• Center for Biological Diversity • Conservation Law Foundation •
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Colleen Coogan
National Marine Fisheries Service
Northeast Regional Office
55 Great Republic Drive
Gloucester, MA 01930

March 1, 2021

via regulations.gov

Re: Proposed Rule to Amend Atlantic Large Whale Take Reduction Plan Regulations, 85 Fed. Reg. 86,878 (Dec. 31, 2020), and Draft Environmental Impact Statement NOAA-NMFS-2020-0031

Dear Ms. Coogan,

On behalf of the Center for Biological Diversity, Conservation Law Foundation, Defenders of Wildlife, the Humane Society of the United States, Humane Society Legislative Fund, and our millions of members and supporters, we submit these comments to the National Marine Fisheries Service (NMFS) on its proposed rule to amend the regulations implementing the Atlantic Large Whale Take Reduction Plan (Plan or ALWTRP) and associated Draft Environmental Impact Statement (DEIS).

As conservation members and alternates on the Atlantic Large Whale Take Reduction Team (Team), we have forcefully advocated for NMFS to fulfill its obligations under the Marine Mammal Protection Act[1] (MMPA) and Endangered Species Act[2] (ESA) to protect large whales covered by the Plan, especially the critically imperiled North Atlantic right whale. The history of the Plan is the history of NMFS's failure to meet these statutory mandates. The species—and the fisheries—now face the consequences of twenty-five years of agency denial and delay.

Since NMFS first promulgated the Plan in 1997, it has never complied with its MMPA obligation to bring mortalities and serious injuries (M/SI) in Category I and II fisheries to at or below the right whale's potential biological removal (PBR), to say nothing of the zero mortality rate goal (ZMRG). NMFS has been equally cavalier with its ESA obligations, tacitly allowing unlawful right whale take in both state and federal fisheries without consequences. On NMFS's watch, right whales don't die of old age.

Yet time and again NMFS has dragged its feet in amending and implementing the Plan. It has refused to finalize proposed regulations until compelled to do so by litigation. It has failed to

[1] 16 U.S.C. §§ 1361–1389.
[2] *Id.* §§ 1531–1544.

implement proactive, protective measures the right whale's status demands and the law requires. It has acceded to certain industry demands to carve out exemptions and rollbacks from Plan requirements and caved in the face of resistance to basic measures like gear marking.

Now, nearly twenty-five years after the original Plan, the right whale—and the agency—are at a crossroads. In the decade since 2011, the right whale has lost nearly all the hard-won population gains it made the decade previously. From a peak of 483 individuals in 2011, the population has plummeted to 356 animals—only around 56 more than when the Plan was first finalized in 1997. Lethal and sublethal entanglements are killing off right whales and depressing their reproduction. Cryptic mortalities are nearly 2.5 times observed mortalities. Two-thirds of cryptic mortalities are entanglement-related. Mortalities are outpacing births by a significant and growing margin.

In short, the species is on a death march to oblivion that can only be reversed with decisive, large-scale, sweeping federal actions to address the existential threats of fishing gear entanglements and vessel strikes in U.S. and Canadian waters. If there was ever a time for NMFS to answer Congress' clarion calls in the ESA and MMPA to save the right whale from extinction at human hands, that time is now.[3]

But while this crisis necessitates immediate and substantial reductions in entanglements, NMFS has proposed a rule that will accomplish neither. NMFS does not even pretend that this rulemaking will satisfy the MMPA's immediate requirement to bring M/SI below PBR, explicitly putting off that goal for a full decade longer under its Conservation Framework. The proposed measures are highly unlikely to meet even the inadequate 60% risk reduction target NMFS set based on now-outdated data, let alone the much higher risk reduction target that new data on population estimates, PBR, and cryptic mortality necessitate. The DEIS does not satisfy the National Environmental Policy Act's (NEPA) requirements for analyzing a full range of reasonable alternatives that meet the purpose and need of this rulemaking. And as described at length in our recent comments on the draft Biological Opinion (BiOp), NMFS cannot finalize that document as drafted without violating the ESA.

In short, NMFS cannot conclude this rulemaking within the parameters and proposals it has proffered for public comment without violating the MMPA, NEPA, and the ESA. If it proceeds as planned NMFS will inevitably face litigation while subjecting industry to costly, disruptive, and ultimately insufficient regulatory measures and wasting more months and years that the critically endangered right whale does not have to spare.

The only reasonable course of action is for NMFS to withdraw the proposed rule and take it (along with the DEIS and draft BiOp) back to the drawing board to bring them into compliance with the law. In the interim, NMFS must act on our December 2, 2020 petition for emergency rulemaking under MMPA section 118(g) by: (1) finding that the incidental mortality and serious injury of right whales from commercial fisheries is having an immediate and significant impact on the species; and (2) prescribing emergency regulations, including temporary closures, to protect right whales in the interim while developing, approving, and implementing Plan amendments that will satisfy NMFS's legal obligations while setting the right whale and the

[3] The United States must also aggressively engage in an open and transparent process with Canada to ensure that appropriate risk reduction measures are implemented bilaterally.

commercial fisheries on a sustainable path forward.

While revising the rule, the agency should clarify for the public and the industry that it must take this action to address long standing legal requirements under the ESA and MMPA, not only the court decision which required the agency to do what the law already required of it. In addition, the agency should clarify that a particular risk reduction target is not equivalent to the same reduction in fishing effort. Regardless, ignoring new scientific data will not adequately protect right whales or the industry which will be told, once again, that despite implementing costly modifications, they were not enough.

I. TIMING OF THE PROPOSED RULE/NEPA ANALYSIS RELATIVE TO THE FINAL BIOLOGICAL OPINION

The agency is well aware that it must complete its new biological opinion by May 31, 2021. Yet NMFS staff have stated several times during the course of informational meetings and public hearings on the proposed rule that the agency expects to complete the final rule and Final Environmental Impact Statement (FEIS) sometime this summer, with the Record of Decision (ROD) to follow after a 30-day minimum waiting period. We are deeply concerned that if NMFS follows through on its plan to complete the biological opinion months earlier than the final rule and FEIS/ROD, it will violate the ESA, the Administrative Procedure Act (APA), or both. This approach would also contradict representations that NMFS made in federal court—representations on which the Court based its decision.

A biological opinion must be coextensive with the agency action it analyzes and must analyze the effects of the entire agency action. *Conner v. Burford*, 848 F.2d 1441, 1453, 1457–58 (9th Cir. 1998); *see also id.* at 1453. We have already detailed the extensive defects in the agency's definition of the proposed action in our comments on the draft BiOp. We need not reiterate those here to state the obvious: if NMFS has not yet decided on the measures to be promulgated in the final rule amending the Plan, it cannot complete a meaningful and lawful biological opinion without the certainty of what the final action—and thus the effects of the entire agency action—will be. *See Ctr. for Biological Diversity v. Ross*, Case No. 18-cv-112 (D.D.C.), ECF No. 111-1 (Fourth Declaration of Jennifer Anderson) at para. 14 ("Completion of the Biological Opinion is linked to completion of the rulemaking process, as the analysis of the effects of the fisheries as modified by the rulemaking necessitates knowing what measures will be in the final rule."). A biological opinion issued when the agency action itself is not final is ipso facto incomplete and unlawful.

As is equally obvious, NMFS must have a valid biological opinion on the state of the world as it exists (i.e., on the ongoing authorization and management of state and federal fisheries as regulated by the Atlantic Coastal Fisheries Cooperative Management Act, the MMPA and the Magnuson-Stevens Fishery Conservation and Management Act), not a biological opinion on future measures not in effect yet. If NMFS issues a final biological opinion that relies on future measures in the final rule and FEIS/ROD, it will continue to be in violation of sections 7 and 9 of the ESA.

NMFS also risks violating the APA's notice and comment requirements if it rushes to finalize its

MMPA decision for purposes of the ESA consultation but then publishes the final rule months later, particularly if it has still not finished analyzing and responding to public comments. The APA obligates NMFS not only to analyze and respond to the public's comments on the proposed rule but to make reasoned choices in its final rule and to alter course where justified. That requires the agency to keep a mind sufficiently open to change based on public comments. *See, e.g.*, *Grand Canyon Air Tour Coal. v. FAA*, 154 F.3d 455, 467–68 (D.C. Cir. 1998) ("An agency is required to provide a meaningful opportunity for comments, which means that the agency's mind must be open to considering them").

If NMFS renders its final decision on what measures to incorporate in the final rule amending the Plan for ESA consultation purposes but still has not completed its FEIS, let alone the ROD, it will have violated NEPA. That statute's twin aims are informing decisionmakers and informing the public both to stimulate public involvement in federal agency decisionmaking and to ensure agency accountability. *See Dep't of Transp. v. Public Citizen*, 541 U.S. 752, 768 (2004) (describing NEPA as intended to "provid[e] a springboard for public comment" (alteration in original)); *New Mexico ex rel. Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683, 703) (10th Cir. 2009) ("By focusing both agency and public attention on the environmental effects of proposed actions, NEPA facilitates informed decisionmaking by agencies and allows the political process to check those decisions."). NMFS must take this hard look "objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made." *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000). If NMFS has already decided for ESA consultation purposes what its action will be long before the FEIS and ROD issue, the NEPA process will have been a meaningless exercise.

Additionally, in *Center for Biological Diversity v. Ross*, the Court vacated the previous 2014 biological opinion, but stayed that vacatur until May 31, 2021 based explicitly on NMFS's representations for how much time it would need to complete the *final rule*, not just the new biological opinion. For example, the Court stated: "vacatur of the 2014 BiOp is appropriate, but [] relief shall be stayed until May 31, not January 31, 2021, to give Defendants time to complete *the new rule* and BiOp." 480 F.Supp.3d 236, 240 (D.D.C. 2020) (emphasis added). The Court based its decision on the fact that:

> NMFS currently estimates that it will publish a final amended Take Reduction Plan and implementing regulations by May 31, 2021. *See* Fourth Anderson Decl., ¶¶ 11–13. The agency intends to issue a new BiOp (presumably including an ITS this time, if required) for the lobster fishery simultaneously with publishing the final amended Plan, as the required "analysis of the effects of the fisheries [on the right whale] ... necessitates knowing what measures will be in the final rule." Defs. Remedy Opp. at 10–11.

Id. at 243. Indeed, after finding that NMFS's "timetable for completing the rulemaking process is reasonably consistent with the MMPA," the Court stated: "[a]lthough the Court therefore finds the May 31, 2021, deadline acceptable, it will look with considerable disfavor on any future requests by NMFS for even more time to *complete the new rule* and BiOp." *Id.* at 249 (emphasis added).

A. NMFS Has a Decades-Long History of Failing to Implement Measures Sufficient to Meet PBR

NMFS has lost sight of several critical aspects of section 118 in the nearly twenty-five years it has administered the ALWTRP. First, Congress did not intend to allow NMFS decades to reduce right whale M/SI to below PBR or to give the agency leeway to promulgate a Plan or amendments that admittedly will not meet this target at all. Second, Congress expressly stated that reducing M/SI to below PBR is only an interim goal on the way to ZMRG. Third, Congress explicitly allowed NMFS to take into account economic and other factors in a Plan *only* if M/SI is below PBR and on its way to ZMRG.

Congress amended the MMPA in 1994 to add section 118 to require "*immediate* action to protect . . . marine mammal stocks most affected by interactions with commercial fishing operations." S. Rep. No. 103-220, at 6 (1994) (emphasis added); 16 U.S.C. § 1387. Especially concerned about the incidental take of endangered marine mammals in commercial fisheries, Congress specified that any such take requires authorization under both section 118 and section 101(a)(5)(E). *See* 16 U.S.C. §§ 1371(a)(5)(E), 1387(a)(2).

Section 118 requires NMFS to develop a take reduction plan for Category I and II fisheries that interact with "strategic stocks," including ESA-listed marine mammals. *Id*. §§ 1387(f)(1), 1362(19)(C). The statute specifies that, as a short-term goal, each take reduction plan must contain regulatory measures to reduce fishery-related mortality and serious injury to below the species' PBR *within six months* of the plan's implementation. *Id*. § 1387(f)(2), (f)(5)(A), (f)(7)(F). The true goal of section 118 is not PBR but ZMRG. *Id.* § 1387(b). Therefore, the long-term goal of a take reduction plan must be to reduce, within five years of its implementation, incidental mortality and serious injury "to insignificant levels approaching a zero mortality and serious injury rate."[4] 16 U.S.C. § 1387(f)(2).

Congress did not entrust NMFS with the latitude to interpret a reasonable timeframe for accomplishing section 118's goal for species like the right whale. Rather, it established section 118's "immediate" goal "that the incidental mortality or serious injury of marine mammals occurring in the course of commercial fishing operations be reduced to insignificant levels approaching a zero mortality and serious injury rate within 7 years after April 30, 1994." *Id.* § 1387(a)(1) (emphasis added); *see also id.* § 1387(b)(1) ("Commercial fisheries shall reduce incidental mortality and serious injury of marine mammals to insignificant levels approaching a zero mortality and serious injury rate within 7 years after April 30, 1994").

Congress thus set clear expectations for NMFS to reduce M/SI of right whales in commercial fisheries to below PBR and to ZMRG by dates certain, as NMFS acknowledged in promulgating the original 1997 ALWTRP. *See* 62 Fed. Reg. 39,157, 39,159 (Jul. 22, 1997) (MMPA required Plan to reduce right whale M/SI below PBR of 0.4 animals per year by January 1998 and further reduce M/SI to ZMRG by April 30, 2001 while taking into account fisheries economics, etc.). Yet the Plan not only failed to accomplish these statutory mandates by the congressionally-set deadlines, it has not even managed to keep pace with the increasing rates of M/SI in U.S.

[4] NMFS defines "insignificant levels approaching . . . zero" or "ZMRG" to mean 10% of a stock's PBR. 50 C.F.R. § 229.2.

commercial fisheries.

Although NMFS cannot turn back the clock to comply with prior deadlines, it is equally obvious that it may not continue to push substantive compliance with the statute off to some future point one minute longer. Congress did not give NMFS a free hand to determine when a Plan or its amendments will fulfill section 118's mandates, such as NMFS is now purporting to do with the proposed rule and Conservation Framework that optimistically (and unrealistically) project finally achieving M/SI reductions below PBR five to ten years from now.

Nor did Congress give NMFS a free hand to determine whether a Plan or its amendments will meet the statutory mandates at all. The language of section 118 allows no exceptions: any take reduction plan or amendments thereto *shall* include measures to reduce M/SI to below PBR, and, thereafter, shall be amended as necessary to meet section's 118 requirements (i.e., ZMRG). *See, e.g.*, 16 U.S.C. § 1387(f)(7)(C), (F).

B. Economics Only Comes into Play When Analyzing ZMRG

Section 118 does not authorize NMFS to promulgate amendments that yet again attempt merely to reduce the risk of commercial fisheries on right whales, *e.g.*, 85 Fed. Reg. at 86,879; it must promulgate measures that will in fact meet the statutory targets of reducing M/SI to below PBR and ultimately to ZMRG. NMFS knows full well that the proposed rule will not meet PBR; at the very, very best, it will bring down M/SI to more than three times PBR.[5]

From the very outset, NMFS has imputed to itself discretion under section 118 to subsume the requirement to bring right whale M/SI below PBR through the Plan (which it has never succeeded in doing) to its desire to minimize economic impacts to the fisheries. *See* 62 Fed. Reg. at 39,159 (rejecting approach of extensive closures that would guarantee M/SI "but only at a high cost to many fishermen" and instead choosing an approach relying on untested gear modifications, limited closures, and disentanglement efforts); *id.* at 39,182 ("Widespread closures, although they might achieve the goals of the MMPA, would be economically costly. Such huge economic costs would not be necessary if disentanglement efforts and gear modifications are successful in reducing bycatch to MMPA standards."). Yet section 118 itself does not support that exercise of discretion, as illustrated by the very different language Congress used in the two sentences composing section 118(f)(2)'s commands for a strategic stock such as the right whale. The first sentence reads:

> The immediate goal of a take reduction plan for a strategic stock shall be to reduce, within 6 months of its implementation, the incidental mortality or serious injury of marine mammals incidentally taken in the course of commercial fishing operations to levels less than the potential biological

[5] *See* NMFS, Draft Endangered Species Act Section 7 Consultation on the: (a) Authorization of the American Lobster, Atlantic Bluefish, Atlantic Deep-Sea Red Crab, Mackerel/Squid/Butterfish, Monkfish, Northeast Multispecies, Northeast Skate Complex, Spiny Dogfish, Summer Flounder/Scup/Black Sea Bass, and Jonah Crab Fisheries and (b) Implementation of the New England Fisheries Management Council's Omnibus Essential Fish Habitat Amendment 2 [Consultation No. GARFO-2017-00031, Jan. 2021, available at https://www.greateratlantic.fisheries.noaa.gov/public/nema/PRD/DraftFisheriesBiOp011421.pdf (Draft BiOp). 230.

removal level established for that stock under section 1386 of this title.

16 U.S.C. § 1387(f)(2). Only *after* that goal has been accomplished does the second sentence allow the agency to balance how to accomplish the long-term goal, i.e., ZMRG, against the fisheries' interests:

> The long-term goal of the plan shall be to reduce, within 5 years of its implementation, the incidental mortality or serious injury of marine mammals incidentally taken in the course of commercial fishing operations to insignificant levels approaching a zero mortality and serious injury rate, *taking into account the economics of the fishery, the availability of existing technology, and existing State or regional fishery management plans.*

Id (emphasis added). Congress clearly intended NMFS to immediately reduce M/SI below PBR; only after that immediate goal has been achieved may NMFS balance the requirement to further reduce M/SI to ZMRG with fisheries economics and other concerns.

For twenty-four years now, NMFS has administered, and, from time to time, amended, a Plan based on the hope that gear modifications and limited closures will achieve in bringing right whale M/SI down to PBR, falling well short of the six-month deadline and the goal of the statute.

II. NONE OF THE PROPOSED MEASURES ADEQUATELY REDUCE RISK

Our organizations do not support either Alternative 2 (Preferred Alternative) or Alternative 3 in the DEIS for several reasons including: (1) that they cannot adequately reduce risk to right whales as packaged; (2) many of the assumptions upon which they allegedly reduce risk are unfounded; (3) to the extent they incorporate state measures they are not yet added to the TRP; and (4) an admitted lack of enforcement beyond 12 nautical miles makes their effectiveness questionable. Neither do we support Alternative 1, the "No Action Alternative," as action is clearly needed.

According to the proposed rule, the Preferred Alternative will "achieve a greater than 60-percent reduction" in risk by ultimately implementing measures falling into four main categories: (1) gear modifications intended to reduce the number of vertical lines; (2) seasonal restricted areas that would allow ropeless fishing; (3) the replacement of buoy lines with weak rope or weak insertions; and (4) additional gear marking requirements. 85 Fed. Reg. at 86,881, 86,885. In the DEIS, NMFS estimates that the Preferred Alternative could reduce risk by up to 64.3%. DEIS Vol. I at 3-68.

Alternative 3 analyzes similar measures as well as: (1) larger, longer, and additional seasonal restricted areas; (2) a line cap allocation capped at 50 percent of the lines fished in 2017 in federal and non-exempt waters throughout the Northeast except in offshore LMA3; and (3) more robust gear markings. NMFS indicates that Alternative 3 could reduce risk by up to 72.6%. DEIS Vol. I at 3-69.

A. The Risk Reduction Targets are not based on the Best Scientific and Commercial Data Available

Nearly two years ago, NMFS provided the Atlantic Large Whale Take Reduction Team (TRT) with a 60-80% risk reduction goal based on 2016 population estimates and a PBR of 0.9. *Id.* at 3-47, 67. At the time, NMFS indicated that, if cryptic mortalities were included in its analysis, the average annual rate of serious injuries and mortalities from entanglement in U.S. fisheries was 4.3 and "would have to be reduced by about 80% in U.S. fisheries to get below the stock's PBR of 0.9." Since that time, NMFS has revised its population estimates and average annual rate of serious injuries and mortalities resulting from incidental entanglements in U.S. fishing gear. In its recently published draft BiOp , NMFS stated: "Using the methods in Pace et al. (2017), this year's preliminary estimate is 366 (95% credible interval range of 353-377) individuals as of January 2019."[6] Using 366 as the Nmin, PBR is now 0.7.[7] Table 57 of the draft BiOp estimates the annual average M/SI of right whales from U.S. fishery entanglements as 6.724.[8] Thus, **using NMFS's own methodology and updated data, the risk reduction target required to reduce M/SI in US fisheries is closer to 90%.**

The proposed rule needs to be revised to achieve M/SI below PBR (at minimum). That is especially true considering other new information, including an updated paper from Pace et al. (2021) that determined based on data from 2010–2017 that the observed mortality detection rate was only 29% of total mortality, leaving 71% of mortalities undetected,[9] and the estimate from the New England Aquarium that the number of right whales alive at the end of 2019 was only 356 individuals, as few as 70 of which were breeding females.[10]

B. The Gear Modifications Proposed to Reduce the Number of Vertical Lines Cannot Adequately Reduce Risk

The proposed rule describes 2 major gear modifications necessary to reduce the number of vertical lines in the Preferred Alternative: (1) increasing the number of traps on a trawl ("trawling up"); and (2) extending the maximum trawl length (distance between endlines) in LMA3. 85 Fed. Red. at 86,881. NMFS also analyzes capping line allocations at 50 percent of average monthly lines in federal waters in the DEIS for Alternative 3. *See* DEIS Vol. I at 1-7. We address each of these in turn.

1. Trawling Up and Line Caps

Every vertical line in the water increases entanglement risk for right whales. Trawling up is one method to reduce the number of vertical lines and could encourage efficiency. However, trawling up will only be guaranteed to reduce the number of vertical lines in the water (and thus risk) if it is combined with a line cap providing a concrete metric for reductions from the baseline. *See*

[6] Draft BiOp.
[7] PBR = Nmin x 0.5 (Rmax) x Fr. In this case, 0.7 = 366 x 0.2 x 0.1.
[8] Draft BiOp.
[9] Pace, R. M. III et al. 2021. Cryptic mortality of North Atlantic right whales. Conservation Science and Practice. e346.
[10] New England Aquarium, Right Whale Consortium Releases 2020 Report Card Update, Nov. 9, 2020, https://www.andersoncabotcenterforoceanlife.org/blog/2020-narwc-report-card/.

DEIS Vol. II at 5-143 (indicating that a 50% line cap reduction would reduce entanglement risk by 45% in federal waters and stating that trawling up alone is insufficient to reduce vertical line numbers). According to a September 18, 2018 TRT presentation, the number of vertical lines in the Northeast region has increased since the 2013 vertical line reduction rule was implemented. Even considering the possibility of a statistical error, there was no significant decrease detected from the implementation of the rule. This combination would hold the fisheries accountable and could prevent latent effort from being realized. *See* DEIS Vol. II at 5-139 (discussing need for a mechanism to prevent latent effort from being activated).

It is not clear, however, that trawling up necessarily reduces risk to right whales (especially to juvenile and calves). Quantitative date on the relationship between gear configurations and the probability of causing serious injuries and mortalities is largely lacking. DEIS Vol. II at 3-12. For example, an inshore fisherman forced to fish 15 rather than 5 traps/trawl may choose heavier line thus increasing risk. On the other hand, an offshore fisherman forced to fish 45 rather than 25 traps/trawl is already using heavy line and probably does not significantly increase risk as a right whale will likely drown under either scenario given the weight of the gear. *See e.g.*, DEIS Vol. II at 3-47-48.

Fishermen have raised safety concerns related to trawling up. It is logical to expect that trawling up could be more difficult on a smaller vessel (where the deck may not be able to accommodate the increased number of traps), or for Captains fishing alone. For those reasons, our organizations do not oppose the conservation equivalency proposed for LMA3, that would increase the maximum length of a trawl from 1.5nm to 1.75 nm to allow a limited number of vessels to fish more than 45 traps per trawl so that smaller vessels can fish less traps/trawl due to safety concerns. 85 Fed. Reg. 86,886.[11]

Although the proposed rule only seeks comment on the Northeast American lobster fishery, it is our view that all fisheries using vertical line, including but not limited to aquaculture, must be considered in this cap. Placing the sole burden of vertical line reduction on the lobster and Jonah crab fishery does little to reduce risk to right whales if risk is increased elsewhere by permitting other fisheries and activities. Data provided in the DEIS, indicate that gillnets pose a disproportionately high risk of entanglement to right whales. *See* DEIS Vol. I at Table 2.2 showing that gillnet/netting represents 47% of known fishery entanglements to right whales, yet gillnets represent only 1.9% of vertical lines in non-exempt waters (Table 2.3 of DEIS Vol. I)).

To reduce the number of serious injuries and mortalities below PBR, NMFS must evaluate the vertical line risk in all fisheries and identify a regulatory mechanism for implementing line caps as soon as possible.

2. NMFS Should Require the Use of One End-Line

The DEIS states that fishing with one end-line was "considered but not analyzed" due to industry concerns about safety, increased gear conflict, and increased gear loss. DEIS Vol. II at 5-138. Given that none of the measures in the proposed rule adequately reduce risk to right whales and

[11] Pers. comm. with TRT member David Borden (only a limited number of vessels will want an exemption from the 45 trap/trawl requirement.

that the remaining measures that would adequately reduce risk are not generally attractive to the industry either, NMFS should fully analyze this option as part of its do-over.

To immediately reduce the number of vertical lines outside of closures, NMFS should require all trap/pot fisheries operating in the Northeast to use a single surface end-line in those areas where right whales are known or expected to be (either socializing, transiting, feeding, or breeding). This immediate 50% reduction in endlines would reduce risk. Understanding that additional gear conflicts could occur in the absence of surface markings, agreements about the direction of gear sets should be developed by industry members fishing in specific regions and sharing agreements with the mobile gear fleet should be drafted (as they already are in certain areas).

C. The Seasonal Restrictions to Buoy Lines Proposed Will Not Adequately Reduce Risk

Both the Preferred Alternative and Alternative 3 propose new restricted areas that are inadequate to reduce risk sufficient to meet PBR. It is also difficult to discern how NMFS evaluated risk related to gear displacement for the specifically identified closures. *See* DEIS Vol. II at 3-36 (only analyzing redirected effort generally and modelling redirected effort for the Northeast Canyons and Seamounts National Marine Monument) While it is likely that some portion of gear (traps and lines) will be moved or removed, a risk analysis that looks at the impact of such gear displacement should be considered before assuming the costs or benefits. To the extent that NMFS relies on state measures to reduce risk, it must incorporate those into the Plan.

Our organizations support the following new Restricted Areas:

- The LMA1 Restricted Area in Alternative 3—Offshore ME LMA1/3 border, zones C/D/E—closed from October to February that allows fishing without buoy lines (with appropriate authorizations for exemption from surface gear requirements).

- The "Large Rectangular Area" in Alternative 3 in Southern New England, as modified to be a year-round restricted area closed to buoy lines with allowances for fishing without buoy lines (with appropriate authorizations for exemption from surface gear requirements).

1. <u>The LMA1 Restricted Area in Gulf of Maine</u>

Based on the best commercial and scientific data available in the public domain, including acoustic data, **we support the LMA1 Restricted Area analyzed in Alternative 3 which closes the area to vertical buoy lines October - February**. This area has been identified as a "foraging hotspot" for right whales using the Duke Habitat Model within the Decision Support Tool and poses a higher than average risk based on co-occurrence. DEIS Vol. I at 3-71, 72. It is also our understanding that based on the demographics of the fleet operating within the boundaries denoted and testimony at public hearings, that at least some of the gear will come out of the water minimizing risk due to shifted effort.

We oppose the trigger process described in the Preferred Alternative that allows the Regional Administrator the discretion to make a decision about this closure based on non-identified criteria. Any proposal to close an area to fishing should be based on sound science and demonstrate a tangible risk reduction to right whales, thus it is unclear how a proposed closure would no longer be warranted simply based on public input or whatever conservation equivalencies would be established in place of this closure if it is removed. Ironically, this is contradictory to what the agency has said elsewhere about its ability to do NEPA analysis on dynamic management.

2. <u>The Massachusetts South Island Restricted Area in the Preferred Alternative is Insufficient</u>

Our organizations do not support the Preferred Alternative - "South Island Restricted Area" - that closes an area south of Nantucket from February through April because the area is too small in time and space. A large body of science demonstrates a year-round presence of right whales in Southern New England. Based on this data, as well as the size of previously established restricted areas in the Plan, **we support the "Large South Island Restricted Area" analyzed in Alternative 3**. **However, we urge the agency to make this a year-round closure to vertical buoy lines.** Modifying the Large South Island Restricted Area to restrict vertical buoy lines year-round would be the most protective and fully account for the variable habitat use of this region by right whales.

Right whale distribution and habitat use has shifted since 2010 in response to climate change-driven shifts in prey availability.[12] The best scientific and commercial data available, including aerial surveys,[13] acoustic detections,[14] stranding data,[15] a series of DMAs declared by NMFS pursuant to the ship strike rule,[16] and prey data,[17] all indicate that right whales now heavily rely

[12] Record, N., Runge, J., Pendleton, D., Balch, W., Davies, K., Pershing, A., Johnson, C., Stamieszkin, K., Ji, R., Feng, Z. and Kraus, S. 2019. Rapid Climate-Driven Circulation Changes Threaten Conservation of Endangered North Atlantic Right Whales. Oceanography. Vol. 32, pp. 162–169.

[13] Kraus, S.D., Leiter, S., Stone, K., Wikgren, B., Mayo, C., Hughes, P., Kenney, R.D., Clark, C.W., Rice, A.N., Estabrok, B., and Tielens, J. 2016. Northeast large pelagic survey collaborative aerial and acoustic surveys for large whales and sea turtles. Final Report. OCS Study, BOEM 2016-054, pp. 118; Leiter, S.M., Stone, K.M., Thompson, J.L., Accardo, C.M., Wikgren, B.C., Zani, M.A., Cole, T.V.N., Kenney, R.D., Mayo, C.A., and Kraus, S.D. 2017. North Atlantic right whale *Eubalaena glacialis* occurrence in offshore wind energy areas near Massachusetts and Rhode Island, USA. Endangered Species Research. Vol. 34, pp. 45–59; Quintana, E., "Monthly report No. 3: May 2017," Report prepared for the Massachusetts Clean Energy Center by the New England Aquarium, pp. 26 (May 15, 2017).

[14] Kraus, et al. 2016; Davis, G.E., Baumgartner, M.F., Bonnell, J.M., Bell, J., Berchick, C., Bort Thorton, J., Brault, S., Buchanan, G., Charif, R.A., Cholewiak, D., 2017. Long-term passive acoustic recordings track the changing distribution of North Atlantic right whales (*Eubalaena glacialis*) from 2004 to 2014. Scientific Reports. Vol. 7, p. 13460.

[15] Asaro, M.J., Update on US Right Whale Mortalities in 2017, NMFS, November 30, 2017, available at: https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/2017%20Nov/asaro_usstrandings_nov2017.pdf.

[16] NMFS Interactive DMA Analyses: https://www.nefsc.noaa.gov/rcb/interactive-monthly-dma-analyses/.

[17] Pendleton, D.E., Pershing, A., Brown, M.W., Mayo, C.A., Kanney, R.D., Record, N.R., and Cole, T.V.N. 2009. Regional-scale mean copepod concentration indicates relative abundance of North Atlantic right whales. Marine Ecology Progress Series. Vol. 378, pp. 211–225; NOAA Northeast Fisheries Science Center, "Ecology of the

on Southern New England waters.[18] In January 2019, an aggregation representing a quarter of the population—100 whales—was seen in this area[19] engaged in both foraging and social activities, demonstrating that it is clearly more than just a migratory corridor. Southern New England is important to all life history stages.[20] Surface Active Groups have also been documented in this region[21] and, given the gestation period of right whales, this behavior is more likely to result in pregnancy during the winter months.

Large, consistent aggregations of right whales in all four seasons, have led scientists and a NMFS Expert Working Group to describe Southern New England as a year-round foraging "hotspot."[22] Several other scientific data sources demonstrate that right whales use these waters year-round.[23] Further, a recent presentation at the North Atlantic Right Whale Symposium discussed new evidence showing that 11 out of 15 newly catalogued whales identified south of Cape Cod have never been sighted further north in the Bay of Fundy or the Gulf of St. Lawrence,[24] and suggesting this area may represent an end-point of the northern migration for some portion of the population.

In addition to year-round use of the area, the relative abundance in the area has increased. For example, there is evidence of a broader temporal shift in distribution resulting in greater densities off Rhode Island and Massachusetts later in the year, through May and into the summer months.[25] April appears to be particularly important for females of reproductive age.[26] Inter-annual and inter-seasonal variability in aerial and acoustic detections imply that there are no clear spatial patterns of habitat use across Southern New England and right whales should be expected to be encountered equally across the region.[27]

Northeast US Continental Shelf – Zooplankton," available at https://www.nefsc.noaa.gov/ecosys/ecosystem-ecology/zooplankton.html.

[18] Although there are challenges in the use of opportunistic sightings data (no area systematically surveyed, effort not corrected for, and potential for counting an individual whale more than once), they are a proxy for habitat used by North Atlantic right whales, as validated by NMFS' management actions based on these data, including the implementation of DMAs.

[19] NMFS, Voluntary Vessel Speed Restriction Zone in Effect South of Nantucket to Protect Right Whales (Jan. 28, 2019), https://www.fisheries.noaa.gov/feature-story/voluntary-vessel-speed-restriction-zone-effect-south-nantucket-protect-right-whales.

[20] Leiter et al. 2017, at 52–54.

[21] *Id.*

[22] Oleson, E.M., Baker, J., Barlow, J., Moore, J.E., and Wade, P., 2020. North Atlantic Right Whale Monitoring and Surveillance: Report and Recommendations of the National Marine Fisheries Service's Expert Working Group. NOAA Technical Memorandum NMFS-OPR-64, at Fig. 1.

[23] Kraus, S.D. 2016; Davis, G.E., et al. 2017; NMFS Interactive DMA Analyses.

[24] Hamilton, P., "North Atlantic Right Whale Catalog Update, Recent Genetic Findings and Whale Naming Results," Presentation at the North Atlantic Right Whale Consortium Annual Meeting (Oct. 29, 2020).

[25] Davis, G. E., et al. 2017.

[26] Leiter, S.M., et al., "North Atlantic right whale *Eubalaena glacialis* occurrence in offshore wind energy areas near Massachusetts and Rhode Island, USA." Endang Spec Res Vol. 34: 45–59 (2017).

[27] *Id.*; DMAs; Redfern, J., Pendleton, D., O'Brien, O., Ganley, L., Hodge, B. and McKenna, K., "Tools to identify and minimize risk to marine mammals," Presentation to the Massachusetts Habitat Working Group (Dec. 11, 2020).

Finally, the Preferred Alternative could result in redirected effort into areas of high risk as the Commonwealth of Massachusetts did not close state waters south of the islands after all.[28] Given the potential for this area to be a winter mating ground as well as preferred habitat for at least some calving females, it is essential that it be afforded significant protection from both vessel strikes and entanglements. **We strongly urge NMFS to modify the entire Large South Island Restricted Area as a Seasonal Management Area to simultaneously reduce vessel strike risks**.

3. The Georges Basin Restricted Area

Alternative 3 analyzes a buoy line closure in the "Georges Basin Restricted Area" between May and August. Our organizations support closures that do not cause predictable relocation of lines to areas of high co-occurrence with right whales, inadvertently displacing risk. This particular offshore area in Georges Basin is important to right whales as plankton data demonstrates its importance as foraging habitat[29] and sightings data (albeit rare currently) as well as telemetry data[30] suggest that this may be a transit corridor for whales moving between the Gulf of St. Lawrence and the Gulf of Maine. *See* DEIS Vol. II at 3-62 (showing increased right whale density along the northern edge of Georges Bank from April through September). However, those benefits are only afforded if gear does not shift into areas of increased risk. Given the size and demographic of the fishing effort there, it is our view that these traps/vertical lines are unlikely to come out of the water between May and August and it is more likely than not that they will relocate into equally high risk areas.

For that reason, we have concerns that a full closure of the area proposed could increase risk by shifting effort south and west resulting in even higher densities along the corridor. Given the potential for the northern edge of Georges Bank to be a regular route between the Gulf of St. Lawrence and Gulf of Maine, **we recommend that NMFS only allow trap/pot fishing with one end line along the entire northern edge of Georges Bank from April – September, as an alternative to the Georges Basin Restricted Area proposed.** While it would not entirely remove risk, it would reduce risk to a larger spatial area by 50% without incurring additional costs to the industry. In addition, NMFS should send an enforcement boat to the area on a regular basis (at least once per week) and perform additional surveys (aerial and vessel) to better understand right whale abundance and behavior while using the area.

[28]Sean Horgan, Fish panel bans inshore lobstering during whale migration, Gloucester Times, Jan. 28, 2021 https://www.gloucestertimes.com/news/fish-panel-bans-inshore-lobstering-during-whale-migration/article_761e98de-6196-11eb-b9f6-c3c00dd2aecc.html; MA DMF, February 19, 2021, "New Protected Species Regulations Finalized for Fixed Gear Fisheries and Industry Outreach on Required Gear Modifications," https://content.govdelivery.com/accounts/MADMF/bulletins/2c2930d. This highlights why NMFS cannot rely on any risk reduction measures unless those measures are specifically incorporated into the ALWTRP—only then can NMFS assure such measures will in fact be legally required as part of the ALWTRP. NMFS cannot delegate its legal obligation to adopt measures to reduce M/SI to the states.

[29] DEIS Vol. I at 3-71, 72-74.

[30] Telemetry track of "Churchill" from 2001, available at http://www.gulfofmaine.org/times/fall2001/right_whales.html.

D. Weak Rope Will Not Reduce the Risk of Entanglement

1. "Weak Rope" and "Weak Insertions" are Unproven Conservation Measures

Our organizations do not support the weak rope or weak link insertions analyzed in the DEIS. The use of weak rope or weak insertions is unproven and cannot guarantee the projected risk reduction goals in the proposed rule.[31] Any assumptions about the efficacy of weak rope or weak contrivances for reducing serious injuries and mortalities are just that—assumptions—that are largely theoretical and untested in the field.

We have previously expressed concerns regarding the efficacy of using 1,700 lb breaking strength rope. At this time, it is neither commercially available nor proven to reduce serious injury and mortality to right whales. The data presented in Knowlton et al. (2016) were obtained prior to 2011, before right whales significantly shifted their habitat use.[32] In addition, the breaking strength does not appear to reduce risk of serious injury or mortality to right whales under two years of age. Indeed, the single paper on which the concept of weak rope as a mitigation measure was developed is based on the "suggest[ion]" that "**adult** right whales . . . can break free from [] weaker ropes and thereby avoid a life-threatening entanglement." Younger right whales (calves and juveniles), as well as smaller whales of other species, have a much lower force output than adult right whales,[33] and are less likely to be able to break even lower-pound breaking strength rope.

NMFS's application of the weak inserts is also problematic as they do not go the entire length of the rope. In the preferred alternative, weak insertions are only proposed down to 50 percent in the rope in nearshore areas and 35 percent in offshore areas. DEIS Vol. I at 1-15.

As NMFS acknowledges in the DEIS, lower-pound breaking strength ropes may reduce the severity of the entanglements, but they will not reduce the encounter rates and associated risk including serious injury or mortality and longer-term sublethal impacts depending on the complexity and specifics of an entanglement event. *Id.* For example, even so-called weak rope could wrap around a whale's mouth and damage its baleen, thereby impeding its ability to feed, leading to weight loss and starvation. Even if that weight loss is not fatal in and of itself, in females it can contribute to delayed reproduction.[34] During the February 25, 2021 ALWTRT public hearing, a member of the Center for Coastal Studies disentanglement team and co-author of the single study on reduced breaking strength rope, expressed his concerns about lines breaking and making it more difficult for disentanglement teams to free entangled whales.[35]

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[31] DEIS Vol. I at 3-68, Table 3.4.

[32] Knowlton, A. R., J. Robbins, S. Landry, H. A. McKenna, S. D. Kraus, and T. B. Werner. 2016. Effects of fishing rope strength on the severity of large whale entanglements. Conserv Biol 30:318-328.

[33] Amy Knowlton, Tim Werner and Scott Kraus, *Whale Release Ropes*, Presentation at the Consortium for Wildlife Bycatch Reduction, https://www.mmc.gov/wp-content/uploads/Knowlton2_Marine-Mammal-Commission-Knowlton2-VERSION-2.pdf at 7 (emphasis added).

[34] *See, e.g.*, Moore et al. 2021. "Assessing North Atlantic right whale health: threats, and development of tools critical for conservation of the species." Dis Aquat Org Vol. 143: 205–226, 2021. https://doi.org/10.3354/dao03578.

[35] NMFS, Atlantic Large Whale Take Reduction Plan Proposed Modifications, Feb. 2021 Presentation, available at https://www.greateratlantic.fisheries.noaa.gov/public/nema/SFD/ALWTRTDEIS-Proposed%20RuleComment%20Opportunity.mp4.

On that note, NMFS inappropriately relies on disentanglement as a tool toward reducing M/SI of right whales and notes that, between 2010 and 2018, seven right whales would have been added to the M/SI list had they not been disentangled. DEIS Vol. I at 2-30; *see also id.* at 3-76. Without intervention, those whales alone would have exceeded PBR for the species. Implementing measures which may result in the loss of these whales by making it more difficult to disentangle them provides no benefit to the species or to the fishing industry who will be once again asked to modify gear at their expense because measures they were mandated to enact by the Agency did not work.

We have similar concerns with the proposed movement of the weak link/line requirement at the buoy. This appears to be an experiment that is being codified before it is tested. In responding to comments, we ask the agency to provide the scientific information that this proposed measure is based upon.

The agency's reliance on weak rope, contrivances or toppers to reduce risk, especially in offshore areas, is particularly unreasonable where (1) lobstermen use a large number of pots per trawl, and have expressed concerns about safety and lost gear; (2) the area is of particularly high risk for right whales due to the heavier line and increased number of traps used there; and (3) there is evidence that whales that become entangled near the bottom (where there will not be nearby weak insertion) have more complex entanglements and cannot break free as easily.[36]

2. Weak Rope Inhibits Species' Recovery

After 50 years of management, conservation and management measures to date have wholly failed to recover the species. A recently published paper summarizing the spiraling health of right whales, the increasing threats they face, and the tools that will be critical for their conservation.[37] The paper concludes that the use of weak rope as a management measure is inconsistent with the recovery of the species and that "to enable species recovery, reduction in mortalities have to be accompanied by substantial reduction of sub-lethal trauma as well," stating:

> The role of sub-lethal entanglement drag in reducing NARW health and fecundity should be a major consideration in comparing the efficacy of potential mitigation measures. Thus, while 1700 lb (~773 kg) breaking strength rope may reduce mortality and severe injury, it will continue to be a source of morbidity. Ultimately, removal of rope from the water column will better enable species recovery.[38]

[36] Howle, et al. 2019. Simulation of the entanglement of a North Atlantic right whale (*Eubalaena glacialis*) with fixed fishing gear. MARINE MAMMAL SCIENCE, 35(3): 760–778 (July 2019).
[37] Moore et al. 2021. "Assessing North Atlantic right whale health: threats, and development of tools critical for conservation of the species." Dis Aquat Org Vol. 143: 205–226, 2021. https://doi.org/10.3354/dao03578.
[38] *Id.*

3. NMFS's Risk Reduction Analysis Uses a Flawed Baseline

NMFS estimates that 26% percent of the vertical lines in the water will be converted to weak rope in the Preferred Alternative, and 73% will be converted to full weak rope in Alternative 3 accounting for approximately significant reductions in risk. DEIS Vol. I at 1-15; DEIS Vol. I at 3-68, Table 3.4. For this analysis, the agency unreasonably assumes that inserts placed at least every 40 feet. are equivalent to full weak rope. *Id.* at 1-14. The analysis which compares various proposed insert intervals to a line with weak inserts every 40 feet ("lower bound"), and also recognizes the depth of the lowest insert (upper bound),[39] is flawed. Weak inserts every 40 feet cannot be used as the baseline for determining the percentage of risk reduction that a "full weak rope," would provide because that risk reduction is unknown. Any calculation of the relative risk reduction of the lesser weak insertion methods proposed, should calculate risk reduction relative to no ropes in the water (i.e., zero risk), not a line with inserts every 40 feet.

E. Improved Gear Markings Are Necessary but Will Not Reduce Risk

In our view, none of the gear marking measures analyzed or proposed in the DEIS are sufficient. We strongly urge NMFS, again, to require gear markings that are specific to the fishery and region in which it is fished, and that can be seen from a plane or boat. Appropriate gear marking requirements should also include requirements for groundlines. In addition, as gear marking is implemented solely for the conservation benefit of right whales, it should be a requirement of the Plan rather than managed by state regulations.

Insufficient gear marking requirements for fixed-gear fisheries in the U.S. have demonstrably hindered targeted management measures to reduce risk to endangered right whales. Our organizations have commented several times over the last five years on this issue, yet NMFS has failed to implement new gear marking requirements. In most cases, NMFS cannot determine the origin (to fishery or country) of the gear documented on and/or removed from right whales to the detriment of whales and the fisheries implicated. DEIS Vol. I at 1-5; 2-40. A better understanding of gear origin, particularly since 2010, is necessary to define areas of high risk to the species and is long overdue. In addition, NMFS should work with gear specialists in both the U.S. and Canada to re-analyze gear documented on, or removed from, entangled large whales in the past.

We strongly urge NMFS to require gear marking that is specific both to a fishery and to the region in which it is fished, and that supports observation of marks from platforms such as boats and planes. It is apparent that the current requirement for gear marking is too broad, enabling at least some industry members to deny potential risk from their fishery, even when the gear removed from whales is consistent with that fished in that region.[40] For instance, NMFS's right whale incident data includes several cases of retrieved gear which was marked with a red tracer

[39] "The lower bound compares the proposed insert intervals relative to insert intervals every 40 ft and provides the percentage of rope within buoy lines that would be considered weak by that metric. The upper bound recognizes that the depth of the lowest insert is important; a whale hitting the line above the lowest weak insert could break away, preventing attachment to the bottom gear and an acute drowning event, and possibly before a serious entanglement injury can be incurred. That upper bound is the estimated percent of line above the lowest weak insert." *Id*.

[40] Letter from Maine Lobstermen's Association to NMFS, Apr. 30, 2019, https://mainelobstermen.org/wp-content/uploads/2019/08/MLA-TRT-near-consensus-withdrawal_2019.08.30-FINAL.pdf?x44315.

and was attributed to the "Northern inshore/nearshore trap" fishery but in only once case was it identified as lobster gear.[41] More specified gear marking requirements under the Plan would substantially reduce the equivocation of which fisheries do, in fact, pose demonstrable risk to the species.

There are also compelling cases in NMFS's own data set for which gear remains categorized as unknown but for which gear determination cannot rule out U.S. fisheries. For example, right whale 4146 was documented as entangled on April 23, 2017, entangled and images indicate that the entanglement appears recent and therefore likely to have occurred in U.S. waters. Similarly, right whale 4091 is listed on a NMFS incident report on May 12, 2018 as having "Line trailing from right mouthline, with at least one pectoral wrap, and trailing 50 ft. Buoy pinned close to flipper." As stated previously, this whale was sighted gear free in the Cape Cod Bay only six days earlier. It is most likely the whales became entangled in U.S. waters and the most likely source of line in U.S. waters is from U.S. fixed fishing gear. However, in neither case does NMFS provide any attribution of gear. We therefore suggest NMFS include a category in their assessment clarifying when U.S. fishing gear cannot be ruled out.

We continue to recommend significantly improved gear marking requirements on every 40 feet of line in all U.S. fisheries known to interact with right whales to better define the region and fishery beyond the broad regional mandates which currently exist. NMFS itself provided support for the increased frequency of gear marking in its gear marking resources, stating: "[a]lternatively, if rope were marked every 40 feet we could expect [to] get the information provided by the mark 90% of the time, because at least 40 feet of rope is likely to be recovered."[42] In light of the frequency with which right whales encounter the bottom while foraging,[43] we recommend unique markings to identify sinking groundline as part of the vertical line system versus those lines used to connect traps to better inform when and where whales encounter gear.

In addition to improved gear marking in the Northeastern American trap/pot fisheries, NMFS should immediately require enhanced gear marking requirements for all permit holders in all Category I and II fisheries likely to entangle marine mammals including, but not limited to: the Northeast sink gillnet, Northeast drift gillnet, Northeast anchored float gillnet, Southeast Atlantic gillnet, Mid-Atlantic gillnet, Southeastern Atlantic U.S. shark gillnet, Atlantic mixed species trap/pot, Atlantic blue crab trap/pot, and the Mid-Atlantic American lobster trap/pot fisheries.

[41] NMFS, 2000-2018 Right Whale Incident Data, Apr. 19, 2019, https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/April%202019/2000-2018_right_whale_incident_data_3_19_19v.xlsx.
[42] NMFS, Past Gear Marking Efforts, updated March 2018, https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/April%202018/past_alwtrt_gear_marking.pdf.
[43] Hamilton PK, Kraus SD (2019) Frequent encounters with the seafloor increase right whales' risk of entanglement in fishing groundlines. Endang Species Res 39:235-246. https://doi.org/10.3354/esr00963.

F. 100% Harvester Reporting, Vessel Tracking Systems, and Enhanced Enforcement Must be Prioritized

As the DEIS acknowledges, Maine still does not have 100% harvester reporting (DEIS Vol. II at 3-102), nor has NMFS finalized a rule requiring it. We urge NMFS to initiate and develop an action that would immediately require: (1) 100% harvester reporting in the entire fishery (2) all federal permit holders to obtain and use a GARFO-approved vessel tracking system; and (2) all federal permit holders to mark all traps electronically in order to provide detailed information on gear type and set location, enhance the enforcement of all regulatory measures in fixed gear fisheries, and help ascertain the ownership of lost or damaged gear.

G. Ropeless Fishing is the Only Way to Adequately Reduce Risk in the Long Term

Our organizations support and appreciate the modifications—in the Preferred Alternative and Alternative 3—that change the existing seasonal restricted areas from areas closed to harvesting lobster and crab to areas closed to persistent buoy lines.[44] 85 Fed. Reg. at 86,887; DEIS Vol. I at 1-7. We also support the measures in both Alternative 2 and 3 that would allow fishing without buoy lines in any newly established restricted areas. *Id.* As a recent paper noted, ropeless fishing is the only way to adequately reduce risk to right whales, while allowing fishing in the long term.[45] However, any authorization to fish in such a closure, such as an exempted fishing permit or letter of authorization, should include conditions to protect right whales such as area restrictions, low vessel speed, observer monitoring, and reporting requirements. *See* DEIS Vol. I at 1-7 ("would" include in Alternative 3 and "likely" in Alternative 2).

III. THE DEIS FAILS TO COMPLY WITH NEPA

NEPA, 42 U.S.C. § 4321 *et seq.*, is the fundamental tool for ensuring that federal agencies properly vet the impacts of major federal actions on wildlife, natural resources, and communities. It requires federal agencies to consider reasonable alternatives and identify the most environmentally preferable one.

A central purpose of NEPA is to assure that federal decision-makers consider the environmental consequences of their actions before a decision to act is made and to provide for "[a]ccurate scientific analysis, expert agency comments, and public scrutiny" of agency decisions. 42 U.S.C. § 4332(C); *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 371 (1989) (NEPA ensures that "the agency will not act on incomplete information, only to regret its decision after it is too late to correct"). Under NEPA, federal agencies are required to take a "hard look" at environmental consequences in order to integrate environmental impacts into the decision making process. *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.21 (1976).

Because the proposed rule to amend the Plan is a major federal action significantly affecting the

[44] As the relative risk of sinking groundline is still uncertain, it is our view that waters within the Cape Cod Bay where the highest known concentration of right whales seasonally occurs, should remain closed to all fixed gear fishing until additional data about the efficacy of ropeless gear becomes available.

[45] Moore et al. 2021. "Assessing North Atlantic right whale health: threats, and development of tools critical for conservation of the species." Dis Aquat Org Vol. 143: 205–226, 2021. https://doi.org/10.3354/dao03578.

human environment, it is subject to NEPA's "detailed statement" requirement. NMFS's EIS must therefore evaluate: (i) the environmental impact of the proposed action, including the cumulative impacts; (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented; (iii) alternatives to the proposed action; (iv) the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. 42 U.S.C. § 4332(2)(C).

NMFS cannot avoid its obligation to conduct a comprehensive review of the direct, indirect, and cumulative impacts of the proposed rule by relying on the amendments to NEPA's implementing regulations recently issued by the Council of Environmental Quality ("CEQ"). NMFS began its NEPA process on the proposed rule well before the regulatory amendments went into effect and thus NMFS should apply the old regulations. *Compare* 84 Fed. Reg. 37822 (Aug. 2, 2019) (NMFS's notice of intent to prepare an environmental impact statement on proposed rule to amend the ALWTRP) *with* 85 Fed. Reg. 43304 (July 16, 2020) (final rule amending CEQ regulations, with an effective date of September 14, 2020). Moreover, the new regulations are unlawful and, in any event, cannot trump NMFS's statutory obligations to fully consider the direct, indirect, and cumulative effects of its actions.[46]

A. The DEIS Fails to Properly Define the Purpose and Need for Action

NMFS fails to properly define the purpose and need. In preparing the DEIS, NMFS must define its purpose and need in acting. 40 C.F.R. §§ 1502.13–1502.14 (2019).This is part of the "responsibility for defining at the outset the objectives of an action" to be taken by the agency. *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991). This purpose and need inquiry is crucial for a sufficient environmental analysis because "[t]he stated goal of a project necessarily dictates the range of 'reasonable' alternatives." *Carmel-by- the-Sea v. U.S. Dep't of Transp.,* 123 F.3d 1142, 1155 (9th Cir. 1997). Thus, "an agency cannot define its objectives in unreasonably narrow terms" without violating NEPA. *Id.*

In crafting the purpose and need statement, the agency must incorporate the parameters set by Congress in relevant statutes. *Busey*, 938 F.2d at 196. Here, that means considering the overall goal of the MMPA to protect and recover imperiled marine mammals, 16 U.S.C. § 1361, the goal of section 118 to drive to M/SI of marine mammals in commercial fishing gear to below ZMRG, *id.* § 1387(a)(1), and Congress's directive that "[t]he interest in maintaining healthy populations of marine mammals comes first" under the statute. *Kokechik Fishermen's Ass'n v. Sec'y of Comm.*, 839 F.2d 795, 800, 802 (D.C. Cir. 1988); *see also Animal Welfare Inst. v. Kreps*, 561 F.2d 1002, 1007 (D.C. Cir. 1977) ("the MMPA is . . . motivated by considerations of humaneness toward animals, who are uniquely incapable of defending their own interests").

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[46] *See* 42 U.S.C. § 4332; *Kleppe*, 427 U.S. at 410 (citing 42 U.S.C. § 4332(2)(C)). There are at least five lawsuits challenging the new regulations. *See* Complaint, *Wild Virginia et al. v. Council on Environmental Quality et al*., No. 3:20-cv-00045 (W.D. Va. July 29, 2020), ECF No. 1; Complaint, *California et al. v. Council on Environmental Quality et al*., No. 3:20-cv-06057 (N.D. Cal. Aug. 28, 2020), ECF No. 1; Complaint, *Alaska Community Action on Toxics et al. v. Council on Environmental Quality*, No. 3:20-cv-05199 (N.D. Cal. Jul. 29, 2020), ECF No. 1; Complaint, I*owa Citizens for Community Improvement et al. v. Council on Environmental Quality et al.*, No. 1:20-cv-02715 (D.D.C. Sept. 23, 2020), ECF No. 1; Complaint, E*nvironmental Justice Health Alliance et al. v. Council on Environmental Quality et al*., No. 1:20-cv-06143 (S.D.N.Y. Aug. 8, 2020), ECF No. 1.

NMFS must also consider the goals of the ESA, which are to protect and recover threatened and endangered species and their habitats, 16 U.S.C. § 1531, and "[t]he plain intent of Congress in enacting this statute . . . to halt and reverse the trend toward species extinction, whatever the cost." *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978); *see also id.* at 185 (agencies must "afford first priority to the declared national polity of saving endangered species").

While NMFS correctly indicates in its purpose and need statement that the agency must take action to further reduce the risk of right whale M/SI in commercial fishing gear to comply with the MMPA, its purpose and need statement is otherwise both too narrow. In particular, the purpose and need statement is too narrow because it is based on the need to reduce M/SI by 60% and ignores the urgent need to reduce the sublethal impacts of entanglement. *See* DEIS Vol. I at 2-41.

As explained above, NMFS's 60% risk reduction target is insufficient. *Supra* Section II.A. Indeed, NMFS's purpose and need is based on outdated information that fails to consider the best available right whale science, including a recent analysis documenting the substantial cryptic mortality right whales suffer, and that entanglements are responsible for the majority of such deaths. *See id*. New information reveals that NMFS should reduce risk by at least 90%, *see id*., meaning the agency must adopt significantly more mitigation measures than what is currently on the table. By narrowly defining the purpose and need statement as measures that achieve a 60% reduction in the risk of right whale M/SI, NMFS arbitrarily makes the preferred alternative the only choice that will meet this goal.

And while the focus of section 118 of the MMPA may be on reducing M/SI from commercial fisheries, NMFS's obligations under the ESA are much broader than that. NMFS must ensure that its actions in authorizing and managing the fisheries neither jeopardize the right whale's continued existence nor adversely modify its critical habitat. *See* 16 U.S.C. § 1356(a)(2). This requires considering not only the deaths and serious injuries caused by entanglement in fishing gear, but all the other impacts such entanglements cause, including impeding the whale's ability to reproduce, or increasing its vulnerability to death or injury from other stressors such as vessel strikes.

It is well established that right whales are negatively impacted by entanglement, not only through a reduction in the numbers of individuals through serious injuries and mortalities, but also through increasing a whale's stress hormone levels, leading to infections; making them more vulnerable to other sources of mortality like vessel strikes; and impeding their ability to feed.[47] For example, studies have concluded that "[p]rotracted entanglement in fishing gear often leads to emaciation through reduced mobility and foraging ability, and energy budget depletion from

[47] *See, e.g*., Julie M. van der Hoop, Douglas P. Nowacek, Michael J. Moore, M. S. Triantafyllou. 2017. Swimming kinematics and efficiency of entangled North Atlantic right whales. Endang. Species Res. Vol. 32: 1–17, 2017, doi: 10.3354/esr00781; Julie van der Hoop, Peter Corkeron and Michael Moore. 2016. Entanglement is a costly life history stage in large whales. Ecology and Evolution, 7: 92–106, doi:10.1002/ece3.2615; Cassoff RM, Moore KM, McLellan WA, Barco SG, Rotstein DS, Moore MJ. 2011. Lethal entanglement in baleen whales. Dis. Aquat. Org. 96: 175−185; Moore, M. and van der Hoop, J. 2012. The Painful Side of Trap and Fixed Net Fisheries: Chronic Entanglement of Large Whales. Journal of Marine Biology. Volume 2012, Article ID 230653, doi.org/10.1155/2012/230653.

the added drag of towing gear for months or years."[48] Additionally, the "chronic effects of entanglement in free-swimming individuals include systemic infection and debilitation from extensive tissue damage . . . More common in protracted cases is severe emaciation due to the inability to cope with a negative energy budget, driven by the combined effects of reduced mobility and foraging ability, and increased energetic demand imposed by towing accessory gear for months to years."[49]

The best available scientific data also indicates that even a single line increases drag on a whale; extra energy demand may affect body condition to the point that individual females' reproductive capacities could be impaired. Indeed, scientific studies have concluded that poor body condition that may result from chronic entanglement in right whales is a serious limitation to reproductive success.[50] Studies have also found that "[r]eproductive females seen alive and carrying gear or with severe wounds from entanglement had a significantly lower chance of calving again. Females that experienced moderate or severe entanglement wounds between calvings had a significantly longer calving interval than females that experienced minor or no entanglement wounds;"[51] that "females that have suffered a severe entanglement are significantly less likely to calve again;"[52] and that "[h]uman impacts are reducing the reproductive success of this population."[53]

Other studies have concluded that entanglements contribute to poor body condition in juvenile right whales, adults, and lactating females, "which could be suppressing their growth, survival, age of sexual maturation and calving rates."[54] Moreover, the poor condition of lactating females, may cause a reduction in calf growth rates, "potentially lead[ing] to a reduction in calf survival or an increase in female calving intervals."[55] As such, "the poor body condition of individuals within the NARW population is of major concern for its future viability."[56] Thus, entanglement is likely one of the major determinants of reproductive failure in right whales, and probably all large whales. NMFS cannot define its purpose and need to focus solely on serious injury and mortality.

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[48] Julie van der Hoop, et al. 2014. Behavioral impacts of disentanglement of a right whale under sedation and the energetic cost of entanglement. Marine Mammal Science. Vol. 30:1, pp. 282–307.
[49] *Id.*
[50] Miller, C. , D. Reeb, P. Best, A. Knowlton, M.Brown and M.Moore. 2011. Blubber thickness in right whales (Eubalaena glacialis) and (Eubalaena australis) related with reproduction, life history status and prey abundance. Marine Ecology Progress Series. Vol. 438, pp. 267–283.
[51] Knowlton, A., P. Hamilton, M. Marx, H. Pettis, and S. Kraus. 2012. Monitoring North Atlantic right whale (Eubalaena glacialis) entanglement rates: a 30 yr retrospective. Marine Ecology Progress series. Vol. 466, pp 293–302; Knowlton, A., P. Hamilton, and H. Pettis. 2012. Status of Reproductive Females in the North Atlantic Right Whale Population and Impacts of Human Activities on their Reproductive Success. Report Submitted to Woods Hole Oceanographic Institution.
[52] Julie van der Hoop, et al. 2016.
[53] *Id.*
[54] Christiansen, F., Dawson, S.M., Durban, J.W., Fearnbach, H., Miller, C.A., Bejder, L., Uhart, M., Sironi, M., Corkeron, P., Rayment, W., Leunissen, E., Haria, E., Ward, R., Warick, H.A., Kerr, I., Lynn, M.S., Pettis, H.M., & Moore, M.J. 2020. Population comparison of right whale body condition reveals poor state of the North Atlantic right whale. Marine Ecology Progress Series. Vol. 640, pp. 1–16.
[55] *Id.*
[56] *Id.*

B. The DEIS Fails to Properly Examine the Direct and Indirect Impacts to Right Whales

The DEIS fails to take a hard look at the direct and indirect impacts on right whales. The relevant regulations define "direct" effects as those that are "caused by the action and occur at the same time and place;" and "indirect" effects as those that are "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8 (2019).

NMFS fails to properly evaluate the direct impacts of the proposed rule on right whales by failing to base its analysis on accurate scientific information, improperly narrowing the scope of the action under review, and assuming the efficacy of risk reduction measures without any discussion of how these measures will not sufficiently reduce risk. As an initial matter, because the DEIS fails to properly define the proposed rule as part of its authorization and management of operation of the fisheries in state and federal waters under the MMPA, the DEIS improperly characterizes the nature and extent of the direct effects as beneficial, rendering the agency's analysis too narrow. Moreover, the analysis is based on outdated information that does not constitute the best available science on right whales, violating the requirement that "[t]he information must be of high quality" because [a]ccurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA." 40 C.F.R. § 1500.1(b) (2019).

For example, the proposed rule and DEIS explain that NMFS established the 60% risk reduction target based on a PBR of 0.9. 85 Fed. Reg. at 86,880; DEIS Vol. I at 1-2. However, as NMFS is well aware, the right whale PBR is now officially 0.8 as per the final 2019 Stock Assessment Report and actually 0.7 as per the most recent data on the population estimate.[57] The DEIS further explains that the assumptions underlying this risk reduction target, were based on an estimate that *40%* of mortalities between 2010 and 2018 were unobserved. DEIS Vol. I at 2-39. But a newly-published paper finds that *71%* of mortalities between 2010 to 2017 were unobserved.[58]

In addition, NMFS simply assumes that the proposed rule will adequately mitigate impacts to right whales to achieve the agency's stated risk reduction target, without addressing the likelihood that it will not do so. As the Supreme Court has instructed, "omission of a reasonably complete discussion of possible mitigation measures would undermine the 'action-forcing' function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects." *Robertson*, 490 U.S. at 353. NEPA requires that FERC discuss mitigation measures with "sufficient detail to ensure that environmental consequences have been fairly evaluated." *Id*. at 352. "An essential component of a reasonably complete mitigation discussion is an assessment of whether the proposed mitigation measures can be effective. . . A mitigation discussion without at least *some* evaluation of effectiveness is useless in making that determination." *South Fork Band Council v. U.S. Dep't of the Interior*, 588 F.3d 718, 727 (9th Cir. 2009) (citations omitted).

[57] NMFS, Stock Assessment Report: North Atlantic Right Whale, Apr. 2020 at 22; Colleen Coogan, NMFS, Presentation to the Atlantic Large Whale Take Reduction Team, Jan. 2021.
[58] Pace et al. 2021.

Moreover, many of the measures on which NMFS relies in its proposed rule are unproven and therefore not guaranteed to hit the projected risk reduction goal. As explained above, the proposed rule relies extensively on the use of weak rope or weak insertions to reduce risk of right whale M/SI. *See supra* Section II.D. But the efficacy of this rope at reducing M/SI is untested, assumes right whales are entangled in particular ways, and will not address the sublethal impacts impeding the recovery of the species. *Id.* Indeed, numerous scientists recently determined that "while 1700 lb (~773 kg) weak rope breaking strength rope may reduce mortality and sever injury, *it will continue to be a source of morbidity*."[59] As such, "removal of rope from the water column will better enable species recovery."[60]

Indeed, numerous studies have demonstrated that NMFS's long history of implementing a series of complex, inefficient gear modifications via the ALWTRP have been ineffective at reducing M/SI to the levels the agency assumed in those rules and associated documents. For example, a 2007 scientific review panel stated that:

> In general, [NMFS] should set higher standards of protection and place greater reliance on the ability of industry to adapt to those standards, rather than continuing to depend on a complex, shifting, inefficient, and ineffective network of regulatory measures to protect the whales. The guiding principle should be to separate high-risk human activities from right whales, in both space and time, to the maximum extent feasible.[61]

Studies issued since then only reinforce this point. For example, a 2014 study by agency scientists concluded that incremental gear modifications under the ALWTRP from 1999 to 2009 were "generally ineffective in abating whale deaths from entanglements in fishing gear."[62] In October 2018, NMFS's Technical Memorandum observed that, starting in 1997 when the original Plan was put in place, including the 2009 sinking groundline and 2014 vertical line rules, data from 2000 through 2017 showed that "absolute entanglements appear to be on the rise."[63] The same document noted the "unintended consequences" of the 2015 vertical line rule that required trawling up, potentially contributing to the increased severity of entanglements.[64]

NMFS's NEPA evaluation therefore cannot simply assume its proposed rule will achieve its goals and must disclose potential shortcomings, particularly where available evidence indicates the proposed rule will not be sufficiently protective.

NMFS also fails to take a hard look at the indirect impacts of the proposed rule. Because the

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[59] Moore et al. 2021 (emphasis added).
[60] *Id.*
[61] Reeves, R.R., A.J. Read, L. Lowry, S.K. Katona, and D.J. Boness. 2007. Report of the North Atlantic right whale program review, 13-17 March 2006, Woods Hole, Massachusetts. Marine Mammal Commission, Bethesda, MD.
[62] Pace, R. M. III et al. 2014.
[63] Hayes S.A., Gardner S., Garrison L., Henry A., Leandro L. 2018. North Atlantic right whales - Evaluating their recovery challenges in 2018. NOAA Tech Memo NMFS NE. 247; 24 p. at 8.
[64] *Id.*; *see also* Kenney, R. 2018. What if there were no fishing? North Atlantic right whale population trajectories without entanglement mortality. Endangered Spec. Res. 37:233 ("[d[espite legal requirements to reduce fishery-related mortality, little or no real progress has been made over the last 2 decades").

proposed rule is part of NMFS's authorization of the fisheries under the MMPA, NMFS must consider all the impacts of the fisheries on right whales as part of its analysis. Yet NMFS failed to do so.

Specifically, NMFS failed to take a hard look at the impacts that fishing activity can have on prey availability for right whales. Right whales select foraging areas based on a relatively high threshold of copepod density. *See, e.g.*, DEIS Vol. I at 4-86. Notably, foraging areas with suitable prey density are limited relative to the overall distribution of North Atlantic right whales,[65] meaning that unrestricted and undisturbed access to suitable areas, when they exist, is extremely important for the species to maintain its energy budget. Scientific information on right whale functional ecology also shows that the species employs a "high-drag" foraging strategy that enables them to selectively target high-density prey patches, but is energetically expensive.[66]

Thus, if access to prey is limited in any way, the ability of the whale to offset its energy expenditure during foraging is jeopardized. NMFS itself has elsewhere recognized that these prey disturbances should and could be minimized because it relies on the Massachusetts Restricted Area to "further minimize" such disturbances stating:

> Localized disturbance to dense copepod aggregations by these gear types is further minimized by MMPA gillnet and trap/pot closure areas that exist in temporal and spatial areas where these dense concentrations are expected to trigger foraging behavior (e.g., Massachusetts Bay Restricted Area). 50 CFR 229.23).[67]

While NMFS's DEIS acknowledges that reduced prey availability can negatively affect right whale health, *e.g.*, DEIS Vol. I at 1-4, 4-88, the agency failed to consider the role the proposed action has in exacerbating those impacts.

Relatedly, NMFS also failed to consider the impacts of fishing vessel operations on right whales. This is improper considering that NMFS elsewhere acknowledged that noise pollution from fishing vessels can negatively impact right whales and increase the risk of ship strikes. *See e.g.*, Draft BiOp at 146. Indeed, there have been at least four documented right whale deaths and serious injuries due to vessel strikes in U.S. waters since January 1, 2020, all due to confirmed or suspected recreational fishing vessels less than 65 feet.[68]

C. The DEIS Does Not Examine a Reasonable Range of Alternatives or Adequately Describe Differences Between Alternatives

The DEIS fails to analyze a reasonable range of alternatives, or adequately analyze the differences between alternatives. NEPA requires a "detailed statement" of "alternatives to the

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[65] *Id.*
[66] Van der Hoop, J., Nousek-McGregor, A.E., Nowacek, D.P., Parks, S.E., Tyack, P., and Madsen, P, "Foraging rates of ram-filtering North Atlantic right whales," *Functional Ecology*, published online May 11, 2019.
[67] Draft BiOp at 87.
[68] Aidan Cox, North Atlantic right whale found dead on Florida beach, CBC News, Feb. 17, 2021, https://www.cbc.ca/news/canada/new-brunswick/right-whale-death-1.5917363.

proposed action." 42 U.S.C. § 4332(2)(c). In considering alternatives, an agency "should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." 40 C.F.R. § 1502.14 (2019).

The requirement to consider reasonable alternatives "lies at the heart of any NEPA analysis." *California ex rel. Lockyer v. U.S. Dept. of Agric*., 459 F. Supp. 2d 874, 905 (N.D. Cal. 2006). The purpose of this section is "to insist that no major federal project should be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means." *Envt'l Defense Fund v. Army Corps of Engr's*, 492 F.2d 1123, 1135 (5th Cir. 1974).

While an agency is not obliged to consider every alternative to every aspect of a proposed action, the agency must "consider such alternatives to the proposed action as may partially or completely meet the proposal's goal." *Nat. Resources Defense Council v. Callaway*, 524 F 2d. 79, 93 (2d Cir. 1975). In considering what constitutes a reasonable alternative, "an agency should always consider the views of Congress, expressed, to the extent that the agency can determine them, in the agency's statutory authorization to act, as well as in other congressional directives." *Citizens Against Burlington v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991). The existence of a viable but unexamined alternative renders an EIS inadequate. *Citizens for a Better Henderson* v. *Hodel,* 768 F.2d 1051, 1057 (9th Cir. 1985).

Despite these obligations, NMFS considered only three primary alternatives: (1) Alternative 1 (not issuing the proposed rule); (2) Alternative 2 (issuing the proposed rule); and (3) Alternative 3 (similar to Alternative 2 but with some additional measures). NMFS neglected to consider a range of reasonable alternatives because none of the action alternatives meet NMFS's protective mandates under NEPA and the MMPA (or the ESA) or provide a meaningful range of adequate mitigation measures. *See supra* Section II.

Indeed, there are relatively few differences among the action alternatives. Both alternatives would require a combination of trawling up, seasonal buoy line restricted areas, and weak lines or weak insertions. *See* DEIS Vol. I at 3-52–3-53. NMFS estimates Alternative 2 would reduce M/SI risk by 64.3% while it estimates that Alternative 3 would reduce M/SI risk by 69.6% to 72.6%. *Id.* at 3-68, 3-69. The lack of any meaningful difference between the alternatives considered in detail violates the requirements of NEPA. *See Muckleshoot Indian Tribe v. U.S. Forest Serv*., 177 F.3d 800, 813 (9th Cir. 1999) (federal agency violated NEPA where two action alternatives considered were "virtually identical").

For example, NMFS failed to examine a truly protective alternative: no fishing. Because NMFS's No Action alternative reflects continued fishing under the current ALWTRP, NMFS should have considered an additional alternative that analyzed no commercial fishing, and thus no risk to from entanglements in U.S. fishing gear. This would have provided an important basis for the public and the agency to compare the tradeoffs between continued fishing and continued risk of entanglements, serious injuries, and mortalities in fishing gear, versus an alternative under which there would be zero risk of entanglement in commercial fishing gear in U.S. waters. No fishing protects the critically endangered right whale NMFS is mandated to protect, conserve,

and recovery; while continued fishing with unattended vertical line continues to threaten the survival and recovery of this critically endangered species.[69]

At the very least, NMFS must consider an alternative that would reduce serious injury and mortality of right whales in Northeast trap fisheries by 90%. NMFS's failure to do so is especially glaring where the agency itself identified the need to reduce U.S. entanglement-related M/SI by upwards of 80% at a time when PBR for right whales was 0.9, DEIS Vol. I at 3-47, and the PBR for right whales is now 0.7.[70] *See supra* Section II.A. Additionally, NMFS should have evaluated alternatives that considered adopting the closures proposed as part of the Preferred Alternative and Alternative 3 as year-round restricted areas, particularly considering the best available science demonstrates that right whales use the waters in Southern New England in all months of the year. *See supra* Section II.C.2.

NMFS should also consider an alternative that considers a line cap on all gear and include an alternative that address risk from gillnet gear. The agency chose not to focus on gillnets in its current rulemaking because lobster gear makes up a significantly greater portion of the line in right whale habitat. *See, e.g.*, DEIS Vol. I at 2-34, 2-40. However, while gillnets make up a small amount of the line in right whale habitat, they pose a disproportionate risk of entangling a right whale.[71] The presence of one or more nets (up to 300 feet long each) strung together and held up by floats, presents a much bigger target area for whales foraging throughout the water column, as compared to vertical trap/pot buoy lines without net in between. The agency must consider an alternative that evaluates the risk reduction benefits of restricting gillnet fishing.

While not necessarily in the spirit of TRT negotiations, NMFS's failure to examine a no-fishing alternative, or an alternative that would further reduce risk to right whales (to 80% or more), as part of its NEPA analysis is especially arbitrary considering that the status of the species has become particularly dire in the years the much-needed amendments to the ALWTRP have languished. *See Nat. Res. Def. Council v. U.S. Forest Serv.*, 421 F.3d 797, 813–14 (9th Cir. 2005) (NEPA obliges an agency to revisit its alternatives analysis whenever there are "changed circumstances [that] affect the factors relevant to the development and evaluation of alternatives," and "account for such change in the alternatives it considers.").

NMFS's failure to address a reasonable range of alternatives is due, at least in part, to its unfounded rejection of alternatives proposed during scoping or elsewhere. In particular, NMFS rejected several proposals that would have required larger closures than what NMFS has proposed—such as the closure of all of Statistical Area 529, the seasonal closure of LMA3 above

[69] That the agency purports to have addressed these impacts in an appendix to its draft biological opinion on operation of the federal fisheries is irrelevant as the agency's obligations under NEPA and the ESA are distinct in several important respects. *See, e.g.*, *Fund for Animals v. Hall,* 448 F. Supp. 2d 127, 136 (D.D.C. 2006) (describing differences). Moreover, "an agency may not circumvent its obligation to provide a clear assessment of environmental impacts simply by placing [vital] analysis in an appendix." *Or. Envt'l Council v. Kunzman*, 817 F.2d 484, 494 (9th Cir. 1987).

[70] *See, e.g.*, Colleen Coogan Presentation to the Atlantic Large Whale Take Reduction Team, Jan. 2021.

[71] "Per the agency's draft North Atlantic Right Whale Conservation Framework for Federal Fisheries in the Greater Atlantic Region, the agency is not even planning on having the ALWTRT evaluate the risk from gillnets and provide recommendations until 2023 and the agency anticipates acting on recommendations from the ALWTRP in 2025." NARWConservationFrameworkGARFO.pdf.

40.3 degrees, or the closure of all waters from January through April—because these measures were "too large" and "unpopular with stakeholders." DEIS Vol. I at 3-79. NEPA does not contain a "popularity" exemption to the requirement to consider a reasonable range of alternatives—indeed, neither do the ESA or MMPA contain a "popularity" exemption to their legal requirements.

NMFS's rejection of these alternatives on this basis is particularly concerning in light of the agency's recognition that the proposed rule will not meet its legal obligation under the MMPA to reduce M/SI to below PBR (not to mention ZMRG), *see supra* Section I; and its acknowledgement over two decades ago, that reducing entanglement risk for right whales would be especially difficult and that "extensive closures of large areas of the ocean to lobster and gillnet fishermen . . . would guarantee reduction of entanglements causing serious injury and mortalities." 62 Fed. Reg. 39,157, 39,159 (July 22, 1997); *cf.*, *Citizens Against Burlington*, 938 F.2d at 196.

In addition to failing to examine a reasonable range of alternatives, NMFS also failed to adequately compare the differences between the alternatives it did consider. For example, NMFS states that the no action alternative would have "high[ly] negative" consequences on right whales because "serious injury and mortality would continue to occur and impact population health," the agency also states that Alternative 2—the preferred alternative— would have a "positive" effect on right whales because it "would reduce right whale co-occurrence by 69%." *See, e.g.*, DEIS Vol. I at 8-276. Similarly, it states that Alternative 3—the non-preferred alternative— would have a "highly positive" effect on right whales by "reduc[ing] right whale co-occurrence by 83–88%. *Id.* These assumptions are unfounded for the reasons described above. *See supra* Section II. But even if true, that would not save the agency's analysis because NMFS failed to acknowledge that even under these alternatives, right whale serious injury and mortality would continue to occur and at unsustainable levels. *See*, *e.g.*, *id.*

D. The DEIS Fails to Properly Examine Cumulative Impacts

To ensure that the full effect of its decision is analyzed, NEPA requires NMFS to examine the potential cumulative impacts. *See* 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1508.9 (2019); *Te-Moak Tribe of W. Shoshone of Nev.* v. *U.S. Dep't of the Interior*, 608 F.3d 592,602-03 (9th Cir. 2010) (citation omitted). A "cumulative impact" is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7 (2019). "[I]n considering cumulative impact, an agency must provide some quantified or detailed information; . . . general statements about possible effects and some risk do not constitute a hard look absent a justification regarding why more definitive information could not be provided." *Ocean Advocates v. U.S. Army Corps of Eng'rs*, 361 F.3d 1108,1128 (9th Cir. 2004) (citation omitted); *see also Te-Moak Tribe of W. Shoshone v. U.S. Dep't of the Interior*, 608 F.3d 592, 603-06 (9th Cir. 2010) (rejecting the EA's cumulative impact analysis because it failed to analyze impacts in light of other projects that would impact the same resources).

NMFS failed to comply with these requirements. Its "analysis" of cumulative impacts amounts to nothing more than general statements about activities that impact large whales and other species. As one example, NMFS states that noise can have "low negative to negative" impacts on large whales, DEIS Vol. I at 8-254, 8-259, NMFS makes no attempt to quantify take from noise pollution or otherwise take a hard look at their detrimental impacts. For example, NMFS fails to even acknowledge its rule issued under the MMPA that allows the Navy to harass right whales hundreds of times each year over the next seven years incidental to testing and training activities conducted in the Atlantic Fleet Training and Testing Study Area. *See* 84 Fed. Reg. 70,712, 70,763 (authorizing 471 instances of Level B harassment of right whales from December 2019 through November 2025). Nor does NMFS attempt to quantify or take a hard look at the impacts of noise from vessel traffic.

Noise from the Navy's activities, the maritime industry, and the numerous offshore wind projects in Southern New England waters[72] will certainly "impact" right whales, and likely significantly so. For example, scientific research reveals that chronic stress in North Atlantic right whales is associated with exposure to low frequency noise from ship traffic.[73] Specifically, "the adverse consequences of chronic stress often include long term reductions in fertility and decreases in reproductive behavior; increased rates of miscarriages; increased vulnerability to diseases and parasites; muscle wasting; disruptions in carbohydrate metabolism; circulatory diseases; and permanent cognitive impairment."[74] As such, "over the long term, chronic stress itself can reduce reproduction, negatively affect health, and even kill outright."[75] In addition, right whales will experience temporary threshold shifts, behavioral response (including foraging displacement), and stress throughout the Atlantic from Navy sonar and other transducers,[76] as well as offshore wind projects. All of the existing and increasing ocean noise impacts important communications, including those between mothers and calves.[77]

In fact, NMFS lumps its analysis of the cumulative impacts on right whales together with other whales by only generally describing impacts on "large whales." *See, e.g.*, DEIS Vol. I at 8-250–8-251, 8-259. But this fails to constitute the hard look required by law and obfuscates the

[72] BOEM, Atlantic OCS Renewable Energy – Massachusetts to South Carolina, Mar. 2020, https://www.boem.gov/sites/default/files/images/Map%20of%20Atlantic%20OCS%20renewable%20energy%20areas.jpg.
[73] Rolland, R, et al. 2012. Evidence that ship noise increases stress in right whales. Proc. R. Soc. B. 279: 2363–2368.
[74] Rolland, R.M., K.E. Hunt, G.J. Doucette, L.G. Rickard, and S.K. Wasser. 2007. The inner whale: hormones, biotoxins and parasites. In: Kraus S.D. and R.M. Rolland, (eds.). The Urban Whale: North Atlantic Right Whales at the Crossroads. Harvard University Press, Cambridge, MA.
[75] *Id*.; *see also* Mayo, C.S., Page, M., Osterberg, D., and Pershing, A., "On the path to starvation: the effects of anthropogenic noise on right whale foraging success," North Atlantic Right Whale Consortium: Abstracts of the Annual Meeting (2008) (finding that decrements in North Atlantic right whale sensory range due to shipping noise have a larger impact on food intake than patch-density distribution and are likely to compromise fitness).
[76] *See, e.g.*, NMFS, Biological and Conference Opinion on U.S. Navy Atlantic Fleet Training and Testing and the National Marine Fisheries Service's Promulgation of Regulations Pursuant to the Marine Mammal Protection Act for the Navy to "Take" Marine Mammals Incidental to Atlantic Fleet Training and Testing (Nov. 2018) at 508.
[77] *See, e.g.*, NMFS, Biological Opinion on the Bureau of Ocean Energy Management's Issuance of Five Oil and Gas Permits for Geological and Geophysical Seismic Surveys off the Atlantic Coast of the United States, and the National Marine Fisheries Services' Issuance of Associated Incidental Harassment Authorizations (Nov. 2018) at 87 ("North Atlantic right whales shift calling frequencies, particularly those of upcalls, and increase call amplitude over both long and short term periods due to exposure to vessel sound, which may limit their communication space by as much as 67 percent compared to historically lower sound conditions").

distinct, significant cumulative impacts that will likely befall right whales in light of their critically endangered status and sensitivity to the various stressors listed, such as the fact that right whales, and female and their calves in particular, are more at risk of vessel strikes than other species.[78]

NMFS also seems to have artificially narrowed the definition of the action area for purposes of its cumulative impacts analysis. Specifically, NMFS defines the action area as "focused primarily on the Northeast Region Trap/Pot Management Area." DEIS Vol. I at 8-248. But this ignores the behavioral characteristics of right whales and other species who migrate hundreds or thousands of miles in the Atlantic and thus will be exposed to the risk of vessel strikes, noise pollution, and other stressors in areas outside the narrow circle NMFS has drawn for purposes of its cumulative impacts analysis. While the agency considers the impacts of entanglements and vessel strikes "in Canadian waters . . . because of the magnitude of impact this is have on the population," *id.*, NMFS must also analyze the combined impacts of the species' exposure to other stressors outside New England. *See, e.g.*, *Nat. Res. Def. Council v. Hodel*, 865 F.2d 288, 297–300 (D.C. Cir. 1988) (rejecting EIS where it failed to properly consider the impacts of offshore oil and gas activities on species who migrate through multiple planning areas); *Utahns v. U.S. Dep't of Transportation*, 305 F.3d 1152, 1180 (10th Cir. 2002) (holding EIS inadequate where it only evaluated impacts within 1,000 feet of proposed project because it limited analysis to smaller, less mobile species and ignored impacts to migratory species). For example, it is not clear if the agency considered the impacts of vessel strikes in the mid- and south-Atlantic regions, despite this stressor having significant impacts on the population in these waters. Indeed, in the last 14 months alone numerous right whales have been killed or seriously injured by vessel strikes in U.S. waters outside New England.[79] Additionally, it is unclear whether the agency considered other stressors right whales also face, or are reasonably likely to face in the foreseeable future, in waters outside New England and Canadian waters such as vessel noise or plastic pollution.

While NMFS may consider the impacts from the proposed rule to be minor (or beneficial), that does not absolve the agency of its duty under NEPA to consider the combined impacts of the regulations on imperiled right whales or other species, particularly because the regulations are part of NMFS's authorization of the operation of the fisheries under the MMPA. As one appellate court has explained:

> the addition of a small amount of [pollution] to a [waterway] may have only a limited impact on [fish] survival, or perhaps no impact at all. But the addition of a small amount here, a small amount there, and still more at another point could add up to some-thing with a much greater impact, until there comes a point where even a marginal increase will mean that *no* [fish] survive.

[78] *See, e.g.*, 78 Fed. Reg. 73726, 73727 (Dec. 9, 2013) ("Right whales appear to be more vulnerable to ship strikes than other large whale species"); NMFS, North Atlantic Right Whale (Eubalaena glacialis) Vessel Speed Rule Assessment (June 2020) at 23.

[79] *See, e.g.*, NMFS, 2017–2021 North Atlantic Right Whale Unusual Mortality Event, https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2021-north-atlantic-right-whale-unusual-mortality-event (updated Feb. 28, 2021).

Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt., 387 F.3d 989, 994 (9th Cir. 2004). The same is true for impacts to right whales from entanglements in commercial fishing gear, vessel strikes, noise pollution, and other stressors—the addition of some impacts here, and some impacts there, could add up to cumulatively significant impacts, particularly where NMFS has found that protecting every individual right whale is essential to its recovery; that its extinction is almost certain in the immediate future if existing threats are not dramatically reduced; and the best available science indicates that ongoing entanglements and vessel strikes are not only impeding the species' recovery but actively driving the species toward extinction.[80] NMFS must carefully examine and disclose these impacts to comply with NEPA.

E. The Economic Analysis in the DEIS Is Fundamentally Flawed

NMFS's economic analysis of the proposed rule in the DEIS is flawed in two fundamental ways. First, it fails to properly consider that reduced effort does not equate to reduced catch. Second, it fails to consider the significant economic benefit from preventing whale entanglements.
The DEIS overestimates the economic impact of the proposed rule on industry by incorrectly assuming reduced effort will lead to reduced landings. Research examining the catch of lobsters in Maine and Canada concluded that there is far more effort in the U.S. than is needed to obtain the same level of catch.[81] Accordingly, seasonal closures and trap reductions could provide substantial benefit to endangered whales while having little economic impact on fishermen.[82] The authors of a 2007 study stated, for example, that "if Maine restricted its fishing season to 6 months and reduced the number of traps by a factor of 10, the same amount of lobster could be landed with greatly reduced risk to right whales and other species."[83]

Recent studies have reached similar conclusions. For example, a 2020 study found that Canadian fishers in the Gulf of Maine caught about the same about of lobster using 7.5 times less effort than Maine fishers in U.S. waters.[84] In particularly, the study determined that from 2007 to 2013 in Maine, lobster landings doubled as the number of traps fell 10.5% and landings per trap increased by about 125%; and that Massachusetts achieved record-high landings since the implementation of trap/pot seasonal closures, especially within those areas most affected by the closures.[85] As such, "a negative economic impact should not be assumed with effort reduction."[86]

The DEIS also overestimates the economic impacts by ignoring the economic benefits of

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[80] *See, e.g.*, Pace et al 2021; NMFS, Immediate Action Needed to Save North Atlantic Right Whales, July 3, 2019, https://www.fisheries.noaa.gov/leadership-message/immediate-action-needed-save-north-atlantic-right-whales; NMFS, Species in the Spotlight, https://www.fisheries.noaa.gov/topic/endangered-species-conservation#species-in-the-spotlight (last visited Feb. 3, 2021).
[81] Myers, R.A., S.A. Boudreau, R.D. Kenney, M.J. Moore, A.A. Rosenberg, S.A. Sherrill-Mix, and B. Worm. 2007. Saving endangered whales at no cost. Curr. Biol. 17(1): R10–R11.
[82] *Id.*
[83] *Id.*
[84] Hannah J. Myers and Michael J. Moore. 2020. Reducing effort in the U.S. American lobster (Homarus americanus) fishery to prevent North Atlantic right whale (Eubalaena glacialis) entanglements may support higher profits and long-term sustainability. Marine Policy. Vol. 118: 103399.
[85] *Id.*
[86] *Id.*

reducing entanglement risk. While putting a dollar figure on an individual whale is not necessarily the best way to measure its inherent value, NMFS cannot focus solely on the cost to industry while ignoring the significant benefits provided by large whales—including to the fisheries themselves—particularly where tools exist to estimate the economic benefits of whales. For example, the International Monetary Fund recently issued a "conservative estimate[]" that placed the average value of an individual large whale at more than $2 million due to the ecosystem services individual whales provide in carbon sequestration and fertilizing activity that adds significantly to phytoplankton growth in the areas whales frequent.[87] In addition, reducing the frequency and severity of whale entanglements, will also reduce the expense associated with disentanglement efforts. But NMFS failed to consider these benefits in evaluating the economic impact of the proposed rule. This is improper.

Courts have held that it is arbitrary for an agency to focus solely on the costs to industry from enacting regulations while ignoring the economic benefits of the new standards. *See, e.g.*, *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1203 (9th Cir. 2008) (holding that it was arbitrary for an agency to consider the economic benefits of decreased carbon emissions from tailpipes when establishing corporate average fuel economy standards for light trucks when it considered economic costs to industry from enacting stricter standards); *see also High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1190-93 (D. Colo. 2014) (holding that it was arbitrary for the agency to consider the economic benefits of a coal mine expansion without also assessing the climate consequences of the end use of coal using the Social Cost of Carbon protocol).

In other words, NMFS "cannot put a thumb on the scale by undervaluing the benefits and overvaluing the costs of more stringent standards." *Ctr. for Biological Diversity*, 538 F.3d at 1198; *see also Mont. Envtl. Info. Ctr. v. U.S. Office of Surface Mining,* Case No. 15-106-M-DWM, 2017 WL 3480262, at *15 (D. Mont. Aug. 14, 2017). Yet that is just what NMFS's DEIS does. While it contains a lengthy analysis of the economic impact to industry, it has no analysis or discussion of the economic benefit of the regulations—whether quantitative or qualitative. While there may be a range of values, the value of saving whales "is certainly not zero" as NMFS irrational treats such value in its DEIS. *See Ctr. for Biological Diversity*, 538 F.3d at 1200.

V. CONCLUSION

NMFS's proposed rule and its associated DEIS are fundamentally flawed and fail to comply with the agency's legal obligations under the MMPA, ESA, and NEPA in numerous ways. NMFS must revise its risk reduction target, proposed rule and associated documents, reissue them for public notice and comment, and implement emergency measures to significantly reduce entanglement risk in the interim. Failure to do so would be a gross dereliction of the agency's duties and condemn the right whale to suffer yet more of the entanglements in commercial fishing that are not only impeding the species recovery, but actively driving it closer to the brink of extinction.

[87] *Id.*; *see also* Carl Wilson, Manipulative Trapping Experiments In The Monhegan Island Lobster Conservation Area, Jan. 2010; Stephanie A. Boudreau & Boris Worm. 2010. Top-down control of lobster in the Gulf of Maine: insights from local ecological knowledge and research surveys. Mar. Ecol. Prog. Ser. Vol. 403: 181–191.

Sincerely,

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