of revenue. Even if the LMA1 restricted area merely displaced the timing of catch instead of reducing it, the losses to the fishery in terms of value would substantially exceed 5 to 10 percent.

Sixth, the estimates in tables 6.11 and 6.12 of the DEIS are gross underestimates based on expert input from lobstermen. There are more boats, more trips, and more catch per trap in the LMA1 restricted area during October through January, in addition to higher prices (Table 2, Addendum 4). The price of lobster is particularly inaccurate, perhaps because NMFS erred when converting price per pound to kilograms. Using NMFS's arbitrary method of a 5 and 10 percent loss in catch, the revised total loss in revenue (using the correct data values) is $992,904 and $1,985,809, respectively.

Table 4.
Catch Impacts in Maine Closed Area by Month (based upon Table 6.12 of DEIS)
revised with MLA survey data

Month	Catch per Trap (kg)	Price ($/kg)	Total Traps[a]	Total Catch (kg)	5% Value ($)	10% Value ($)
October	11.4	$ 9.00	35,329	210,261	94,597	189,193
November	12.3	$ 9.20	45,929	269,926	124,112	248,224
December	12.3	$ 10.01	55,108	300,768	150,534	301,068
January	6.8	$ 11.11	56,661	194,032	107,785	215,569
Total					**992,904**	**1,985,809**

[a] *The DEIS did not present the method for estimating total traps. Since the survey results demonstrate more vessels operating in LMA1 than estimated in the DEIS, we assume the additional vessels fish on average the same number of traps per vessel as estimated in the DEIS.*

In sum, NMFS has substantially *underestimated* the impacts of the proposed LMA1 restricted area on lobster catch and the value of lobster traditionally caught during the proposed closure months that will instead be landed later in the season. NMFS must revise its estimate based on the expert information provided by nearly 150 lobstermen responding to the MLA survey. This information represents the best available commercial data, and NMFS should re-evaluate the net benefits of the proposed LMA1 restricted area accordingly.

MLA therefore recommends that NMFS use the MLA estimate of $992.904 and $1,985,809, which represents the best available commercial data, in the final EIS and evaluate the net benefits of the LMA1 restricted area accordingly.

3. Uncorrected deficiencies in the DST result in an inaccurate assessment of potential risk in LMA1.

As explained above, there remain significant flaws and uncertainty with the risk reduction estimates generated by the DST. With respect to the LMA1 restricted area, the "hot spot" NMFS identifies is primarily predicated on the density of fishing gear rather than observed whale abundance or behavior since the oceanographic regime shift that occurred in 2010.[75] NMFS's overreliance on gear density is a driving factor for the assumed entanglement risk to NARW in the proposed LMA1 restricted area. Were the DST improved as both MLA and independent experts recommend, we are confident that the LMA1 restricted area would not be necessary to meet the risk reduction target.

The results of the DST indicate that the LMA1 restricted area is the most significant source of risk reduction for Maine lobstermen, accounting for 23% of Maine's risk reduction (10.8% for the region). This compares to less than 20% (12% for the region) for Maine's trawling up measures and less than 12% (14% for the region) for weak point insertions. While the current DST analysis bears this out, these results are completely counterintuitive, contrary to the best available data, and underscore the fact that NMFS has artificially inflated the risk posed by the Maine Lobster Fishery (particularly in LMA1).

Whale sightings data available to the public through WhaleMap show sparse NARW sightings in the proposed LMA1 restricted area.[76] Maine DMR mapped the NARW glider detections cited as a justification in the DEIS for the restricted area and determined that 73% of these detections were outside its boundaries and occurred in Area 3.[77] Two Massachusetts waters closures in the Proposed Rule that are known for large seasonal aggregations of NARW receive similar or lower risk reduction scores. The MRA closure where three-quarters of the NARW population has been sighted in a season receives a risk reduction similar to LMA1 and the South Island closure, which has frequent high abundance of NARW, receives significantly less risk reduction. The MLA believes that appropriately weighting whale behavior within the DST would significantly raise the risk reduction benefit from these two important Massachusetts habitats.

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[75] The DEIS's reference to Cole *et al*. (2013) at 3-72 lacks relevance because the BiOp discounts most demographic data (*e.g.*, calving rate) prior to 2010 based on an understanding that a permanent oceanographic regime shift has occurred. *See* DEIS, *supra* note 24, at 7-32. The fact that LMA1 may be suspected as a breeding ground between 2002 and 2008 would not be relevant unless favorable oceanographic conditions returned to the area.

[76] *See* https://whalemap.org/WhaleMap/.

[77] Statement of Me. Dep't Marine Resources Commissioner Patrick Keliher, Maine DMR, during DEIS public hearings, Nat'l Oceanic & Atmospheric Admin. Public Hearings on Proposed Whale Rule, February 23-24, 2021; DEIS, *supra* note 24, at 3-72.

This uncertainty must inform NMFS's choice of the alternative for paragraph (c)(6)(ii) of the proposed regulations, particularly in light of the severe economic impact of the proposed closure. For reasons discussed here and elsewhere, the MLA believes the LMA1 restricted area is unnecessary, unduly burdensome, and not fully informed. However, if NMFS proceeds to implement the LMA1 restricted area (whether as modified or proposed), the need for improvement of the DST underscores the benefit of selecting Alternative 1-B, which would allow for further consideration and modification of the LMA1 restricted area before implementation, if and when a closure is triggered.

4. Alternative 1-B to the LMA1 restricted area maximizes the net benefits under E.O. 12866 and is fully consistent with OMB Circular A-4.

As explained above, the costs of the proposed LMA1 restricted area exceed the benefits, and it is likely that other measures, such as weakened lines, will reduce entanglement risk more than what is estimated in the DEIS. As stated above, the MLA is opposed to the proposed LMA1 restricted area. If, however, NMFS proceeds to implement the LMA1 restricted area, MLA strongly believes that Alternative 1-B—to implement the LMA1 restricted area only if certain triggers are met—maximizes net benefits under E.O. 12866, for the following reasons.

E.O. 12866 directs that "in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach."[78] The proposed LMA1 restricted area is predicated on reducing the risk of entanglements resulting in M/SI by 60 percent. As addressed in Section II.B *supra* and demonstrated in the MLA's comments on the Draft BiOp, however, the target of 60 percent is likely higher than what is necessary to sufficiently reduce the potential risk posed by the Lobster Fishery. Moreover, NMFS proposes to impose a potentially unnecessary level of risk reduction on fishing in the LMA1 restricted area without making a "reasoned determination that the benefits of the intended regulation justify its costs."[79]

Alternative 1-B accounts for the uncertainty associated with the amount of risk reduction to be achieved by the Lobster Fishery under the Proposed Rule. As MLA has explained, sufficient uncertainties exist in NMFS's assessment of risk reduction that the proposed measures either will not be accurately targeted to protect NARW from risks of M/SI or will prove to overshoot the statutory goal of reducing M/SI to a level at or below PBR. Under Alternative 1-B, however, an established procedural time frame would allow for a meaningful evaluation of the rule's effectiveness.

During that time, NMFS would continue to improve its understanding of how whale behavior and gear configuration contribute to severe entanglements and refine and improve the DST to reflect the best available science as accurately as possible. New information on M/SI would be collected, including any changes as a result of recently enhanced Canadian regulatory measures. NMFS would also refine the population models, including the disputed estimate of

[78] E.O. 12866 § 1a.

[79] *Id.* § 1a(6).

cryptic mortality. Should the Regional Administrator determine that the frequency of entanglements in the Northeast region has not been reduced by 60 percent, then the LMA1 restricted area could be put into effect without further rulemaking. By the same token, should the Regional Administrator find that M/SI has been effectively reduced without implementation of the LMA1 restrictions, MLA members and other participants in the fishery would not have to bear its unnecessary costs.

The phased approach taken under Alternative 1-B, which authorizes a seasonally restricted LMA1 pending an evaluation of the effectiveness of the rule, is fully consistent with OMB Circular A-4. OMB's guidance to agencies is that, "when uncertainty has significant effects on the final conclusion about net benefits, your agency should consider additional research prior to rulemaking. The costs of being wrong may outweigh the benefits of a faster decision."[80] The costs for being wrong in terms of a LMA1 restricted area are significant adverse impacts to the regional economy while achieving little in terms of recovering the NARW.

5. Modifying the geographic area of the proposed LMA1 restricted area would impose less economic and social impacts without compromising risk reduction.

If NMFS proceeds to implement the proposed LMA1 restricted area, the MLA, notwithstanding its objections, recommends that NMFS modify the geographic scope of the restricted area. Unfortunately, NMFS did not seek comments on any proposed closures off the coast of Maine during scoping, and this proposal was not discussed or recommended by the TRT. In the absence of required processes that would have informed both stakeholders and NMFS, Maine lobstermen are attempting (in a short 60-day comment period) to determine how NMFS's proposed closure will affect the fishery and what alternatives may reduce adverse economic and social impacts while retaining conservation benefits. In this light, MLA offers the two recommendations below, recognizing that the process for determining impacts and benefits needs to be more thoroughly vetted.

First, the MLA recommends that NMFS move the LMA1 restricted area further offshore and split the closure area equally between Area 1 and Area 3. Maine lobstermen disagree with NMFS's assessment of a lack of fishing effort on the Area 3 side of the line, and based on observation, believe it to be only slightly less than fishing effort on the Area 1 side of the line. Additionally, glider detections of NARW cited by NMFS in the DEIS to justify this closure occurred primarily in Area 3 as noted above. This would decrease the economic burden of the closure on Maine lobstermen by lessening the spatial extent of lost fishing grounds in Area 1 and spread it among more vessels by sharing the costs between Area 1 and Area 3 lobstermen.

Second, the MLA alternatively recommends that NMFS reconfigure the LMA1 closure to encompass an equal spatial area, but make the closure longer and narrower. This would potentially lessen the economic hardship on boats impacted under the current configuration and provide a more equitable and lesser economic among more lobster boats. Lobstermen typically set gear within an area so that they can haul through a set number of traps in a day. The

[80] OFFICE OF MGMT. & BUDGET, CIRCULAR A-4 (Sept. 17, 2003), https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4/.

nearshore portion of the closure will be fished as they transit this area setting gear from west to east, rather than lengthwise within the closure from north to south. Narrowing the restricted area will reduce the amount of productive bottom lost. Making it longer will impact more lobstermen along the coast but lessen the severity of economic impact for individual vessels. Presumably, this would also provide significant conservation benefit for whales as it runs along NMFS's assumed offshore migration route.

The MLA is prepared to work with NMFS and DMR to explore these and other options to minimize the impacts of the proposed LMA1 restricted area.

6. Modifying the time period of the proposed LMA1 restricted area would lessen economic impacts without compromising risk reduction.

If NMFS finalizes a restricted area in LMA1, we request that the seasonal closure begin September 1 and end December 31. Shifting the closure by one month would significantly reduce the adverse economic impact on the Maine Lobster Fishery. As discussed in Section D.2 above, an estimated 89 vessels fish the area in January, making these productive grounds the most important month of the year for many lobstermen. NMFS also identified January as the most active month in the DEIS. Moreover, January is the month when the price of lobster is at its near peak (Table 2, Addendum 4). Conversely, lobstermen utilize LMA1 to a much lower extent during September and the price of lobster is similarly low. According to the DEIS, NARW are also present in LMA1 during September.

NMFS should endeavor to maximize the cost-effectiveness of the rule both overall and with respect to specific mitigation requirements. The disproportionately high use of LMA1 by lobstermen during January makes a closure during this month highly impactful. In contrast, a closure in September is much less impactful and may allow NMFS to reach its overall risk reduction target. There are strong arguments for not including a seasonal closure or, if one is included, predicating it on a subsequent review of the rule's effectiveness (*i.e.*, Alternative 1-B). Were NMFS to finalize a LMA1 restricted area, we believe a one-month shift as described here will meet the risk reduction target, particularly if the DST is revised as recommended to account for whale behavior and gear threat (*e.g.*, weak lines).

E. Conservation Equivalencies are necessary to address impracticable non-closure provisions.

One size does not fit all for NARW conservation measures in the Maine lobster fleet. Maine is special because there is a place for businesses of all sizes in the lobster fishery. The Maine fleet is extremely diverse with significant differences in the size of the fishing operations (vessel size, crew size, trap numbers), geographic differences and fishing styles among zones (trawl length, bottom type, oceanographic conditions), and the inshore versus offshore fishery.

According to Maine DMR, roughly 20% of Maine's lobstering vessels are less than 18 feet in length, with an outboard engine and limited deck space. These vessels are often operated by older fishermen and students, typically fishing alone. Approximately 70% of Maine's lobstering fleet is made up of boats from 20 to 39 feet in length. Many of Maine's medium-sized vessels are fished by single operators or by the captain with up to two crew members. The

smallest portion of the Maine fleet (10%) is composed of its largest boats, typically ranging from 40 to 50 feet in length. These lobster boats generally operate with a small crew of two to four sternmen.[81] The Maine Lobster Fishery is primarily a small boat, day-trip fishery in which lobstermen fish local territories that are close to shore.[82]

In order to minimize the profound safety, operational, social, and economic impacts to Maine lobstermen resulting for many from trawling up and weak point inserts, the MLA urges NMFS to include conservation equivalencies, as recommended below, to allow each lobsterman as much flexibility as possible in implementing the required risk reduction. This flexibility may save lobstermen from having to size up a boat, abandon traditional fishing grounds, or hire more crew and fish more traps to comply with the regulations. Specifically, MLA supports inclusion of conservation equivalencies to allow lobstermen to fish minimum trawl lengths with two endlines or break trawls in half with one endline resulting in an equivalent number of endlines and protection for right whales. NMFS must also consider proposals for conservation equivalencies developed by each of Maine's seven lobster zone councils working in collaboration with Maine DMR to adapt the trawling up and weak insert requirements to allow fishing areas to achieve an equal risk reduction based on local fishing conditions. For many lobstermen, implementing the zone's conservation equivalency proposal will go a long way in reducing the negative impacts described below. Maine DMR will provide the specifics of the current proposals. The MLA urges NMFS to create a process to allow for future requests for conservation equivalencies once the actual operational, safety, and economic impacts of the plan are more fully understood.

1. Trawling Up by Distance from Shore

NMFS's Preferred Alternative 2 adopts many elements of the plan submitted by Maine DMR to require longer trawls that increase by distance from shore, and the insertion of weak points in vertical lines. Of concern to MLA is the omission of a provision for conservation equivalencies, as noted above. NMFS proposes to require Maine lobstermen to deploy the following minimum trawl lengths and weak point insertions:

Table 5.

Distance from Shore	Min traps/trawl	Weak Insertions
exempt waters	status quo	1 located ½ way down
exemption line to 3 miles ("sliver")	3 traps	2 located 1/4 & ½ way down
3 to 6 miles	8 traps	2 located 1/4 & ½ way down
6 to 12 miles	15 traps	2 located 1/4 & ½ way down
12+ miles	25 traps	1 located 1/3 way down

Although many lobstering operations in the Maine fleet would be able to adopt the trawling up and weak point provisions, many others have significant concerns with both trawling

[81] Letter from Patrick Keliher, Me. Dep't Marine Resources Commissioner, to Michael Pentony, Regional Administrator of Greater Atlantic Regional Office of NOAA Fisheries (Sept. 16, 2019) (attached as Addendum 5).

[82] JAMES M. ACHESON, THE LOBSTER GANGS OF MAINE (1988).

up and weak points as stand-alone management measures, and greater reservations over the impacts of these measures combined. Specific issues with trawling up include:

a. The vessel and crew size limit the number of traps and amount of rope that can be safely handled aboard a vessel. This concern includes lobstering operations of all sizes that do not operate adequately sized boats to handle longer trawls in the areas they fish. This issue arises relative to boat length and number of trawls. For example, a 38-foot boat could handle hauling a 15-trap trawl but will face significant challenges in hauling and resetting a 25-trap trawl. By contrast, a 32-foot boat may not be able to handle a 15-trap trawl, but could safely haul an 8-trap trawl. These boats may be operating in the same area and would face significantly different challenges in complying with these rules.

b. Captains and crew, and single operators in particular, face additional difficulties in handling longer trawls on deck as it is extremely arduous to operate the vessel and manage multiple traps and large amounts of rope. The presence of more traps and rope aboard the vessel significantly increase the potential for accidents as deck space becomes limited. With so much rope and gear moving quickly, lobstermen are vulnerable to getting fingers, hands, and arms caught in the rope, which can result in severe injuries, especially when unsnarling trawls. Untangling snarled gear puts tremendous strain on the line that could give out while a lobsterman works to free that gear, particularly if it is near a weak point. If a lobsterman or crew's leg or gear gets caught up in rope or snagged on a trap, s/he can be pulled overboard in an instant when gear is being reset. While man overboard situations are dangerous for all lobstermen, the risk is significantly higher for single operators with no crew to help the victim get back aboard the vessel. Lobstermen fishing longer trawls on hard bottom or in strong tides and currents also face elevated safety risk as there are more sinking groundline which may get hung up under rocks, creating tremendous strain on the line as the captain attempts to haul the gear aboard. If the gear parts, it will snap, causing a hazard to the person operating the hauler.

c. Due to vessel limitations, many lobstermen may have to make a difficult choice to (1) either purchase a larger vessel and fish harder to continue to lobster in waters 12 miles or more offshore, (2) make modifications to an existing vessel, or alternatively, (3) turn their fishing effort closer to shore, which creates more fishing pressure and gear conflict in those areas. Gear conflict will occur when relatively larger boats set a greater proportion of lobster traps closer to shore, often set as longer trawls in areas where this fishing style is not the norm. Not only does this create conflict between larger and smaller fishing operations, but also poses a tremendous safety risk to the operator of the smaller vessels if shorter trawls are set over by longer trawls due to congestion. Smaller vessels are not equipped to haul back and handle the number of traps or the strain of the gear which occurs when one trawl is set over another.

d. Lobstermen who choose to upgrade to a larger vessel capable of safely fishing longer trawls must take on large payments, and in turn hire more crew and increase effort to generate the revenue necessary to cover boat payments and increased operating costs. These lobstermen would concentrate more effort further from shore. This also contributes to a growing divide between smaller and larger vessels that are forced to segregate and specialize in different parts of the fishery. It also leaves the small boat fleet vulnerable to extreme congestion and fishing pressure, and reduced catches, if these larger vessels choose to fish closer to shore.

e. Adding more traps to each trawl often results in a loss of trap efficiency. Smaller gangs of gear take longer to haul, so lobstermen fish this way because they are able to deploy traps more strategically on the bottom to maximize catch. When lobstermen are forced to fish a certain number of traps in each trawl, they are not able to efficiently work the productive bottom and catch per trap will go down. Lobstermen cannot effectively set longer trawls on unique patches of hard bottom or into holes and crevices. Lobstermen who attempt this often find that the gear gets hung down and parts off during hauling leading to gear loss and corresponding loss of catch. While lobstermen will attempt to grapple this gear back, it is often difficult to locate it, especially if it has been dragged by a storm or interaction with other fishing gear. Furthermore, because of sinking groundlines and traps, lobster gear is nearly impossible to see on bottom sounders. When gear is lost, lobstermen must purchase new traps and replacement tags, or forgo the income from the lost gear.

Based on the foregoing concerns, the MLA makes the following recommendations:

- The MLA recommends that NMFS remove the trawling up requirement for Maine LMA from 3 to 6 miles because it receives less than 1% credit.

- The MLA recommends that NMFS consider conservation equivalencies for trawling up measures to allow gear modifications identified by lobstermen to be fished inside of 12 miles, where there is a lower probability of NARW interaction with lobster gear.

- The MLA recommends that NMFS continue to research additional options for gear modifications and accessible technologies to reduce interactions between NARW and lobster gear. These include:

    - cap rope diameter at 3/8";
    - use a weak rope topper consisting of 5/16" rope at the top 1/3 of the line;
    - allow the potential for colored ropes to deter NARW;
    - issue best practices to limit the scope of vertical lines and the use of extra rope in the surface system;
    - promote industry use of whale sightings smart phone app.

2. Weak Rope Insertions

Many of the concerns stated above will be magnified if weak points are inserted into line. Not surprisingly, weakening ropes is highly suspect to most lobstermen as the success of their business depends on their ability to haul back each trap or trawl. Lobstermen must know that gear will remain where it was set, and that it can be efficiently and reliably hauled back. Most lobstermen are understandably worried that weakening endlines will lead to gear loss, loss of catch, and additional ghost gear. This becomes even more of a concern as they are asked to trawl more traps to each endline while making each endline weaker. They fear that adding more weight and strain to weaker vertical lines will lead to (1) higher failure rate of endlines due to storms and gear conflict, (2) higher failure rate during hauling due to strain on the line, (3) increased number of traps lost per failed endline, and (4) and limited ability to grapple lost gear back due to sinking groundlines.

Maine DMR has worked closely with the region's industry associations and lobstermen to (1) test the average strength of vertical lines currently deployed in the fishery; (2) measure the typical strain on vertical lines as they are being hauled under a variety of fishing, oceanographic, and weather conditions; and (3) try a variety of methods to insert weak points into vertical lines including knots, splices, and manufactured devices.[83] These options have been tested repeatedly to demonstrate that lines predictably break at 1700 lbs. and leave a bitter end that will not catch in baleen. This research has demonstrated that when lines made up of more than one rope type are broken, the rope breaks consistently on the weaker (smaller diameter) side of the knot or splice.

Lobstermen have volunteered significant time to these projects, donated a substantial amount of rope, and worked to innovate a variety of methods to achieve a 1700-lb. breakaway. The DMR's proposal reflects many of the findings of this work, such as requiring only one weak point insertion in gear fished outside 12 miles as it experiences higher strain than ropes fished closer to shore. DMR is preparing a list of knots and splices, and is exploring manufactured devices that can be inserted into the line to reliably break at 1700 pounds of force or less. These approaches have buy-in from lobstermen, and therefore, can be quickly adopted and provide immediate benefit to NARW.

In addition, Maine DMR is working with the region's lobster associations to field-test time tension line cutters ("TTLC"). A TTLC can be rigged into any section of the vertical line and will cut the rope after it senses a certain tension on the line that occurs for a set period of time (as programmed in the device). If a whale encounters the line, thereby applying tension, the device will cut the rope as prescribed by the TTLC. TTLCs could be used to reduce the frequency and severity of entanglement in heavier lines providing a mechanism for strong line to break free if encountered by NARW where 1700-pound weak points are too weak to allow for safe retrieval of gear.

Under the Proposed Rule, weak points would not be inserted in the bottom half of the line where lobstermen require stronger rope to safely haul back gear due to documented safety concerns. TTLCs may provide a viable alternative to incorporate a mechanism that will break at 1700 pounds of pressure over a specified time providing additional protection for NARW while allowing lobstermen to haul gear safely. If used as an equivalency for a weak insertion at the bottom of an endline, it could effectively provide an equivalent to a full weak rope and reduce entanglement risk considerably more than is assumed in the Proposed Rule. This device has already been through substantial engineering, testing and field research, and provides another option to reduce the severity of entanglement in heavier lines that could be implemented in the near-term.

In sum, DMR has tested a variety of options to achieve a 1700-lb. weak point insertion, many of which were considered and recommended by lobstermen. However, the Proposed Rule

[83] DEIS, *supra* note 24, at 3-92–106; *see also* DMR ROPE STUDY REVEALS OPTIONS FOR WEAK ROPE, https://mlcalliance.org/2019/08/12/dmr-rope-study-reveals-options-for-weak-rope/ (last visited Mar. 1, 2021).

does not specify how lobstermen can meet the weak point requirements. Accordingly, the MLA makes the following recommendations:

- The MLA recommends that NMFS adopt a robust and flexible list of options, including all options submitted by Maine DMR such as knots, splices, and manufactured options, and allow additions and refinements to be made over time as new data become available. Many of these options already have buy-in from lobstermen and can be more readily integrated into their fishing gear to provide immediate benefit to NARW.

- The MLA recommends that NMFS review the results of the DMR's project to test TTLCs as a conservation equivalency for weak points. This technology could be phased into the highest risk areas of the fishery, outside of 12 miles, to further reduce the risk of M/SI.

- The MLA recommends that NMFS conduct an analysis of the potential risk reduction that could be achieved by incorporating a TTLC at the bottom of the vertical line in various regions, by distance from shore, in the Lobster Fishery.

F. The MLA Supports NMFS's Gear-Marking Proposal.

The MLA fully supports NMFS's proposal to require lobstermen from each state and LMA3 to mark gear with a unique color, and require more frequent and larger marks. Maine lobstermen regulated under the TRP have already expanded the size of each mark, increased the number of gear markings, and changed each gear marking from red to purple with a green tracer in the top mark. In addition, Maine is requiring lobstermen fishing in exempt waters, who have never been required to mark gear, to incorporate three purple marks into each vertical line.

This new gear marking scheme is significantly more complex than the previous requirement under the TRP. Further, implementation in exempt waters impacts thousands of lobstermen who were not subject to this requirement previously. This gear marking plan strikes a balance to differentiate lobster gear fished in exempt waters from lobster gear fished in waters regulated under the TRP in a manner that allows lobstermen to comply when they shift gear back and forth between the areas by adding or removing a green tracer in the top portion of the line. The MLA does not support a more complex gear marking program as suggested by other stakeholders because it would be difficult to implement and reduce compliance.

The DEIS does not include the compliance costs for gear marking experienced by Maine lobstermen who complied with the TRP gear-marking requirement before implementation of the final rule. Maine lobstermen incurred this cost in order to comply with the federal gear plan and expedite a better understanding of the origin of fishing gear that is known to entangle whales. The MLA therefore recommends that NMFS include the compliance costs for gear marking for the state of Maine.

G. The Proposed Rule underestimates economic impacts and is economically significant under E.O. 12866.

In Section III.D.2 above, we present the cost of the proposed LMA1 restricted area based on expert input from many affected fishermen and the five-year average price of lobster. These costs are nearly $2 million and five times more than estimated in the DEIS. Survey respondents identified numerous other aspects of the Proposed Rule, for which NMFS also underestimates economic impacts (Table 4, Addendum 4), summarized as follows.

- Gear marking: Respondents estimated that it would take 6 minutes longer per vertical line (34 minutes) than estimated in the DEIS.
- Weak point insertion: Respondents estimated that it would take 9 minutes longer per insertion (13 minutes) than estimated in the DEIS.
- Reconfiguration of traps: Respondents estimated that it would take 12 minutes longer per trap (26 minutes) than estimated in the DEIS.
- Cost of labor: Respondents estimated the cost of labor to be $15.25 more per hour ($41) than estimated in the DEIS
- Gear loss: Respondents estimated gear loss as a consequence of the Proposed Rule to be on average 15 percent. The DEIS assumed no additional gear loss.
- Additional crew: Respondents estimated adding an average of 0.79 crew members to comply with the Proposed Rule. The DEIS acknowledged that some vessels would add crew but did not provide an estimate.

These estimates are based on the expert opinion of more than 100 Maine lobstermen and represent the best available information. NMFS must recalculate its estimates of economic impacts and revise accordingly. Considering that the upper bound cost of the Proposed Rule is $61 million, it is likely that the revised calculations will demonstrate that the Proposed Rule is economically significant under E.O. 12866 and a major rule under the Congressional Review Act. We request that NMFS review and revise the designation of the final rule accordingly.

H. The Final Rule Must Be Phased In Because Lobstermen Cannot Reconfigure and Mark Gear During the Fishing Season.

NMFS has stated that it anticipates the release of the Final Rule in early summer—a time when the lobster season is already in full swing. Most lobstermen haul all or portions of their gear out of the water during the winter months. Lobstermen work through their gear during haul out to mark or remark ropes, replace or repair worn ropes and traps, prepare new warps and reconfigure gear to be reset in the spring. Late spring through late fall comprise the peak fishing months for Maine lobstermen when nearly all license holders have gear actively deployed. It would be nearly impossible for Maine lobstermen to comply with new regulations while gear is actively fished.

The MLA therefore recommends that NMFS adopt a phased in implementation schedule for the provisions of the Final Rule with the understanding that lobstermen cannot reconfigure and mark gear in the middle of the fishing season.

I. Ropeless Gear Is Not Commercially Viable for the Reasonably Foreseeable Future.

As the comments filed by MLA and other fishing associations in response to the Draft BiOp explain in greater detail,[84] ropeless gear is not a realistic alternative for the Lobster Fishery for the reasonably foreseeable future. Although NMFS is not mandating its use in the Proposed Rule, the agency is setting an expectation that this sort of fishing will soon be necessary. However, ropeless fishing is not commercially viable for technological, operational, cost, safety, and enforcement reasons that cannot be ignored for purposes of this rulemaking and the future management of the fishery. The DEIS appropriately recognizes that "[a] number of technological, regulatory, financial, and operational barriers must be addressed before [ropeless] fishing gear can be considered operationally feasible on a broad scale."[85] But the DEIS does not fully disclose or analyze those barriers and, accordingly, we provide the following additional information (as well as the detailed comments provided in response to the Draft BiOp).

Technological constraints. The ropeless system depends on reliable and efficient technology, including an acoustic trigger and release mechanism, dependable vessel-to-satellite and vessel-to-fleet communication systems that protect private data and function in real time, and the ability to incorporate this technology across a very diverse fleet that includes many small- to medium-sized boats that lack the necessary GPS and computer capability, and deck workspace as well, a problem even for larger vessels. As Dr. Mark Baumgartner of Woods Hole Oceanographic Institute, has warned: "We are in the early stages of development – mostly proof of concept with prototypes that are not yet designed for operational fishing by hundreds to thousands of fishermen…. Every system… will need to go through a redesign process to (a) incorporate gear location system, (b) work for fishing at scale (e.g., ruggedized design, long endurance), and (c) enable mass production at low cost."[86]

Operational and economic concerns. The economic model for the Lobster Fishery is based on a high volume of landings caught with a gang of 800 traps or less (1,945 or fewer in LMA3) traps, where lobstermen compete for prime bottom. This requires efficient and predictable hauling and redeployment of gear. Depending on location, 100 to 400 traps per day must be hauled, using an approach that involves frequent movement to varying fishing areas depending on catch levels. Any hauling and deployment system that results in fewer traps hauled per day would significantly and adversely impact the New England lobstering business model.[87]

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[84] *See* Draft BiOp Comment Letter at 37-40.

[85] DEIS, *supra* note 24, at 3-60.

[86] Mark Baumgardner, Near-term Development (2019), https://ropeless.org/wp-content/uploads/sites/112/2019/11/21.-Baumgartner_nearterm_developments_for_distribution_20191113.pdf

[87] In contrast, the one fishery in the world that uses ropeless gear fishes less than 20 traps per day and does not share fishing territories with other fisheries. *See* Letter from Kristan Porter, President of Me. Lobstermen's Ass'n, Inc. to TRT Ropeless Fishing Subgroup (Mar. 14, 2020)

Reduced profits would, in turn, make it more difficult for lobstermen to pay for the high capital and operating costs required to operate a ropeless system. The current best estimate is that existing technology for ropeless systems will cost ten times or more per trap compared to gear currently in use.[88] These systems require significant investment in technology, including a computer system, acoustic detector, trigger devices, and rope storage systems. Given the failure rate of current systems, fishermen would also need to invest in redundancy.[89] And in view of the currently distressed state of the Lobster Fishery resulting from the harsh adverse economic impacts of the COVID-19 pandemic, as noted above, the real-life commercial feasibility of ropeless fishing is far from being a realistic option.

Safety risks. Ropeless fishing also poses significant safety risks to fishermen in both the Lobster Fishery and fisheries that overlap with it. The increased handling time on deck required in using ropeless gear is a particular concern for fishermen who operate their vessels alone and must maintain constant steering vigilance to ensure safe vessel maneuvering within high traffic areas and in high seas. Eliminating the current surface buoy and vertical line system would remove visible notice to other ocean users of the presence of lobster gear on the ocean floor. In a fishery that operates coextensively with other fisheries in the same fishing grounds, all of these fisheries would have to use interoperable tracking and communications software so the location of fishing gear is known to any vessel or law enforcement accessing an area, but this type of interoperability is not in existence today. To the contrary, all of the ropeless systems under development currently use unique acoustic and release devices, rope storage options, and monitoring and communications software. Without such a coordinated approach, conflict is inevitable as mobile gear drags through sunken trap gear, risking loss of catch from nets, trawls, and traps, and endangering vessels and crew seeking to retrieve costly gear. And even if the diverse fleets were outfitted with compatible detection systems, weather or interaction with mobile gear can displace sunken lobster traps from their marked location, resulting in "ghost gear" along with economic losses and unwanted impacts on valuable target species.

Enforcement challenges. In June 2018, the Atlantic States Marine Fisheries Commission's ("ASMFC") Law Enforcement Committee ("LEC") reviewed the enforceability of ropeless pop-up buoy gear technologies that were under consideration to reduce impacts on NARW.[90] The LEC concluded that deployment of ropeless gear would significantly impede law enforcement's ability to enforce lobster conservation rules. The concerns identified by LEC include: (1) the time and cost required to retrieve and re-deploy ropeless gear would significantly reduce the number of vessels and traps inspected for compliance; (2) the need to access multiple

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https://archive.fisheries.noaa.gov/garfo/protected/whaletrp/trt/meetings/March%202018%20Ropeless%20subgroup/kristan_porter_observations_of_ropless_fishing.pdf.

[88] *See* Brief for Me. Lobstermen's Association as Intervenor-Defendants', Decl. of N. Oppenheim, *Ctr. for Biological Diversity v. Ross*, 2020 U.S. Dist. LEXIS 149837, Civil Action No. 18-112 (JEB)(Aug. 19, 2020) (Attached to Draft BiOp Comment Letter as Addendum F) [hereinafter Oppenheim Decl.].

[89] *Id*. at 12.

[90] *See* ATL. STATES MARINE FISHERIES COMM. LAW ENF'T COMM., Meeting Summary, May 2018, http://asmfc.org/files/LEC/LEC_MeetingSummary_Spring2018.pdf.

pop-up buoy gear technologies and retrieval/mapping systems would represent a financial burden and logistical challenge; (3) unanswered questions on systems to be used to store and secure trap location information raised serious concerns; and (4) the vulnerability of acoustic and radio frequencies to hacking or stolen data posed risks of illegal hauling of gear by others.[91]

In sum, many significant issues must be addressed before ropeless technology can reasonably be considered for fishery-wide adoption. These examinations must address the technological, operational, and economic impediments that undeniably exist, and which vary significantly depending upon the scale at which the technology is adopted. Collaboration with fishermen, and the associations that represent them, is essential for both understanding these issues and finding appropriate and effective solutions.[92]

J. Alternative 3 Exceeds Legal Requirements and Fails to Maximize Net Benefits under E.O. 12866.

As reflected in the DEIS (Table 6.22), Alternative 3 would be significantly more expensive than the preferred Alternative 2. The two largest drivers of the cost are the requirements to convert full weak rope in the top 75 percent of both buoy lines, and to cap line allocations at 50 percent of average monthly lines in federal waters. Neither of these requirements are necessary to meet the applicable statutory requirements, nor are they nearly as cost-effective as the measures proposed as part of Alternative 2.

Under Alternative 2, the trap/pot fisheries would convert over 26 percent of the rope in buoy lines outside of Maine exempt waters at an estimated cost of $2.2 million dollars, or $81 thousand for each percent of line converted. Alternative 3 weak line measures would convert over 73 percent of the rope at an estimated cost of $10.2 million, or about $139 thousand for each percent of line converted. In other words, the compliance costs of Alternative 3 per unit of

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[91] *See* Letter from Robert E. Beal, Exec. Director Atl. States Marine Fisheries Comm, to Michael Pentony, Regional Administrator of Greater Atl. Regional Office of NOAA Fisheries (June 19, 2018) (Draft BiOp Comment Letter, Addendum G).

[92] Even if ropeless fishing were currently viable, NMFS has effectively eliminated any incentive to fish in the proposed LMA1 restricted area because the authorization process to do so is highly uncertain and onerous. Any vessel that wishes to access the LMA1 restricted area must receive separate authorization through an exempted fishing permit ("EFP"). Although NMFS endeavors to process an EFP within 60 days, controversial permit applications frequently take much longer. As noted in the DEIS, an EFP to access a closure in federal waters would need to comply with ESA and NEPA, further extending the timeline to review and approve an application in addition to delay factors associated with a potential legal challenge from groups hostile to the lobster fishery. The DEIS also suggests a permit may include a requirement to carry an observer, which increases cost, reduces operational flexibility, and may further discourage potential applicants. The DEIS does not explain the evidentiary basis for placing additional requirements on the use of ropeless gear in restricted areas. The DST upon which the LMA1 restricted area is based did not assume such additional conditions when estimating the amount of risk reduction achieved through ropeless fishing. Based on these considerations, it is reasonably foreseeable that the LMA1 restricted area will be a hard closure during the time period it is closed and, beyond potential pilot studies, will not be accessed using ropeless gear.

rope are nearly double that of the preferred alternative. Yet, there is little additional corresponding benefit as a result of converting 75 percent of a buoy line to weak. Published literature (Knowlton *et al*. 2015, Arthur *et al*. 2015) has identified 1,700 lbs. as the threshold below which whales can break free of line, and research conducted by Maine DMR has demonstrated that rope always breaks at its weakest point.

Therefore, converting large sections of buoy line to weak line is not necessary to reduce entanglement risk. Rather, the best available information strongly suggests that well-placed weak links are sufficient. We agree with NMFS's determination to reject the weak line measures in Alternative 3.

Additionally, the proposed measure in Alternative 3 to cap line allocations at 50 percent of average monthly lines in federal waters would have a devastating impact on the Maine Lobster Fishery. As recognized in the DEIS,[93] it is certain that fishermen will be constrained by vessel size, rope storage constraints, hauling block capacity, number of crew, or other operational constraints. The cost to make major modifications to the vessel or hire additional crew will be prohibitive to many fishermen. The only option for many fishermen will be to reduce the number of traps fished by up to 50 percent of their current trap level.

There is no analysis or plan in the DEIS for how a line cap would be achieved. It is reasonably certain that such requirements would have disproportionate and acute impacts on small vessels and certain rural, coastal communities where fishing with small vessels is more common. Small vessels would be uniquely disadvantaged by line caps because larger vessels have additional crew and deck space to adjust to the additional traps per trawl. While the cost of a line cap may also be substantial for larger vessels, they could potentially continue to fish the same number of traps and benefit from the reduced fishing effort by smaller vessels. A line cap would curtail the catch of small vessels while facilitating additional catch by larger vessels, thereby creating significant inequity in the fishery with ramifications throughout Maine, particularly with respect to small businesses and disadvantaged small and rural communities. These significant effects are not analyzed in the DEIS, despite the legal requirement to do so.[94]

Alternative 3 would also extend the seasonal closure to February for a total of five months. Including the month of February, which is outside the time period when LMA1 is characterized as a "hot spot,"[95] would exacerbate the adverse economic impacts without commensurate benefits in terms of reducing the risk of entanglement. Moreover, the price of lobster is historically higher in February ($6.41/lb.) than the months of October through January. February is also *the most important month* in terms of accessing LMA1, with 76 percent of survey respondents landing a majority of their catch in LMA1. For reasons discussed elsewhere in our comments, we strongly oppose any expansion of the time period of the proposed LMA1 restricted area, as well as potentially shifting the closed period to include February.

[93] DEIS, *supra* note 24, at 6-222.

[94] 50 C.F.R. § 1508.1(g)(1).

[95] DEIS, *supra* note 24, at 3-72 (Fig. 3.4).

Finally, the MLA is aware that other stakeholders have suggested that NMFS limit lobstermen to only one endline per trawl. This suggestion is baseless. The need for two endlines on a trawl has been well established through the TRT process. The MLA strongly opposes the proposal.[96]

In sum, Alternative 3 is neither reasonable as defined at 50 C.F.R. § 1508.1(z), nor is it analyzed in sufficient detail to comply with NEPA. We strongly oppose including any of the measures in Alternative 3 in the final rule.

K. The TRT Process Leading to TRP Recommendations Was Rushed and Flawed.

The process leading up to the April 2019 TRT meeting was rushed and flawed. The TRT met several times during 2017 and 2018 to discuss the need for management action and consider preliminary risk reduction proposals to aid in the recovery of NARW.[97] In September 2018, the NEFSC released a controversial technical memo (NMFS-NE-247),[98] which was presented to the TRT that month via webinar. That memo set the stage for NMFS to focus its management effort on the Lobster Fishery.[99]

NMFS convened the TRT the week of April 23 to 26, 2019, with the objective to "develop consensus recommendations on a suite of measures that will achieve a 60 to 80% reduction in mortalities and serious injuries of right whales in U.S. fisheries to support NMFS rulemaking that will be initiated in May 2019."[100] Yet the agency had belatedly presented the

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[96] The standard fishing practice is to deploy trawls with two endlines. Endlines are commonly lost for a variety of reasons including boat traffic, weather and gear set overs, so a second endline is needed to prevent gear loss and creation of ghost gear. In Downeast Maine, lobstermen must be able to haul back gear from either end of the trawl depending on the direction of the strong tides and currents. A second endline is also necessary to allow lobstermen to retrieve gear if one end gets hung down (under rocks or due to gear set overs in congested areas which is common). This puts tremendous strain on the line and lobstermen must haul back from the other end in order to safely retrieve the gear.

[97] The TRT met several times in 2017 and 2018: April 2017 (Full TRT meeting in RI), November 2017, January and March 2018 (virtual meetings with information updates), February through April 2018 (several subgroup meetings to discuss weak rope, gear marking and ropeless fishing), September 2018 (webinar on NEFSC Tech Memo NMFS-NE-247), October 2018 (Full TRT meeting to consider preliminary risk reduction proposals). *See* Nat'l Marine Fisheries Serv. Atl. Large Whale Take Reduction Team Meeting Summaries, https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-mammal-protection/atlantic-large-whale-take-reduction-plan.

[98] SEAN A. HAYES, NORTH ATLANTIC RIGHT WHALES – EVALUATING THEIR RECOVERY CHALLENGES IN 2018 (Sept. 2018), https://permanent.fdlp.gov/gpo110779/tm247__2_.pdf; *see also* NAT'L OCEANIC & ATMOSPHERIC ADMIN., Technical Memo. NMFS-NE-247 (Sept. 2018).

[99] *See* Letter from Me. Dep't Marine Res. to Dr. Jon Hare (Oct. 3, 2018) ("While many category I and category II fisheries from Maine to Florida are regulated under the Atlantic Large Whale Take Reduction Plan, the content of the Memo is almost exclusively limited to the lobster fishery in the Gulf of Maine.") (attached as Addendum 6).

[100] *See* Nat'l Marine Fisheries Serv. Atl. Large Whale Take Reduction Team Memo. (Apr. 23-26, 2019), https://media.fisheries.noaa.gov/dam-migration/final--atlantic_large_whale_take_reduction_team_meeting_april23-26_kom_(508).pdf.

risk reduction goal to the TRT via email on April 5, 2019, and unveiled the DST—which was still in development—via webinar on April 16, 2019.[101] This left TRT members with no meaningful amount of time to consider and evaluate the DST. As MLA explained to NMFS in a letter dated April 22, 2019:

> [T]he MLA is deeply disturbed by the timing of NMFS's release of new information to guide discussions at this week's TRT meeting. Our last TRT meeting was six months ago. NMFS only announced the Take Reduction Target and presented a draft of the Decision Support Tool in recent days. Given NMFS' directive to begin rulemaking at the conclusion of the meeting, the MLA is extremely frustrated to receive such critical and complex information just days before. TRT members are unrealistically expected to reach consensus on management alternatives before the Team has had any input on the Take Reduction Target itself or had adequate time to evaluate and grasp the implications of the new information presented.[102]

Based on its incomplete understanding of the available science and under extreme pressure exerted by NMFS, Maine's TRT members reluctantly agreed to the TRT's recommendations to achieve a 60% risk reduction in the Lobster Fishery. Due to unresolved concerns with the timeliness and accuracy of information provided to TRT members, the MLA subsequently undertook a careful review of NMFS "2000-2018 Right Whale Incident Data" and corresponding Atlantic Large Whale Entanglement Reports and North Atlantic Right Whale SARs. The MLA identified substantive errors in NMFS data that show a "distinctly different understanding of relative risk" posed by Northeast lobster fishing gear to right whales.[103]

MLA's review of NMFS's entanglement data revealed several errors that changed its understanding of known causes of right whale entanglement. The 2018 NARW stock assessment incorrectly coded four NARWs as "gear unknown." Two of these were determined to be from non-trap gear, one was from Canadian trap/pot gear, and the only U.S. entanglement was from gear that did not originate from Maine. Maine's TRT members would never have agreed to regulate only the Northeast trap/pot fishery or the 60% risk reduction if accurate data on the known entanglement cases had been presented to the Team.

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[101] See Nat'l Marine Fisheries Serv. Atl. Large Whale Take Reduction Team Meeting Materials (Apr. 23-26, 2019), https://archive.fisheries.noaa.gov/garfo/protected/whaletrp/trt/meetings/April%202019/19_april_2019_trt_meeting.html.

[102] Letter from Me. Lobstermen's Ass'n to NOAA Greater Atl. Reg'l Fisheries (Apr. 22, 2019) (attached as Addendum 7).

[103] The TRT meeting summary states, "A broad-based recommendation that the Agency/Team revisit the Team's recommendations if revisions to the model suggest: (1) a distinctly different understanding of relative risk…." Nat'l Marine Fisheries Serv. Atl. Large Whale Take Reduction Team Key Outcomes Memo., at 7 (Apr. 23-26, 2019), https://media.fisheries.noaa.gov/dam-migration/final--atlantic_large_whale_take_reduction_team_meeting_april23-26_kom_(508).pdf.

Given these findings and lingering concern with the TRT process and outcome, Maine's five lobster industry TRT members withdrew support for the "near consensus agreement." Unfortunately, although NMFS pledged to address shortcomings in the DST before it was used for management decisions, a number of those flaws persist, as explained elsewhere in these comments.

III. CONCLUSION

The MLA appreciates NMFS's consideration of the comments and recommendations provided in this letter. The MLA remains committed to working with NMFS to ensure that this rulemaking process achieves a result that maximizes conservation benefits while also—and very importantly—minimizing adverse economic, operational, and social impacts to the Maine Lobster Fishery. The recommendations provided above will help to accomplish that balance and ensure that any final rule is consistent with the best available scientific and commercial data. If you have any questions or would like additional information, please do not hesitate to contact me at 207.967.4555 or patrice@mainelobstermen.org.

Sincerely,

Patrice McCarron
Executive Director

cc: Dr. Paul Doremus, Acting Assistant Administrator NOAA Fisheries
Sam Rauch, Deputy Assistant Administrator for Regulatory Programs
Jennifer Anderson, Assistant Regional Administrator for Protected Resources
Senator Susan Collins (via Cameron O'Brien)
Senator Angus King (via Peter Benoit and Chris Rector)
Representative Chellie Pingree (via Lisa Pahel and Rhiannon Hampson)
Representative Jared Golden (via Eric Kanter and Morgan Urquhart)
Honorable Janet Mills, Governor of Maine (via Tom Abello)
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