• Center for Biological Diversity • Conservation Law Foundation •
• Defenders of Wildlife • Humane Society of the United States •
• Humane Society Legislative Fund • Natural Resources Defense Council •

Via Electronic Mail

February 19, 2021

National Marine Fisheries Service
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RE: Comments on the Draft Batch Biological Opinion and Conservation Framework

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, Natural Resources Defense Council, and our millions of members and supporters, we submit these comments to the National Marine Fisheries Service ("NMFS") on its 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" (hereinafter "Draft BiOp").

NMFS's Draft BiOp is fatally flawed in numerous ways. The Draft BiOp fails to properly define the agency actions under review; arbitrarily defines the environmental baseline; improperly relies on uncertain, unproven, and future mitigation measures; is not based on the best available scientific data; employs an unlawful jeopardy analysis; reaches conclusions contrary to the evidence before the agency; and fails to include a proper incidental take statement, among other shortcomings. The agency's Draft BiOp and related "North Atlantic Right Whale Conservation Framework for Federal Fisheries in the Greater Atlantic Region" (hereinafter "Framework") represent a gross dereliction of the agency's legal obligations under the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531–1544, to the critically endangered North Atlantic right whale and other ESA-listed large whale species. If finalized without substantial, fundamental changes, the Draft BiOp will only further imperil ESA-listed species, including right whales already struggling to survive in the face of ongoing entanglements in commercial fishing gear and vessel strikes in U.S. and Canadian waters.

The Draft BiOp's inadequacies with respect to right whales are particularly egregious. As NMFS is well aware, entanglements in the ropes used in commercial fisheries have become the leading

cause of documented right whale deaths and serious injuries in recent years.[1] Entanglements can also increase a whale's stress hormone levels, leading to infections; make it more vulnerable to other sources of mortality like vessel strikes; and impede its ability to feed.[2] Additionally, the trauma suffered during an entanglement can reduce the chances a whale will reproduce.[3] Females that have suffered a severe entanglement "are significantly less likely to calve again."[4]

As NMFS has recognized, both the rate and severity of entanglements have increased in recent years.[5] For example, NMFS determined in 2018 that 26 percent of the right whale population is entangled each year, that the risk of an entanglement is increasing at a rate of 6.3 percent per year, and that the impacts of entanglement events on individual whales have become more severe over the last few years as U.S. fisheries have moved further offshore.[6] The increase in the frequency and severity of entanglements has coincided with the sharp population decline, reduced calving rates, and an Unusual Mortality Event unprecedented in modern times.[7] Deaths now outpace births three to two.[8]

According to the Draft BiOp, an astonishing 201 right whales were killed from 2010–2019. Draft BiOp at 225.[9] But the true death toll is likely even higher, according to a recently-

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[1] 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. 17, 2021).

[2] *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 lifehistory stage in large whales. Ecology and Evolution, 7: 92–106, doi:10.1002/ece3.2615; Cassoff R.M., Moore K.M., McLellan W.A., Barco S.G., Rotstein D.S., Moore M. 2011. Lethal entanglement in baleen whales. Dis. Aquat. Org. 96: 175−185.

[3] *See, e.g.*, Julie van der Hoop, et al. 2016.

[4] *Id.*

[5] 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 2, 8–9 (hereinafter "Right Whale Recovery Tech Memo"); *see also* Kraus, S., R. Kenney, C. Mayo, W. McLellan, M Moore and D. Nowacek. 2016 Recent Scientific Publications Cast Doubt on North Atlantic Right Whale Future. Frontiers in Marine Science. Opinion. August 17, 2016.

[6] Right Whale Recovery Tech Memo at 1, 2, 4, 10.

[7] NMFS, 2017–2021 North Atlantic Right Whale Unusual Mortality Event.

[8] Anderson Cabot Center, Right Whale Consortium Releases 2020 Report Card Update (Nov. 9, 2020), https://www.andersoncabotcenterforoceanlife.org/blog/2020-narwc-report-card; Pettis, H.M., Pace, R.M. III, Hamilton, P.K. 2021. North Atlantic Right Whale Consortium 2020 Annual Report Card. Report to the North Atlantic Right Whale Consortium.

[9] *See* Pace, R. M. III et al. 2021. Cryptic mortality of North Atlantic right whales. Conservation Science and Practice. e346.

published study that concludes only 29% of right whale mortalities were detected from 2010–2017. As that study also finds—and as NMFS has also acknowledged in the Draft BiOp—unobserved mortalities are far more likely to have resulted from entanglements than from vessel strikes.

Entanglements in commercial fishing gear are no longer simply impeding the recovery of this critically endangered species but are actively driving it towards extinction at an accelerating rate. The right whale's dire status and the increasing frequency and severity of entanglements have led NMFS to declare that protecting every individual is a top priority, and that the species "extinction is almost certain in the immediate future" absent swift intervention to reduce threats to the species.[10]

Yet the Draft BiOp fails to conduct the careful, probing analysis required or require adequate mitigation measures that the ESA demands. The Draft BiOp—and the inadequate proposed amendments to the Atlantic Large Whale Take Reduction Plan ("ALWTRP" or "Plan") that the Draft BiOp purports to analyze—will, if finalized as written, deprive right whales of important protections to which they are legally entitled and desperately need.

At the very least, NMFS must use its emergency rulemaking authority under the Marine Mammal Protection Act, 16 U.S.C. § 1387(g), to implement immediate measures to protect right whales from suffering further deaths and serious injuries from entanglements in commercial fishing gear while NMFS works to develop a long-term solution to the entanglement problem afflicting this species. Indeed, new information that has come to light in the short time since NMFS issued the Draft BiOp, including an observed serious injury of a right whale off Georgia due to an entanglement, only highlights the urgent need for NMFS to act as the law requires and the species' plight demands.

I. The Draft BiOp Improperly Limits the Agency Action, the Action Area, and the Effects of the Action under Review

The Draft BiOp fails to appropriately define the agency action, the action area, and the effects of the action under review. Each of these failures means that the draft has not properly evaluated the impacts of the full suite of actions requiring consultation on ESA-listed species, particularly the right whale. NMFS must address and rectify these errors before finalizing the biological opinion.

A. The Draft BiOp Improperly Defines the Agency Action

The Draft BiOp's definition of the agency action under consultation manages to be simultaneously overinclusive and underinclusive. As a result, the Draft BiOp fails undertake

[10] 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).

the meaningful, data-driven analysis of the full scope of the effects of these actions that the ESA requires.

The ESA's implementing regulations define "action" as:

> [A]ll activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas. Examples include, but are not limited to:
>
> (a) actions intended to conserve listed species or their habitat;
> (b) the promulgation of regulations;
> (c) the granting of licenses . . . [or] permits []; or
> (d) actions directly or indirectly causing modifications to the land, water, or air.

50 C.F.R. § 402.02.

The Draft BiOp identifies three separate components of the "proposed action."

First: the authorization of ten federal fisheries NMFS authorizes and manages under the Atlantic Coastal Fisheries Cooperative Management Act ("ACA"), 16 U.S.C. §§ 5101–5108, and the Magnuson-Stevens Fishery Conservation and Management Act ("MSA"), *id.* §§ 1801–1884, including (1) American lobster, (2) Atlantic bluefish, (3) Atlantic deep-sea red crab, (4) Jonah crab, (5) mackerel/squid/butterfish, (6) monkfish, (7) Northeast multispecies, (8) Northeast skate complex, (9) spiny dogfish, and (10) summer flounder/scup/black sea bass. Draft BiOp at 22.

As part of the effects analysis for this first component of the proposed action, NMFS includes (a) the effects of changes in the operations of these federal fisheries in federal waters only as modified by the proposed ALWTRP measures, and (b) the effects of vessels transiting through state and federal waters to the federal fishing grounds. *Id.*

Second: the Framework that establishes a schedule of rulemakings, of which the current proposal to amend the ALWTRP is the first, to take place over the next decade "to further reduce M/SI in the federal fisheries." *Id.* at 23–26.

Third: the post hoc consultation on the New England Fishery Management Council Omnibus Essential Fish Habitat Amendment 2 ("Habitat Amendment") and related measures. *Id.* at 27–29.

NMFS has framed these actions (and, as a result, the action area and effects of the action) unlawfully. First, it is improper and overinclusive for NMFS to characterize its action under the Marine Mammal Protection Act ("MMPA") as the ten-year Framework for three to four phases of rulemaking, of which the current proposed ALWTRP amendments are only the first phase. Second, it is improper and underinclusive for NMFS to exclude the effects the Plan as proposed to be amended in state waters, where NMFS regulates state fisheries subject to the Plan under the MMPA.

As shown below, properly framed, the three actions that NMFS must analyze in this biological opinion are: (1) the Plan as amended by the proposed measures as implemented in both state and federal waters to regulate commercial fishing for the protection of marine mammals pursuant to the MMPA; (2) NMFS's ongoing authorization and management of federal fisheries, as modified by the proposed ALWTRP measures; and (3) the already-finalized Habitat Amendment.[11]

1. The Agency Action is Overinclusive Because the Framework Itself Is Not an Agency Action and Cannot Form the Basis for a Reasoned No Jeopardy Conclusion on the North Atlantic Right Whale

The Draft BiOp improperly defines the Framework as one of the three agency actions under consultation. NMFS characterizes the proposed ALWTRP amendments as the first of the agency's projected three to four phases of separate rulemakings over the next five to ten years that will purportedly reduce the annual average of mortality and serious injury ("M/SI") in the federal fisheries to ensure against jeopardy do not jeopardize the right whale. Draft BiOp at 23–25; *see id.* at 23 ("The Framework will further modify how the federal fixed gear fisheries operate and, as such, these changes are considered as part of the proposed action.").

But the Framework is not itself an agency action. It sets only timeframes for future rulemakings and targets for the success rates these rulemakings must achieve to bring NMFS into compliance with the ESA—which, as it admits explicitly, the proposed ALWTRP measures on the table now cannot do:

> Once the ALWTRP measures are implemented, NMFS estimates that, without further action, the federal fisheries are anticipated to result in the death of approximately an annual average of 2.2 right whales (22 right whales over a 10-year period). Our analyses indicate that further reductions in entanglements and M/SI in the federal fisheries under this Conservation Framework are needed to ensure the fisheries will not appreciably reduce the likelihood of the survival and recovery of the species as required by the ESA.

Framework at 3; *see also id.* at 4 ("With no further reduction in M/SI [above that from the proposed ALWTRP measures], our analyses indicate the federal fisheries are impacting the survival and recovery of right whales."). But NMFS cannot substitute the Framework as the action under analysis and presume future benefits from future actions simply because it cannot otherwise avoid a jeopardy conclusion on the proposed action actually in front of it.

[11] For the first action, the Greater Atlantic Regional Fisheries Office ("GARFO"), through its Protected Resources Division, is the "action agency" for ESA section 7(a)(2) purposes, while GARFO's Sustainable Fisheries Division is the "action agency" for the second and third actions. For all three actions, GARFO's Protected Resources Division is the "consulting agency."

Distilled to its essence, the Framework consists of two elements: (1) a schedule for future rulemakings, and (2) a projection of the necessary quantitative reductions in right whale M/SI in the federal fisheries that NMFS states it must achieve to avoid jeopardy. But neither the schedule of rulemakings nor the presumed future benefits of these rulemakings is sufficiently certain to occur. (And as explained below NMFS may not lawfully exclude M/SI in state fisheries regulated by the ALWTRP from its jeopardy analysis anyway.)

First, despite its statement of "commitment," NMFS cannot guarantee that rulemakings for Phases 2 through 4 will occur at all, let alone occur on the Framework's schedule. The Framework, developed in the last administration (as was this Draft BiOp), does not bind the present administration to follow through on this "commitment" to implement a Phase 2 rule on gillnet fisheries in 2023. Nor can the Framework bind the next two administrations that will hold office from 2025–2029 and 2029–2033 when Phase 3 and 4 rulemakings are scheduled to occur.

Even assuming the Framework could commit NMFS to a rulemaking schedule, the history of the ALWTRP belies the notion that the agency will actually meet the schedule's deadlines. In the current rulemaking alone, every time the agency has publicly represented that it would complete this rulemaking by a date certain, it has not even come close. The same is true for past ALWTRP rulemakings, which dragged on for years until litigation forced the agency to act, as illustrated by the 2007 and 2014 Plan Amendments. And even when NMFS has ultimately issued final ALWTRP amendments, it often establishes extended timeframes before regulatory changes take effect, meaning there are often no changes on the water until many months after the rule is published. NMFS is in no position to promise completed rulemakings by dates certain, let alone assume any benefits from future rulemakings will accrue soon enough to meet the agency's scheduled evaluation periods.[12]

Second, NMFS's projected risk reduction targets to be achieved from Phases 2 through 4 are no more than wishful thinking. The Framework presents no information to undergird its conclusions that future rulemakings can, in fact, hit their risk reduction targets. As NMFS repeatedly states, the Framework does not establish specific measures for each rulemaking to prescribe how each will modify fixed gear fisheries in any way that this consultation can analyze meaningfully, let alone make a rational connection between those future rulemakings and the specified risk reduction targets.[13]

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[12] Indeed, the 2014 Biological Opinion stated that it would not expect to see effects in the right whale population estimates of the 2009 sinking groundline ALWTRP amendments and the 2008 vessel speed rule for some time and predicted it would take at least five more years to see any benefit from the 2014 vertical line rule. 2014 Biological Opinion at 147–48. It is pure fantasy here for NMFS to assume that it will have any meaningful data of the effectiveness of this proposed rulemaking and the 2023 gillnet rulemaking available by 2023–2024 sufficient to ensure the 2025 rulemaking—only four years away—meets the agency's risk reduction target.

[13] *See, e.g.*, Draft BiOp at 23 ("The Framework identifies the level of reductions in mortalities and serious injuries (M/SI) that NMFS is committed to achieve in order to meet its mandates (Table 2). At this time, the Framework does not specify particular measures to allow NMFS to consider input on these measures."); *id.* at 230–32 (identifying "general measure"); Framework, at 1 ("The Conservation

The history of the ALWTRP shows that NMFS's track record in predicting risk reductions to be achieved by past ALWTRP amendments justifies no confidence in its ability to predict that future amendments will achieve their risk reduction goals. In 2014, for example, a paper published by NMFS scientists at the Northeast Fisheries Science Center evaluating the effectiveness of ALWTRP from 1999 to 2009 found "no evidence to suggest that the frequency of entanglements or entanglement-related mortality substantially abated" over that time period; indeed, entanglement events became more frequent through the study period.[14]

In its 2014 Biological Opinion on the federal fisheries as modified by the 2014 Plan Amendments, based on data from 2007–2011, NMFS predicted that M/SI from entanglements in U.S. fisheries or fisheries of unknown origin presumptively attributed to the U.S. would be no more than 3.25 right whales on a five-year average basis.[15] It also assumed that it would take at least five years following the 2014 rule to start seeing the benefits of the trawling-up requirements. Seven years later, the current Draft BiOp now attributes an annual average of 6.724 M/SI to U.S. fisheries from 2010 to 2019, even only attributing half of entanglements in gear of unknown origin to the U.S. Draft BiOp at 225–26. Even the accuracy of this new estimate is now suspect given the best available data that rates of cryptic mortality over this time period were higher than previously thought.

Not only was the 2014 Biological Opinion wrong in predicting that risk reductions from the 2014 Rule would start to show up in the data by 2019, but as we now know, M/SI attributable to U.S. fisheries over that time period was much higher than the agency's previous assumption. NMFS has no credible basis to assert that the Framework's future rulemakings will have any better success in hitting the agency's stated targets than its past rules have.

Moreover, where the Framework's 60% risk reduction target for the current rulemaking is already demonstrably inadequate to the task of bringing M/SI below PBR and avoiding jeopardy, the Framework's risk reduction targets for future rulemakings are meaningless. The proposed ALWTRP amendments explain that NMFS established the 60% risk reduction target for premised on a PBR of 0.9 and on assigning 50% of the observed entanglements of unknown origin from 2009—2018 to the U.S. fisheries. 85 Fed. Reg. 86,878, 86,880 (Dec. 31,

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Framework does not specify particular measures but identifies the level of reductions in mortalities and serious injuries (M/SI) that NMFS is committed to achieve in order to meet its ESA mandates."); *id.* at 4 ("The Conservation Framework describes the targets to be achieved and the dates by which they must be implemented to ensure the Framework's goals are achieved. At this time, the Conservation Framework does not specify the specific measures that will be implemented. When developing measures at each phase, we will be able to consider gear innovations, ALWTRT actions, fishing and shipping changes, and evidence of impacts of U.S. and Canadian right whale conservation."); *id.* at 7 ("As described above, this Conservation Framework specifies targets rather than particular measures to be implemented.").

[14] Pace, R.M. III, et al. 2014. Incremental fishing gear modifications fail to significantly reduce large whale serious injury rates. Endang Species Res. Vol. 26:115-126, doi: 10.3354/esr00635.

[15] NMFS, Endangered Species Act Section 7 Consultation on the Continued Implementation of Management Measures for the American Lobster Fishery, Consultation No. NER-2014-11076 (July 31, 2014) at 145.

2021). The Draft Environmental Impact Statement further explains the assumptions underlying this risk reduction target,[16] including an estimate that 40% of mortalities between 2010 and 2018 were unobserved.[17]

The newly-published Pace et al. 2021 paper, however, finds that 71% of mortalities between 2010 to 2017 were unobserved. And as NMFS is well aware, 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.[18] The 60% risk reduction targets the Framework establishes for Phases 1 and 2 are thus terminally outdated. By contrast, NMFS does not explain how it derived the risk reduction targets for Phases 3 and 4, but to the extent they rely on the outmoded 60% risk reduction target for the first two phases, they too are unreliable.

This illustrates the problem of establishing quantitative risk reduction targets years in advance of developing and implementing appropriate management measures, when the science and data are moving faster than the agency's risk reduction target-focused rulemaking process can keep up with. Nearly two years after the April 2019 ALWTRT meeting at which NMFS established the 60% risk reduction target for the current rulemaking to meet, with months to go before the agency finalizes the Plan amendments and more months still before they take effect, it is painfully clear that NMFS is still trying to navigate forward by looking only in the rearview mirror. NMFS has no credible basis to assert that the Framework's risk reduction targets established now for future rulemakings will be adequate to the task as shown by future science and data, let alone build an entire jeopardy analysis around them.

Finally, unlike the proposed ALWTRP amendments, the ongoing authorization and management of the ten federal fisheries, and the Habitat Amendment, the Framework does not "propose" to do anything now with respect to Phases 2 through 4 that will change the operations of fisheries in state and federal before those rulemaking phases actually occur. Nothing in Phases 2 through 4 currently has effects that are "reasonably certain to occur." *See* 50 C.F.R. § 402.02 ("effects of the action" are consequences caused by the proposed action that are reasonably certain to occur); *see also id.* § 402.17(b) ("[a] conclusion of reasonably certain to occur must be based on clear and substantial information"). Only if and when NMFS actually proposes new amendments to the ALWTRP in Phases 2 through 4 will it propose "actions" that may affect listed species and will require full formal consultations of their own.

In sum, NMFS may not bootstrap the Framework's aspirational goals of reducing M/SI to right whales to specified levels in future rulemakings over the next decade into an "action" with specific "effects" that incorporates the proposed ALWTRP measures as simply Phase 1 of a four-phase plan, thereby minimizing and offsetting the effects of the proposed ALWTRP measures and the ongoing operations of the fisheries themselves. The Draft BiOp's entire

[16] NMFS, Draft Environmental Impact Statement for Amending the Atlantic Large Whale Take Reduction Plan: Risk Reduction Rule, Dec. 30, 2020, Vol. I, at 2-37—2-40 (hereinafter "DEIS").

[17] *Id.* at 2-39 (citing Pace, R., pers. comm).

[18] 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.

jeopardy analysis is premised on a fiction. NMFS must revise the Draft BiOp to omit the Framework entirely and focus as the ESA requires it to do only the only proposed actions on the table—the authorization of the federal fisheries, the proposed ALWTRP amendments (across all relevant state and federal fisheries), and the Habitat Amendment, and do so based on the best available scientific data.

2. The Agency Action is Underinclusive Because It Does Not Consider the ALWTRP, Including the Proposed Amendments, as an Action with Effects in Both State and Federal Waters

With respect to fisheries impacts on right whales, the Draft BiOp improperly limits the agency action to NMFS's authorization of ten federal fisheries and disclaims any responsibility for state fisheries: "As NMFS does not authorize, fund, or carry out fishing activities in state waters, these activities are not considered part of the proposed action in this Opinion. Consequently, this Opinion is evaluating effects from fishing activities (i.e., entanglement/bycatch) by vessels with federal permits in federal waters only." Draft BiOp at 22.

Similarly, with respect to the proposed rule to amend the ALWTRP, the Draft BiOp states that only "[c]hanges in the operation of these [federal] fisheries resulting from the proposed ALWTRP measures are included in our analysis in this Opinion." *Id.* For the proposed ALWTRP amendments, NMFS considers these changes to be part of the proposed action only insofar as "how the proposed measures will alter the [federal] fisheries in this opinion." *Id*. at 25.

The Draft BiOp's unduly narrow definition of the agency action improperly excludes the proposed ALWTRP measures that will govern the operations of the northeast commercial lobster and crab trap/pot fisheries in both state and federal waters. *See* 85 Fed. Reg. 86,878 (Dec. 31, 2020). But the final regulation amending the ALWTRP is an independent agency action and the agency must consult on the full range of its effects irrespective of whether they occur in state or federal waters. Similarly, NMFS's ongoing management and authorization of other state fisheries that are subject to the ALWTRP, but not subject to the proposed Plan amendments, are also ongoing agency actions on which NMFS must consult.

Section 118 of the MMPA requires NMFS to develop a "take reduction plan" for Category I and II fisheries that interact with "strategic stocks," including ESA-listed marine mammals. 16 U.S.C. §§ 1387(f)(1), 1362(19)(C). Each take reduction plan must contain regulatory measures to reduce fishery-related mortality and serious injury to below the species' potential biological removal level ("PBR")[19] within six months of the plan's implementation. *Id*. § 1387(f)(2), (f)(5)(A), (f)(7)(F).[20] The MMPA plainly does not limit the application of take

[19] "Potential biological removal" means "the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population." 16 U.S.C. § 1362(20).

[20] The "long-term goal" of the plan must be to reduce bycatch levels to the "zero mortality and serious injury rate" within five years. *Id*. § 1387(f)(2). The MMPA requires NMFS to amend a take reduction plan as necessary to meet these goals.

reduction plan regulation to federal fisheries. The statute's take prohibition applies to any person or vessel subject to the jurisdiction of the United States irrespective of whether the take occurs in federal or state waters or on the high seas. *Id*. §§ 1372(a)(1), (a)(2)(A). NMFS has exclusive jurisdiction to authorize the incidental take of marine mammals in commercial fisheries, irrespective of whether those fisheries are prosecuted in state or federal waters. *Id*. §§ 1371(a)(5)(E), 1387(f).

The proposed ALWTRP measures are clearly actions "intended to conserve listed species."[21] By the plain language of the ESA's implementing regulations, NMFS is not excused from complying with section 7(a)(2) in promulgating or amending a take reduction plan simply because the plan is expected to reduce mortality of an endangered marine mammal. *See* 50 C.F.R. § 402.02 (defining action); *see also Cooling Water Intake Structure Coal. v. EPA*, 905 F.23d 49, 81 (2d Cir. 2018) ("Consistent with the ESA's goal of 'conserv[ing] endangered species and threatened species, 16 U.S.C. § 1531(c)(1), the relevant inquiry is whether the action causes jeopardy or adverse modification, period—not whether it provides 'incremental improvements' that make conditions 'slightly less harmful' to a species but still reduce the likelihood of survival and recovery for that species." (citing *Alcoa v. BPA*, 175 F.3d 1156, 1162 n.6 (9th Cir. 1999)).

The proposed ALWTRP measures also constitute regulations promulgated by NMFS to authorize incidental take of marine mammals by Category I and II commercial fisheries in U.S. waters (both state and federal). NMFS may not exclude the proposed ALWTRP measures to be implemented in state waters from the scope of the consultation based on a convenient fiction that its federal fisheries authorities restrict it solely to regulating only that incidental take of ESA-listed marine mammals that occurs in federal waters by federally-permitted vessels. Although NMFS generally lacks jurisdiction to regulate state fisheries in state waters under the ACA[22] or the MSA, the MMPA gives NMFS full authority to promulgate fishing regulations to regulate

[21] Table 1, Draft BiOp at 19, on the history of formal consultations completed on fishery management plans or marine mammal take reduction plans, indicates that NMFS has only ever completed formal consultation on the ALWTRP once, in 1997. NMFS's past failures to complete formal consultation on its actions amending the ALWTRP notwithstanding, NMFS may not avoid its obligation to do so here.

[22] Note, however, that NMFS regulates fishing federal limited access permits issued pursuant to the American Lobster Fishery Management Plan under ACA in both state and federal waters. Federal fisheries regulations, including those of the ALWTRP, are binding on federal permit holders regardless of whether they fish in federal or state waters, although these permit holders remain subject to applicable state and local requirements as well. 50 C.F.R. § 697.4(b) (citing 50 C.F.R. pt. 229). If federal or state management measures differ, the more restrictive applies. *Id.* Thus, even considering only its ACA authority to authorize and manage lobster fishing in federal waters, NMFS must include within the scope of its action fishing in state waters by vessels with federal limited access lobster permits.

marine mammal incidental take that apply to commercial fisheries regardless of where they are prosecuted.[23,24]

Under the MMPA, NMFS authorizes marine mammal incidental take by vessel owners participating in any Category I or II commercial fishery who have duly registered[25] and who comply with applicable take reduction plan regulations. *Id*. §§ 1387(c)(2)(A); 1387(c)(3); 50 C.F.R. § 229.4(a)(1), (b). Additionally, each owner must comply with reporting requirements and "any applicable take reduction plan and emergency regulations" established by NMFS. 16 U.S.C. § 1387(c)(3)(A)(iii)–(iv); 50 C.F.R. § 229.4(f), (k). These requirements apply to all fishing vessels in the commercial fishery to which the Plan applies, irrespective of whether the fishing vessel operates in state waters, federal waters, or both, unless the applicable Plan explicitly exempts them. *See, e.g.*, 50 C.F.R. § 229.32(a)(2)(i) (applying ALWTRP regulations to all U.S. waters in the Atlantic except for areas exempted in paragraph (a)(3)).

The ALWTRP regulations specify how, where, and when fishing vessels and operators subject to the Plan may fish in both state and federal waters. *See, e.g.*, 50 C.F.R. §§ 229.32(b) (establishing gear marking schemes for different areas); 229.32(c) (establishing general, area-specific, and seasonal gear restrictions). Both the MMPA and its implementing regulations prohibit fishing in violation of these restrictions, 16 U.S.C. § 1372(a)(5), 50 C.F.R. § 229.3(i), or even owning, operating, or being on board a vessel subject to the ALWTRP unless that vessel and its gear comply with those regulations. 50 C.F.R. § 229.3(h).

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[23] NMFS's current position that it lacks authority to regulate fishing in state waters, Draft BiOp at 22, flatly contradicts its previous statements in first promulgating the ALWTRP in 1997. There, NMFS specifically rejected an argument that its authority to regulate the incidental take of marine mammals in commercial fisheries is limited to federally licensed and regulated marine fisheries:

> The MMPA grants legal authority to NMFS to regulate any vessel allowed to engage in commercial fishing in all U.S. waters, including both state and Federal waters. . . . The MMPA's legal authority applies without regard to whether a fishery occurs in state waters or Federal waters. Section 118 of the MMPA does not make a distinction between Federal or state fisheries but applies to any fishery that interacts with marine mammal stocks.

62 Fed. Reg. 39,157, 39,170 (July 22, 1997).

[24] The ESA also provides NMFS with authority to regulate fishing in state waters for the protection of listed species. 16 U.S.C. § 1540(f). For example, NMFS promulgated the ALWTRP regulations governing the state and federal waters in the Southeast Restricted Area, 50 C.F.R. § 229.32(f), under the authority of both the ESA and the MMPA. 79 Fed. Reg. 36, 586, 36,610 (June 27, 2014).

[25] *See* NMFS, Marine Mammal Authorization Program, available at https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-authorization-program ("If you own a commercial fishing vessel or non-vessel gear that operates in a ***Category I or II fishery***, you must obtain a marine mammal authorization certificate each year from NOAA Fisheries or its designated agent. This certificate legally authorizes you to incidentally take a marine mammal in a commercial fishery.").

The proposed ALWTRP measures will prescribe additional restrictions on how, where, and when lobster vessels may fish in state waters, irrespective of whether they are also permitted to fish in federal waters. *See id*. § 229.32 (ALWTRP); *see also* 85 Fed. Reg. at 86,891–900 (proposed measures); Draft BiOp at 185 ("The regulatory component of the Plan includes a combination of broad fishing gear modifications and time area restrictions . . . . Revisions are made to the Plan by implementing regulations as new information and technology becomes available."); *id.* at 185–87 (summarizing Plan regulatory measures). Because NMFS "authorizes" via the Marine Mammal Authorization Program ("MMAP") fishing activities in state waters under the ALWTRP, it therefore must consult on the proposed amendments to the Plan as well as its ongoing authorization of other fisheries via the existing Plan regulations and MMAP.[26]

In NMFS's recent 2021 List of Fisheries, it maintains the listing of the Northeast/Mid-Atlantic American lobster trap/pot fishery as a single Category I fishery. 86 Fed. Reg. 3028, 3046 (Jan. 14, 2021). NMFS explicitly addressed and rejected comments from the Maine Lobstermen's Association seeking to separate out and reclassify the Maine lobster fishery, *id.* at 3035–36; it treated a similar request from the Massachusetts Division of Marine Fisheries for Massachusetts state waters the same way. *Id.* at 3037–38.

Just as NMFS denied requests from state fishing interests and a state fishery management agency to separate out and recategorize their respective state fisheries, it must also recognize that it cannot separate out the federal components of this Category I fishery as regulated by the proposed amendments to the ALWTRP for separate analysis at the behest of federal fisheries managers. The ALWTRP is a single set of federal regulations governing the activities of this Category I fishery in both state and federal waters and must be recognized and analyzed as such. Similarly, NMFS cannot separate out its ongoing authorization of other fisheries in state waters under the ALWTRP and MMAP for the same reason.

Take reduction plan regulations promulgated under 16 U.S.C. § 1387(f) are no different than regulations or authorizations issued under 16 U.S.C. §§ 1371(a)(5)(A)(i), 1387 (a)(5)(D), or 1387(a)(5)(E). Under both sections, NMFS may authorize the incidental take of marine mammals, provided certain standards are met and subject to permissible methods of taking. Under both sections, whenever such authorizations may affect ESA-listed species, NMFS must comply with its ESA section 7(a)(2) obligations.

The Draft BiOp here (and the agency's past biological opinions that consistently failed to consult on ALWTRP amendments as agency actions in their own right) stands in marked contrast to NMFS's practice in consulting on ESA regulations governing the incidental take of sea turtles in

[26] It is irrelevant that NMFS has not previously authorized the lethal incidental take of ESA-listed large whales such as the North Atlantic right whale and will not do so here either. Through the MMAP program, NMFS authorizes the incidental take of the Gulf of Maine DPS of humpback whale and the Canadian east coast stock of minke whale by vessels engaged in the Category I fishery who register and comply with the ALWTRP requirements. This authorization therefore triggers the ESA consultation requirement for all listed species and critical habitats in state waters potentially affected by fishing activities subject to regulation by the proposed ALWTRP measures.

shrimp trawls and the authorization and management of shrimp fisheries in the southeast. In the most recent (but soon to be superseded) biological opinion, completed in 2014, NMFS consulted on the continuation of two actions: (1) conserving sea turtles via its sea turtle conservation regulations, that exempt incidental take under specific conditions; and (2) authorizing shrimp trawling under the federal South Atlantic and Gulf of Mexico Shrimp FMPs under the MSA.[27] That consultation did not limit itself to the effects of the sea turtle conservation regulations in the federal fisheries, however, but analyzed their effects in state waters as well:

> NMFS's sea turtle conservation regulations under the ESA apply to all shrimp trawlers, wherever they occur. They apply in federal waters (i.e., the Gulf and South Atlantic EEZ), where NMFS authorizes shrimp trawling via two federal fishery management plans under the MSFCA, and in state waters, where fisheries are authorized by respective state agencies. Unlike NMFS's authority to manage fisheries under the Magnuson Stevens Act, NMFS's authority to conserve listed species under the ESA is not restricted to federal waters. . . . Thus, although NMFS does not authorize state fisheries, NMFS, in implementing the sea turtle conservation regulations, does mandate that those state-authorized fisheries comply with the sea turtle conservation regulations [affecting how shrimp trawlers may fish] and provides an exemption from the Section 9 prohibitions that would otherwise apply to sea turtle species.[28]

There is no meaningful distinction between ESA sea turtle conservation regulations and MMPA take reduction plan regulations. Both regulate how state and federal fisheries subject to their requirements may operate and receive authorization to take federally-protected species irrespective of where the fishery operates or which agency has jurisdiction over the management of the fishery resource itself. NMFS must treat the proposal to amend the ALWTRP and its ongoing authorization of state and federal fisheries under the ALWTRP and MMAP the same way—by consulting on it as an agency action.

No matter how longstanding, NMFS's crabbed view of its authority to regulate commercial fishing in state waters under the MMPA is inconsistent with the law and its own statements, both past and present.[29] NMFS must correct this legal error—and all of the legal errors that flow from

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[27] *See* NMFS, Reinitiation of Endangered Species Act (ESA) Section 7 Consultation on the Continued Implementation of the Sea Turtle Conservation Regulations under the ESA and the Continued Authorization of the Southeast U.S. Shrimp Fisheries in Federal Waters under the Magnuson-Stevens Fishery Management and Conservation Act (MSFMCA), Consultation No. SER-2013-12255 (Apr. 18, 2014), https://media.fisheries.noaa.gov/dam-migration/shimpbo_2014.pdf.

[28] *Id.* at 35 (defining action area as both Gulf and South Atlantic EEZ and adjacent marine and tidal state waters).

[29] The agency's outreach guides, published to assist fisheries participants subject to the ALWTRP understand how the regulations apply to them, demonstrate the specifics of ALWTRP requirements in various state waters. *See, e.g.*, NMFS, Atlantic Large Whale Take Reduction Plan, Northeast Trap/Pot

it—before concluding formal consultation and issuing a final biological opinion by defining the proposal to amend the ALWTRP as an agency action to be consulted on and by considering the full range of the effects of this proposal in both state and federal waters.

B. The Draft BiOp Arbitrarily Limits the Action Area and Effects of the Action to Federal Waters

Because NMFS has improperly restricted the scope of the action subject to consultation, it has also improperly defined the action area. Draft BiOp at 68 ("For the purposes of this Opinion, the action area encompasses the area in which the ten [federal] fisheries operate, broadly defined as all U.S. EEZ waters from Maine through Key West, Florida. This includes state waters (0 to 3 nautical miles) as vessels fishing in the federal fishery transit to the fishing grounds through these waters.").

As explained above, NMFS must consult on the full range of the effects the proposed measures to amend the ALWTRP and its ongoing management and authorization of other fisheries subject to the ALWTRP in both state and federal waters. Therefore, it must redefine the action area to encompass not only the federal waters in which federal fisheries operate but also the state waters in which NMFS regulates fisheries subject to the ALWTRP's requirements. Here, because NMFS's proposed MMPA action is to amend the ALWTRP regulations that govern the northeast commercial lobster and crab trap/pot fisheries in both state and federal waters, all state waters in which these fisheries operate are part of the action area. Additionally, because NMFS continues to authorize and manage other fisheries subject to the ALWTRP in both state and federal waters, all state waters in which these fisheries operate are also part of the action area. Relatedly, NMFS must consult on the effects of fishing vessel transits and the risks of vessel strikes from both federally permitted vessels transiting to the federal fishing grounds and vessels regulated by the ALWTRP operating only in state waters.

Similarly, NMFS has improperly limited the "effects of the action," or "all consequences to listed species or critical habitat that are caused by the proposed action," 50 C.F.R. § 402.02, section of its analysis. It has inappropriately failed to consider the effects of fishing in state waters that will be regulated by the proposed ALWTRP amendments as well as the effects of fishing in state waters under the unchanged aspects of the Plan as part of the effects of the action.

The Draft BiOp acknowledges that right whales are susceptible to entanglement in pot/trap and gillnet gear, and that any part of the gear (buoy line, groundline, floatline, and surface system line) creates an entanglement risk that can injure or kill a right whale. *See, e.g.*, Draft BiOp at 168. The Draft BiOp estimates that right whales are killed or seriously injured every year in state fisheries, yet it fails to consider these impacts as part of the effects of the action. *Id.* at 169 (emphasis added); *see also id.* ("There are state fishery components of the Northeast sink gillnet, Northeast/mid-Atlantic lobster trap/pot, and the Atlantic mixed species pot/trap."). As

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Fisheries Requirements and Management Areas, https://media.fisheries.noaa.gov/dam-migration/northeast_trap_pot___2018_alwtrp.pdf; NMFS, Atlantic Large Whale Take Reduction Plan, Supplements, https://media.fisheries.noaa.gov/dam-migration/all_supplements_2018_alwtrp.pdf.

NMFS manages and authorizes these fisheries under the ALWTRP and MMAP,[30] NMFS must appropriately categorize them in the baseline and describe their effects under effects of the action rather than cumulative effects.

After correcting its description of the agency action and the action area, NMFS must revise its effects of the action analysis to include the effects of the proposed ALWTRP measures and its continuing authorization of other fisheries under the existing ALWTRP regulations and MMAP on listed species and critical habitat in both state and federal waters to which these measures will apply.[31]

II. NMFS Must Use the Best Available Scientific Data on the Effects of the Fisheries in Both State and Federal Waters

NMFS is obligated to use the best available scientific data in describing and evaluating the effects of entanglements on right whales. The Draft BiOp's effects description is incomplete and does not apply the best available scientific data. As a result, its effects analysis and integration/synthesis of effects are irredeemably flawed and cannot be carried forward to the final biological opinion.

First, as a matter of law, NMFS may not lawfully exclude right whale entanglements in state fisheries that are subject to the ALWTRP's requirements. *See supra*, Section I; Draft BiOp at 216, 227. Further, as a matter of scientific data, the entire MMPA section 118 process for categorizing the Category I and II fisheries in both state and federal waters that are subject to the ALWTRP makes no such arbitrary distinctions because NMFS recognizes that it cannot distinguish by political jurisdiction the risks posed by trap/pot fisheries. In the 2021 List of Fisheries ("LOF"), NMFS found that gear used in the state and federal lobster trap/pot fishery in the northeast and mid-Atlantic is functionally equivalent; that the "sample size of recovered gear from entanglements is small and much of the retrieved gear is unmarked and cannot be attributed to a particular location;" that current gear marking systems are wholly inadequate to determine relative entanglement risks in state vs. federal fisheries; that it is likely that entanglements occur in areas where they have not yet been observed or reported; that "entanglement data indicate that the gear used across this fishery remains a risk to right whales." 86 Fed. Reg. at 3036–37.

It is fundamentally irrational for NMFS to determine on the one hand that the data available on entanglements cannot be used to exclude particular state fisheries from the overall Category I

[30] *See, e.g.*, NMFS, Atlantic Large Whale Take Reduction Plan: Mid-Atlantic Trap/Pot Fisheries Requirements and Management Areas at 4, available at https://media.fisheries.noaa.gov/dam-migration/mid_atlantic_trap_pot_2018_alwtrp.pdf.

[31] Among many other fatal flaws in the jeopardy analysis, as described below, it was arbitrary for NMFS not to include the effects of the state fisheries as managed by the ALWTRP in the "without fisheries" scenario of its state-space mark-recapture model projecting population trajectories under scenarios with and without the proposed action. Draft BiOp at 330–38. Regardless, the entire modeling exercise was purely academic because it was built on unlawful definitions of the proposed action, unfounded assumptions about the efficacy of the proposed ALWTRP measures and the Framework, and outdated data on estimated M/SI in the U.S. fisheries.

determination for section 118 purposes, but on the other to apply the Decision Support Tool—that does not take into account all the uncertainties on the origins of entanglements that NMFS points out in the LOF—to apportion M/SI entanglements in U.S. trap/pot gear between state and federal fisheries on a 73/27 percentage split.[32] The final biological opinion must fully account for 100% effects of all right entanglements in state and federal fisheries managed by the ALWTRP and may not relegate state fisheries impacts to the cumulative effects section.

Second, in estimating future lethal right whale entanglements, the Draft BiOp relies on data from 2010 to 2019 of 112 confirmed right whale entanglements, 49 of which resulted in M/SI. *Id.* at 222. But the Draft BiOp then counts only entanglements that result in mortality or serious injury determinations, *id.* at 223, excluding all observed entanglements that were not determined to have resulted in M/SI. This decision arbitrarily contradicts NMFS's own statements in the 2021 List of Fisheries "there have been a number of life-threatening entanglements since 2010 that have resulted in a non-serious injury due to disentanglement intervention. (Henry *et al*., 2019)." 86 Fed. Reg. at 3036. These cases "that would have been serious injuries prior to disentanglement are not counted against PBR in the SAR, but they are included in the recorded takes for the LOF and associated management measures." *Id.* It is arbitrary and irrational for the agency to include these cases for purposes of the LOF but exclude them for purposes of the ESA consultation where the only difference is that in the non-M/SI cases a right whale was lucky enough to be sufficiently disentangled by a response team. The Draft BiOp's approach is in fact the opposite of "provid[ing] the benefit of the doubt to the species and a more conservative estimate of total right whale entanglements." Draft BiOp at 223.

Third, NMFS's estimates of total (observed + cryptic) mortalities between 2010 and 2019 in both Canada and the US from all causes, Draft BiOp at 225, and the calculations reflected in Row 5 of Table 57[33] must be recalculated in light of the best available data from the recently-published Pace et al. 2021 study on cryptic mortality. The Draft BiOp's total right whale mortality estimate of 201 whales from 2010 to 2019 includes 90.04 observed mortalities and an estimated 110.96 unobserved mortalities. The Draft BiOp thus assumes that 45% of mortalities were observed and 55% were unobserved.

[32] This is especially true given that NMFS has never established reporting requirements for the federal lobster fishery, Draft Biop at 29, rendering it "difficult" to define fishing effort, *id.* at 33, and to determine the number of lines fished in federal waters. It is also irrational for NMFS to state, without support, that Canadian snow crab gear is "more lethal than most U.S. fishing gear." Draft BiOp at 224. One, as NMFS has reiterated many times, only a tiny fraction of entangling gear is ever recovered, and only a tiny fraction of recovered gear is ever able to be identified definitively to a fishery. Second, the U.S. lobster fishery has steadily shifted northwards and offshore, Right Whale Recovery Tech Memo at 4–5, where "[o]ffshore U.S. gear may be equivalent in risk of injury and mortality given the large diameter of the rope fished and the long and heavy trawls." DEIS at 2-39. That snow crab gear is more readily identifiable when taken off a whale says nothing about relative lethality, only about relative identifiability in the face of wholly inadequate gear marking requirements.

[33] We assume that the caption for Table 57 stating that the data comes from 2010 to 2018 (rather than 2019) is in error and should read 2010 to 2019.

In Pace et al. 2021, however, the authors determined based on data from 2010–2017 that the observed mortality detection rate was only 29% of total mortality, leaving 71% of mortalities undetected. NMFS must update its entire effects analysis to explain what this means for its calculations for unobserved cryptic mortalities of unknown cause and unknown country to update the total and annual average M/SI entanglements attributed to U.S. fisheries from 2010–2019. (Draft BiOp at 225–26, Table 57, rows 5 and 6). For now, every calculation in the Draft BiOp's effects analysis from p. 225 on based on the estimate of 6.724 annual average M/SI attributable to U.S. fisheries cannot be carried forward into the final biological opinion.

Even when NMFS updates that calculation, however, the Draft BiOp's effects analysis is so incomplete and unfounded that it cannot be fixed by rejiggering a few numbers in a table. NMFS cannot exclude the M/SI entanglements in state fisheries regulated by the ALWTRP from its effects analysis. *Id.* at 223. It cannot assume that the stated 60% risk reduction target for the current ALWTRP amendments is the appropriate goal. *Id.* at 228. It cannot assume the currently proposed measures will even achieve the 60% risk reduction target. *Id.* at 228–30. It cannot assume its future risk reduction targets for Framework Phases 2 through 4 are appropriate or achievable. *Id.* at 230–32. Its entire jeopardy analysis and no jeopardy determination for the right whale, Draft BiOp at 326–42, including the population projection model, rests on assumptions that are neither legally tenable nor factually supportable.

III. The Draft BiOp Improperly Defines the Environmental Baseline

NMFS's definition of the environmental baseline is unlawful in two distinct ways. First, it fails to properly examine whether the right whale is already in jeopardy. Second, it arbitrarily includes operations of the fisheries as part of the environmental baseline thus ignoring ongoing jeopardy risks.

A. NMFS Fails to Evaluate Whether the Right Whale Is Already in Jeopardy

NMFS's Draft BiOp fails to analyze whether the right whale's risk of extinction is already sufficiently high to qualify as jeopardy. This is arbitrary.

It is critical that NMFS explain whether the right whale is already at jeopardy. This is because if a species is already at jeopardy, additional action that "causes some deterioration in the species' pre-action condition" is prohibited. *Nat'l Wildlife Fed'n*, 524 F.3d at 930 ("[W]here baseline conditions already jeopardize a species, an agency may not take action that deepens the jeopardy by causing additional harm."). In other words, "if baseline conditions are already dire, then even a small additional impact due to [takes caused by the action under review] may require a jeopardy determination." *Oceana v. Pritzker*, 75 F. Supp. 3d 469, 491 (D.D.C. 2014); *see also Am. Rivers v. Fed. Energy Regulatory Comm'n*, 895 F.3d 32, 46–47 (D.C. Cir. 2018) (holding biological opinion unlawful where agency failed to take degraded baseline conditions caused by two decades of dam operations into account).[34]

[34] NMFS recently enacted amendments to its longstanding regulations implementing section 7 of the ESA that purport to overturn the standard articulated by the Ninth Circuit in *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Service*. However, those regulatory changes are inconsistent with the statute and

NMFS itself has recognized the right whale as one whose "extinction is almost certain in the immediate future" if existing threats are not dramatically reduced;[35] that anthropogenic threats appear to be worsening; and that death, serious injuries, and other harmful impacts from entanglements are currently the primary driver behind the species' dire status. *See, e.g.*, Draft BiOp at 94–95. Given the species' existing status, NMFS has concluded that "its resilience to future perturbations is expected to be very low," and "the species may decline towards extinction if prey conditions worsen, and anthropogenic mortalities are not reduced." *Id.* at 95.

Yet the Draft BiOp contains no analysis of whether the right whale is already in jeopardy. NMFS's failure stems, at least in part, from its reliance on the Trump administration's 2019 unlawful amendments to longstanding regulations implementing section 7 of the ESA. In enacting these amendments, the agency advanced a new interpretation of "appreciably" in the definition of "jeopardize the continued existence of." *See* 50 C.F.R. § 402.02. Specifically, the agency asserted that a species cannot be "in jeopardy," "in peril," or "jeopardized" by baseline conditions, and that any other interpretation would be inconsistent with the ESA. 84 Fed. Reg. 44,976, 44,987 (Aug. 27, 2019); 83 Fed. Reg. 35,178, 35,182–83 (July 25, 2018). To the contrary, NMFS's interpretation is inconsistent with the protections of section 7(a)(2) and the overall purposes of the ESA. The agency itself has previously recognized that, "[t]he very concept of 'jeopardy' is that a Federal agency should not authorize, fund, or carry out an action that would injure a listed species' chances for survival to the point that recovery is not attainable." 51 Fed. Reg. 19,926, 19,934 (June 3, 1986).

NMFS's unlawful interpretation allows it to take actions that perpetuate or worsen existing conditions, even when doing so will mean that a species will never recover, undermining one of the primary purposes of the ESA "to ensure the recovery of endangered and threatened species, not merely the survival of their existing numbers." *Alaska Oil & Gas Ass'n v. Jewell*, 8145 F.3d 544 (9th Cir. 2016) ("the goal of species recovery is paramount" under the statute). NMFS's approach renders the prohibition on actions that jeopardize a protected species meaningless in the very situation where species need them the most. *See* 51 Fed. Reg. at 19,934 ("Congress intended that the 'jeopardy' standard be the ultimate barrier past which Federal actions may not proceed…").

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unlawful. The regulatory changes are the subject of several lawsuits, and the Biden administration has included the regulations on a list of actions it is reviewing. *See, e.g.*, *Ctr. for Biological Diversity, et al. v. Bernhardt, et al.*, Case No. 4:19-cv-05206 (filed N.D. Cal. Aug. 21, 2019); *State of California, et al. v. Bernhardt, et al.*, Case No. 4:19-cv-06013 (filed N.D. Cal. Sept. 25, 2019); *Animal Legal Defense Fund v. Bernhardt, et al.*, Case No. 4:19-cv-06812 (filed N.D. Cal. Oct. 22, 2019); White House, Fact Sheet: List of Agency Actions for Review, Jan. 20, 2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/20/fact-sheet-list-of-agency-actions-for-review/.

[35] 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).

Indeed, that is just what is happening with right whales. Decades of entanglements in fishing gear and other stressors have devastated the population and contributed to its current steep decline. While NMFS has proposed amendments to the ALWTRP, they cannot support the agency's failure to examine whether the right whale is already in jeopardy. In other words, "the species already stands on the brink of extinction, and the incremental improvements pale in comparison to the requirements for survival and recovery," *Aluminum Co. of America v. Bonneville Power Admin.*, 175 F.3d 1156, 1162 n.6 (9th Cir. 1999), particularly where, as described below, the measures on which NMFS relies are largely unproven and uncertain.

B. NMFS Improperly Includes Ongoing Activities as Part of the Environmental Baseline

NMFS's Draft BiOp improperly includes operations of the fisheries in state and federal waters as managed and authorized by NMFS under the ACA, MSA, and MMPA that are (or should be) the subject of the Draft BiOp as part of the environmental baseline. Courts have rejected biological opinions that categorize "ongoing agency activities" as part of the environmental baseline, rather than as part of "the effects of the action," as inconsistent with the ESA. *See Nat'l Wildilfe Fed'n*, 524 F.3d at 926–29. For example, in *National Wildlife Federation*, NMFS incorporated the ongoing impacts of a dam operation into the environmental baseline by claiming that ongoing operations were "non-discretionary." *Id.* at 928. The court held the biological opinion unlawful because the ESA does not permit agencies to "ignore potential jeopardy risks by labeling parts of an action non-discretionary." *Id*. Such an approach undermines the precautionary nature of the ESA and the purpose and protections that section 7(a)(2) consultations are supposed to provide.

The same is true here. NMFS cannot sweep the impacts of the fisheries analyzed in the Draft BiOp under the rug by including them in the environmental baseline. That the agency has previously consulted on the fisheries is irrelevant. The "effects of the action" include *all* effects of an ongoing federal agency action over which the agency has discretionary involvement or control—regardless of whether consultation was previously conducted on the action.

NMFS's approach is especially arbitrary here for two reasons. First, none of the agency's prior consultations on the ongoing operation of the fisheries at issue in the Draft BiOp have properly defined the agency action under review, the relevant action area, or the effects of that action on the right whale and other ESA-listed whales or included a proper ITS. For example, the agency's prior consultations have always arbitrarily narrowed the scope of the agency action under review to the agency's authorization of federal permits under applicable fishery management plans, ignoring its authorization and management of the fisheries in both state and federal waters under the MMPA; arbitrarily narrowed the scope of the effects of the action by focusing on only entanglements that cause death or serious injury; and unlawfully failed to contain an ITS authorizing and mitigating the extent of permitted take.

Second, NMFS's new regulatory definition of the environmental baseline (already the subject of several lawsuits) specifies that "ongoing agency activities or existing agency facilities **that are not within the agency's discretion to modify** are part of the environmental baseline." *See* 50 C.F.R. § 402.02 (emphasis added). Yet NMFS has the authority to modify the operations of the federal fisheries that are the subject of this opinion under the MSA and the ACA and has the

authority under the MMPA to modify—or halt altogether—the operations of all commercial fisheries subject to the ALWTRP in both state and federal waters.

That NMFS is proposing to change how the American lobster and Jonah crab fisheries operate to reduce risk to right whales does not change the equation. A decision to continue an ongoing action—even if modified to be slightly less harmful than it was previously—is as much a decision to carry forward the harmful effects as it is a decision to continue the action in a slightly less detrimental fashion. *See* 50 C.F.R. § 402.02 (defining agency "action" as anything a Federal agency authorizes, funds, or carries out).

IV. The Draft BiOp Improperly Relies on Unproven, Uncertain, Future Mitigation Measures to Reduce the Impacts of the Fisheries

The ESA prohibits NMFS from relying on unproven, uncertain, or future mitigation measures in reaching a no-jeopardy determination. Yet that is just what NMFS has done in the Draft BiOp. Indeed, nearly the entire draft opinion—including the agency's key finding that operation of Atlantic fisheries will not jeopardize the continued existence of critically endangered North Atlantic right whales—is based on unproven or future measures from the Framework and the current proposed ALWTRP rulemaking. This approach violates a basic tenet of the ESA that the risk that mitigation measures may not occur or may be ineffective "must be borne by the project, not by the endangered species," *Sierra Club v. Marsh*, 816 F.2d 1376, 1386 (9th Cir. 1987), and renders NMFS's Draft BiOp unlawful as written.[36]

As courts have made clear, an agency cannot rely on "unapproved and undefined mitigation measures" in reaching a no jeopardy conclusion. *Ctr. for Biological Diversity v. Bernhardt*, 982 F.3d 723, 744 (9th Cir. 2020). Rather, "mitigation measures supporting a [biological opinion's] no jeopardy or no adverse modification conclusion must be 'reasonably specific, certain to occur, and capable of implementation; they must be subject to deadlines or otherwise-enforceable obligations; and most important, they must address the threats to the species in a way that satisfies the jeopardy and adverse modification standards.'" *Ctr. for Biological Diversity v. Salazar*, 804 F. Supp. 2d 987, 1001 (D. Ariz. 2011) (quoting *Ctr. for Biological Diversity v. Rumsfeld*, 198 F. Supp. 2d 1139, 1152 (D. Ariz. 2002)). Mitigation measures that may eventually be developed under the MMPA, such as new ALWTRP amendments, "do[] not change this analysis because . . . [the] MMPA . . . does not alter the agency's obligations under Section 7 of the ESA." *Ctr. for Biological Diversity v. Bernhardt*, 982 F.3d at 747.

The Draft BiOp violates this fundamental premise in multiple ways. First, even if the Framework were appropriately before NMFS for consultation as a legitimately-proposed agency action—which it is not—the Draft BiOp would still be arbitrary in relying on future Framework

[36] To the extent NMFS is relying on the recent changes to its regulations implementing section 7 of the ESA that provide the agency can rely on future mitigation promises "as proposed" without requiring "specific binding plans or a clear, definite commitment of resources," 84 Fed. Reg. at 44,979–80, 45,017, such reliance is unlawful because the new regulatory language violates section 7 of the ESA. *See* 16 U.S.C. § 1536(a)(2), (b)(3)(A), (b)(4)(A); *see also NWF v. NMFS*, 524 F.3d at 935–36.

rulemakings to avoid a jeopardy finding.[37] NMFS relies on the Framework as the action under consultation to perform its jeopardy analysis and rationalize its no jeopardy conclusion. *See, e.g.*, Draft BiOp at 330 (no jeopardy conclusion relying on the fact "implementation of the Framework will reduce M/SI by at least 60% in gillnet and other pot/trap fisheries in 2023, reduce M/SI by at least an additional 60% in fixed gear in federal waters in 2025, and by an additional 87% in fixed gears in federal waters in 2030"). The Framework's purported actions "include the current ALWTRP rulemaking and anticipates three additional rulemakings *over the next ten years*." Framework at 5 (emphasis added).

Yet the Framework consists of nothing but unproven, uncertain, future mitigation measures as demonstrated above. By its terms, the Framework "**does not specify particular measures."** *Id.* at 1 (emphasis added). Instead, it sets a series of goals to reduce risk in federal fisheries over the next ten years by certain percentages, with no mention of what those measures will entail, when they would go into effect in the water, or how NMFS is justified in assuming the measures will actually hit the intended risk reduction targets. Thus, the entire Framework is nothing more than "'general commitment[s] to future improvement' [that] are insufficient under Section 7." *Ctr. for Biological Diversity v. Bernhardt*, 982 F.3d at 747 (citing *Nat'l Wildlife Fed. v. Nat'l Marine Fisheries Serv.*, 524 F.3d 917, 935–36 (9th Cir. 2008)). That notion resonates particularly strongly here, where the agency is allowing fisheries to continue during the pendency of the purported development of the Framework rulemakings that NMFS candidly admits are necessary to avoid jeopardy. *See Nat'l Wildlife Fed'n. v. Nat'l Marine Fisheries Serv.*, 184 F. Supp. 3d 861, 908 (D. Or. 2016) ("Reliance on a 'commitment' to achieve a certain percent increase in salmon survival does not relieve [NMFS] of the requirement to rely only on those actions that are reasonably certain to occur." (citation omitted)).

Second, the Draft BiOp relies on measures in the current proposed rule to amend the ALWTRP that are unproven and therefore not guaranteed to hit the projected risk reduction goal. For example, the agency's no jeopardy conclusion relies on its claim that the current proposed rule to amend the ALWTRP "will reduce M/SI in U.S. waters by at least 60% across lobster and Jonah crab fisheries." Draft BiOp at 330. This assumption is based, in large part, on the use of weak rope or weak insertions. But the assumption of the efficacy of weak rope or weak contrivances for reducing serious injuries and mortalities is just that—an assumption—that is largely theoretical and has never been tested in the field. Lower-pound breaking strength ropes will not necessarily reduce or avoid mortality or serious injury or longer-term sublethal impacts depending on the complexity and specifics of an entanglement event. 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. Moreover, right whale calves and juveniles are likely not strong enough to break 1700-lb rope. 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

[37] Additionally, as explained above, the Framework also unlawfully excludes consideration of take in state waters.

avoid a life-threatening entanglement."[38] The study's authors have admitted that younger right whales have a much lower force output than adult right whales,[39] meaning young whales are less likely to be able to break even lower-pound breaking strength rope.

The agency's reliance on weak rope to reduce risk, especially in offshore areas is particularly inappropriate where (1) lobstermen use a large number of pots per trawl, and thus may not be able to safely use weak rope, contrivances, or toppers; (2) the area is of particularly high risk for right whales due to the heavier line and increased number of traps; and (3) there is no evidence that whales diving to the bottom in search of copepods and entangled near the seafloor (where there is no weak link and the line is heavier) can break free. Indeed, NMFS itself acknowledges that vast majority of mortality and serious injury risk from entanglements is from fisheries in federal waters. *E.g.*, Draft BiOp at 220.

Moreover, while the ALWTRP is focused on reducing mortality and serious injury, the jeopardy analysis under the ESA must look at *all* impacts of entanglements, including those that do not lead to serious injury or mortality, such as impaired reproductive ability, among other negative impacts. *See infra*, Section V. In light of these sublethal impacts, weak rope will continue to be a source of morbidity.

Third, the Draft BiOp relies on uncertain measures to be developed by states in New England. This is improper. To the extent NMFS wants to rely on measures enacted by a state, it can and must add those measures to the ALWTRP via its authority under the MMPA. Otherwise, NMFS has no way to ensure that such measures will actually be enacted or will not be subsequently amended in a way that would increase risk to right whales. For example, while the Draft BiOp relies on various risk reduction measures proposed by the state of Massachusetts, *see* Draft BiOp at 26, not all of those measures were ultimately enacted. The state chose not to adopt (1) the closure of state waters between February 1 and April 30 south of the Massachusetts Restricted Area or (2) the prohibition on fishing singles for vessels greater than 29 feet.[40]

NMFS's reliance on unproven, uncertain, future mitigation measures is especially arbitrary in light of the long, beleaguered history of the ALWTRP. Despite its existence for over two decades and several significant, substantive amendments, documented mortality and serious injury for right whales has continued to exceed the right whale's PBR—often by significant levels—and vastly exceeds insignificant levels approaching a zero-mortality rate. In fact, since

[38] Knowlton, A. et al. 2016. Effects of fishing rope strength on the severity of large whale entanglements. Conservation Biology. Vol. 30:2, 318–328 (emphasis added).

[39] 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.

[40] 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.

the most recent round of amendments to the ALWTRP, right whale mortality and serious injury from entanglement in commercial fishing gear has **increased**, while the population has **plummeted**.

In other words, there is no rational basis for the agency's speculative assumption that future risk reduction measures will be successful, particularly where the agency continues to enact the very types of measures that a 2007 scientific review panel has deemed ineffective at reducing risk:

> 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.[41]

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."[42] In October 2018, NMFS' 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."[43] 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.[44]

From the very outset of the ALWTRP more than two decades ago, NMFS recognized 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). Yet the agency has continued to fail to enact these necessary measures, despite the dire status of the right whale and its legal to do so.

V. The Draft BiOp Downplays the Sublethal Effects of Entanglements

The Draft BiOp arbitrarily downplays the sublethal impacts of entanglements on right whales. These effects are clearly "consequences to" right whales "that are caused by the proposed

[41] 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.

[42] Pace, R. M. III et al. 2014.

[43] Right Whale Recovery Tech Memo at 8.

[44] *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").

action—a wealth of scientific information indicates that the impacts of sublethal entanglements affect the survival and recovery of right whales within the meaning of the ESA. *See* 50 C.F.R. §§ 402.02 (defining "effects of the action;" "jeopardize the continued existence of" and "recovery"), 402.14(h)(1)(iii) (biological opinion must contain a "detailed discussion of the effects of the action on listed species").

To be clear, the Draft BiOp acknowledges sublethal effects. It recognizes, for example, that "entanglement in fishing gear appears to have substantial health and energetic costs that affect both survival and reproduction (Hayes et al. 2018a, Hunt et al. 2016, Lysiak et al. 2018, Pettis et al. 2017, Robbins et al. 2015, Rolland et al. 2017, van der Hoop et al. 2017a)." Draft BiOp at 95, 220-221. It also states that "[t]he sublethal stress of entanglements can have a serious impact on individual health and reproductive rates (Lysiak et al. 2018, Pettis et al. 2017, Robbins et al. 2015). *Id.* at 146.

However, the Draft BiOp fails to properly consider sublethal impacts in the effects of the action or its jeopardy analysis. Instead, it dismisses them on the basis that "there is no further evidence to make the conclusion that sublethal effects from fishing gear entanglement alone causes a decline in large whale health" and that NMFS supposedly "cannot quantify the degree to which entanglements are affecting calving rates." *See id*. at 221, 338. This is improper. For example, as explained in more detail below, *see infra* Section VIII, NMFS's jeopardy analysis must consider not just the impacts from the proposed action in isolation, but the effects of the action in light of all the other stressors acting on the population. Thus, the fact that there is allegedly no information that sublethal impacts alone cause a decline in whale health is immaterial to agency's obligation to include sublethal effects in its jeopardy analysis. Moreover, NMFS cannot dismiss impacts from sublethal entanglements simply because it cannot quantify them. *See* BiOp at 220–221. NMFS's failure to properly consider the impacts of sublethal entanglements on the ability of animals to successfully reproduce is particularly concerning given its conclusion in prior biological opinions that "[h]ealthy reproduction is critical for the recovery of the North Atlantic right whale."[45]

Any reliance in the jeopardy analysis on the Linden model to dismiss the threat of the impacts from sublethal entanglements is flawed. *See* Draft BiOp at 326, 329, 330. Rather than address the sublethal impacts quantitatively, this model addresses them qualitatively and assumes that the effects are all consumed by calving rates. *Id*. This analysis ignores the effects that go beyond mortality—such sickness and injury—that would decrease the fitness of an individual animal but not necessarily kill it (although it could make them more vulnerable to a fatal vessel strike).

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

[45] *See, e.g.*, NMFS, Endangered Species Act Section 7 Consultation on the Continued Implementation of Management Measures for the American Lobster Fishery, Consultation No. NER-2014-11076 (July 31, 2014) at 33.

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.[46]

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 the added drag of towing gear for months or years."[47] 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."[48]

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.[49] 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;"[50] that "females that have suffered a severe entanglement are

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[46] *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 lifehistory 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.

[47] 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.

[48] *Id.*

[49] 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.

[50] 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.

significantly less likely to calve again;"[51] and that "[h]uman impacts are reducing the reproductive success of this population."[52]

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."[53] 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."[54] As such, "the poor body condition of individuals within the NARW population is of major concern for its future viability."[55]

Thus, entanglement is likely one of the major determinants of reproductive failure in right whales, and probably all large whales. NMFS cannot conduct an adequate jeopardy analysis without properly considering these and the other sublethal impacts of entanglements.

VI. The Draft BiOp Otherwise Omits Key Factors from Consideration Downplays Stressors, and Ignores the Best Available Scientific Data

In the "Effects of the Proposed Action" (Section 7), NMFS fails to consider many consequences of the proposed actions (improperly defined and unduly narrowed, as described above) on the critically endangered right whale. And although NMFS claims it will afford the "benefit of the doubt" to the species when uncertainties are present, Draft BiOp at 214 (quoting House of Representatives Conference Report No. 697, pg. 1442, 96th Congress, Second Session, 12 (1979)), it fails to do so by downplaying the consequences of ongoing and future fishing in both state and federal waters as well as reopening thousands of square miles of ocean waters in Southern New England to expanded gillnet fishing, in addition to the consequences of many other non-fishing stressors on the right whale population.

A. The Draft BiOp Unreasonably Relies on the Vessel Speed Rule that NMFS has Recently Acknowledged Is Insufficient to Reduce the Likelihood that Fishing Vessels in State and Federal Waters Will Hit a Whale

The Draft BiOp makes a determination that right whales are not likely to be adversely affected by fishing vessels operating in the action area under the proposed action, Draft BiOp at 237. This conclusion relies on the ship speed restriction rule implemented in 2008 (50 C.F.R. § 225.105)

[51] Julie van der Hoop, et al. 2016.

[52] *Id.*

[53] 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.

[54] *Id.*

[55] *Id.*

that may have reduced the risk of vessel strikes and the number of mortalities, Draft BiOp at 187–192, 237 (based on data from 2009–2018). However, any reliance on this rule to ensure no jeopardy in the final batched biological opinion would be misplaced. While the Draft BiOp denotes the "rarity" of ship strikes and makes the conclusory statement that "it seems extremely unlikely and discountable that a fishing vessel would strike a whale, even during transiting," *id*. at 237, 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.[56]

As NMFS recently acknowledged in its North Atlantic Right Whale Vessel Speed Rule Assessment (June 2020) ("Assessment"), the current rule does not sufficiently protect right whales from getting run over or killed by ships and many of the components of the rule are voluntary, rather than mandatory. NMFS cannot rely on unenforceable or ineffectual measures in its jeopardy analysis. *See, e.g.*, *Rumsfeld*, 198 F. Supp. 2d at 1152.

Specifically, the Assessment concludes that "[s]ince the speed rule was implemented, there has been a decline in the total number of documented right whale vessel strike mortalities but an increase in serious and non-serious injuries." Assessment at 35. It notes that "certain discrete areas of poor compliance stand out," *id.*, the continuing level of vessel collisions including those by boats smaller than 65 feet, and the "gravity of the whales' heath and population status," NMFS made several recommendations to strengthen the current rule including: (1) consideration of a new Seasonal Management Area (in which speed limits would be mandatory) south of Martha's Vineyard and Nantucket because "right whale foraging activity has steadily increased in this area;" (2) regulating vessels less than 65 feet in acknowledgement that smaller vessels have killed and injured right whales; and (3) modification or even termination of the Dynamic Management Area ("DMA") program because compliance with voluntary speed limits is low. *See* Assessment at 36–37.[57]

B. The Draft BiOp Ignores the Best Available Scientific Data Demonstrating Right Whales Use Southern New England Year-Round as Foraging Habitat

When discussing important foraging habitat for right whales, the Draft BiOp identifies the "continental Shelf south of New England" as new foraging habitat, yet it makes no mention of year-round use of the area. Draft BiOp at 195 (describing use as "seasonal"); 196 (describing a habitat shift out of the Great South Channel and Bay of Fundy and into Southern New England in "fall and winter," and describing right whales as "moving through the action area" but "foraging in northern parts of the action area"); 218 (describing high use in winter through early spring); 229 (proposing seasonal closure to trap/pot fishing south of Nantucket).

[56] 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.

[57] NMFS's inclusion of federal vessel operations in the environmental baseline is puzzling in light of its new regulation that specifies the environmental baseline includes "consequences to listed species or designated critical habitat from ongoing agency activities . . . that are not within the agency's discretion to modify," *see* 50 C.F.R. § 402.02, and NMFS has the authority to regulate vessels under the MMPA and ESA as its ship speed rule demonstrates.

This runs counter to a recent NMFS Technical Memorandum authored in 2020 by the agency's North Atlantic right whale "Expert Working Group" that describes the area "South of the Islands" as "core" North Atlantic right whale foraging habitat during the Winter/Spring/Summer/Fall."[58]

As noted, right whale distribution and habitat use has shifted since 2010 in response to climate change-driven shifts in prey availability.[59] Draft BiOp at 222. The best available scientific information, including aerial surveys,[60] acoustic detections,[61] stranding data,[62] a series of DMAs declared by NMFS pursuant to ship strike rule,[63] and prey data,[64] all indicate that right whales

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[58] Oleson, E.M., Baker, J., Barlow, J., Moore, J.E., and Wade, P., "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 (August 2020), at Fig. 1. Available at: https://www.fisheries.noaa.gov/resource/document/north-atlantic-right-whale-monitoring-and-surveillance-report-and-recommendations.

[59] 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.

[60] 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).

[61] 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.

[62] 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.

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

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

now heavily rely on Southern New England waters.[65] In January 2019, an aggregation representing a quarter of the population—100 whales—was seen in this area[66] 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. Of 196 individual whales identified in the area between January 1, 2010 and June 30, 2015, 35 percent were females, 58 percent were males, and the remainder were of unknown sex. Of the 188 individuals that were assigned an age class, almost two thirds were adults and one third juveniles. Six individuals were classified as calves at the time of their sighting.[67] There were 34 different reproductive females identified, eight of which had only been documented in Southern New England since the start of 2010.[68]

As discussed above, large, consistent aggregations of right whales in all four seasons, have led scientists to describe Southern New England as a year-round foraging "hotspot."[69] Several other scientific data sources demonstrate that right whales use these waters year-round. 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 of the Gulf of St. Lawrence,[70] 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.[71] April appears to be particularly important for females of reproductive age.[72] Inter-annual and inter-seasonal variability in aerial and acoustic detections imply that there are no

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[65] 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.

[66] 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.

[67] Leiter et al. 2017, at 52–54.

[68] *Id.*

[69] 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.

[70] 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).

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

[72] Leiter et al. 2017.

clear spatial patterns of habitat use across SNE and right whales should be expected to be encountered equally across the region.[73] Several scientific data sources demonstrate that right whales use these waters year-round.[74] Right whales should therefore be expected to be present in Southern New England in increasing numbers year-round and the Draft BiOp's characterization of their use of the area as "seasonal" minimizes the risks of entanglement and vessel strikes in that region.

C. The Draft BiOp Downplays Foraging Displacement Caused by Offshore Wind Development in Southern New England

While the Draft BiOp mentions numerous MMPA incidental harassment authorizations ("IHA") and letters of authorization issued pursuant to section 101(a)(5) of the MMPA for a variety of activities, its jeopardy analysis is silent on the effects that foraging displacement caused by offshore wind projects could have on the survival and recovery of right whales. *See* Draft BiOp at 165. NMFS has openly acknowledged that ocean noise associated with surveying for and constructing these projects may cause foraging displacement in IHAs for the projects proposed in the Massachusetts and Rhode Island wind energy areas. A recently published IHA reiterates this point and illuminates the agency's assumptions:

> North Atlantic right whales may temporarily avoid the immediate area but are not expected to permanently abandon the area. NMFS does not anticipate North Atlantic right whales takes that would result from the proposed project would impact annual rates of recruitment or survival.

See Proposed IHA for Vineyard Wind, 86 Fed. Reg. 8490, 8533 (Feb. 5, 2021).

We now know that several offshore wind projects have been unwittingly sited within a critical foraging hotspot for right whales. *See supra*, Section VI.B.

The need for right whales to forage and socialize undisturbed, where and when food is available, cannot be downplayed. Scientists have concluded that "right whales acquire their energy in a relatively short period of intense foraging; even moderate changes in their feeding behavior or their prey energy density are likely to negatively impact their yearly energy budgets and therefore reduce fitness substantially."[75] North Atlantic right whales are already experiencing significant food-stress: juveniles, adults, and lactating females have significantly poorer body condition relative to Southern right whales, and the poor condition of lactating

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[73] *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).

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

[75] 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.

females may cause a reduction in calf growth rates.[76] The Draft BiOp provides no scientific support for NMFS's assertions in its IHAs that right whales will not permanently abandon certain areas once construction begins or that even temporary avoidance will not impact recruitment and survival of the species.

In addition to the energetic costs to right whales of avoiding increasingly noisy ocean waters, another potential consequence of this habitat displacement is displacement into nearby shipping lanes, thus increasing the risk of a ship strike. In the final biological opinion, NMFS should consider these additional risks; especially given that any additional stressor could further exacerbate population-level impacts. The difficulty in obtaining empirical data on these kind of population-level impacts demands a precautionary approach.

D. The Draft BiOp Downplays the Effects of Gillnet Entanglements on Right Whales

The Draft BiOp estimates that 1.25 right whales were entangled in gillnet gear in U.S. fisheries (based on data from 2010–2019). Draft BiOp at 227, 233. Even given the new uncertainty as to the validity of this estimate given the need to recalculate total estimates based on Pace et al. 2021, the assignment of all presumed U.S. entanglements in unknown gear based solely on the huge proportion of vertical trap/pot lines, *id.* at 224, resulting in a total estimate of annual average 0.125 M/SI, *id.* at 227, downplays the effects of gillnet entanglements on right whales by ignoring the disproportionate risk of entanglement in a gillnet end-line. Perhaps more importantly, NMFS and the take reduction team have not even begun to discuss or analyze the effects of gillnet entanglements (sublethal or lethal) on right whales, much less recommend immediate protections, having spent the last four years focused on the lobster fishery.

End-lines in the northeast sink gillnet fisheries present a disproportionate risk of entangling a right whale. 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 Draft BiOp contains no discussion of the disproportionate impact of the significantly larger target area that could entangle a whale. Further, its limited analysis of gillnet fishing in critical foraging grounds in Southern New England waters is flawed and fails to rely on the best available scientific data, as discussed below.

While the Draft BiOp generally concludes that it is unlikely that gillnet fishing effort will shift much across the region, it provides little specificity or support. *See* Draft BiOp at 308, 312, 315, 317, 318. For example, there is no analysis of the likelihood that the number of fishing vessels could change. Similarly, there is no analysis of the likelihood that latent fishing effort could change. And while noting that numerous management actions have increased fishing opportunities in gillnet fisheries—including by allowing extra-large mesh-size sector exemptions, modifying the management uncertainty buffer in the monkfish fishery, adding an additional skate species to the skate fishery management plan, and increasing quota allocations and trip limits for certain target stocks, *see, e.g.*, Draft BiOp at 44–52, 306—there is no

[76] Christiansen, et al. 2020.

justification for the BiOp's conclusion that these additional opportunities will result in increased efficiency rather than increased amount of gear in the water.

By ignoring the effects of this increased gillnet fishing effort on right whales, NMFS's jeopardy analysis cannot accurately address the short or long-term impacts of the continued operation of these fisheries on right whales. NMFS's final biological opinion must therefore incorporate these threats into its analysis. *See, e.g., Pac. Coast Fed'n of Fishermen's Ass'ns v. Nat'l Marine Fish. Serv*, 265 F.3d 1028, 1037–38 (9th Cir. 2001) (invalidating biological opinion due to agency's failure to consider relevant factors).

E. The Draft BiOp Downplays the Entanglement Risk of Aquaculture Facilities

The Draft BiOp acknowledges that aquaculture increases the entanglement risk, the likelihood of a vessel strike, and ocean noise:

> Aquaculture has the potential to impact ESA-listed species through entanglement and/or other interaction with aquaculture gear (e.g., buoys, nets, and vertical lines), introduction or transfer of pathogens, increased vessel traffic and noise, impacts to habitat and benthic organisms, and water quality (Clement 2013, Lloyd 2003, Price and Morris 2013, Price et al. 2017).

Draft BiOp at 151. NMFS tries to avoid carefully analyzing such impacts, stating that known interactions are "rare," but it is well documented that fewer than 1% of entanglements are attributed to the activity of origin. *Id.* The Draft BiOp also acknowledges that aquaculture in the Northeast has been and continues to expand (state and federal waters). *Id.* at 152. In fact, at least one active project in right whale critical habitat (in federal waters eight miles off Rockport, MA) has plans to dramatically increase the number of longlines lines (from 3 lines to 120 lines) in waters where right whales are known to forage. *See id.* ("surface longlines consist of horizontal longline suspended on/near the surface of the water with buoy lines or poles at each end"). Yet, despite at least 299 projects in the Northeast, *see id.* at Table 49, regulation by NMFS is unclear at best and the Draft BiOp contains no descriptions of completed consultations or discussion of the effects of these projects on the survival and recovery of right whales.

F. The Draft BiOp Downplays the Impacts of Noise Pollution from Vessels and Military Activities along the Atlantic Seaboard

The Draft BiOp notes that "NMFS has completed consultations on individual Navy and USCG activities," Draft BiOp at 166, but provides *no* discussion of the impact of these activities on right whales in the U.S. Atlantic. Likewise, NMFS mentions that the maritime industry "has the potential to interact with ESA-listed species," but does not address noise pollution as a potential impact. *Id.* at 178. This is a significant omission as the best available scientific data demonstrate that the noise generated by these activities and other vessel activity can negatively impact right whales in numerous ways.

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). Instead, the Draft BiOp's description of these activities focuses solely on take of other species of whales and sea turtles via "**harm** due to exposure to impulsive and non-impulsive acoustic stressors annually." Draft BiOp at 166 (emphasis added).

While the agency provides no explanation for its decision to ignore impacts to right whales, it appears to have done so because the activities will supposedly not "harm" right whales within the meaning of the ESA. This is improper. The ESA prohibits not just actions that "harm" or "kill" right whales, but also those that "harass" the whales. 16 U.S.C. § 1532(19). And the agency regularly applies the MMPA's broad definition of harassment when analyzing impacts to ESA-listed marine mammals under the ESA.[77]

Moreover, the environmental baseline includes not just those activities that cause "harm" or otherwise "take" right whales within the meaning of the ESA, but rather includes:

> the past and present **impacts** of all Federal, State, or private actions and other human activities in the action area, the anticipated *impacts* of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the *impact* of State or private actions which are contemporaneous with the consultation in process.

50 C.F.R. § 402.02 (emphasis added); *cf.*, 16 U.S.C. § 1532(19) (defining take to mean "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect," or attempt to do so). NMFS has no authority to exclude impacts to listed species from various activities simply because the agency believes such impacts do not rise to the level of take under the ESA. Yet that is just what NMFS has done in the Draft BiOp. In doing so, NMFS has failed to conduct the comprehensive jeopardy analysis required by law. *See, e.g.*, *Am. Rivers v. U.S. Army Corps of Eng'rs*, 271 F. Supp. 2d 230, 255 (D.D.C. 2003) ("The ESA requires that all impacts of agency action . . . be addressed in the consultation's jeopardy analysis.").

Noise from the Navy's and USCG's activities and the maritime industry will certainly "impact" right whales. For example, scientific research reveals that chronic stress in North Atlantic right whales is associated with exposure to low frequency noise from ship traffic.[78] 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

[77] *See, e.g.*, NMFS, Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion Liberty Oil and Gas Development and Production Plan Activities, Beaufort Sea, Alaska, NMFS Consultation Number at 134 AKR-2018-9747 (July 31, 2018).

[78] Rolland, R, et al. 2012. Evidence that ship noise increases stress in right whales. Proc. R. Soc. B. 279: 2363–2368.

diseases; and permanent cognitive impairment."[79] As such, "over the long term, chronic stress itself can reduce reproduction, negatively affect health, and even kill outright."[80] In addition, right whales will experience temporary threshold shifts, behavioral response, and stress throughout the Atlantic from Navy sonar and other transducers.[81] Vessel and navy training activities can also impact important communications, including those between mothers and calves.[82]

G. The Draft BiOp Downplays the Consequences of Opening Longstanding Closures in Southern New England to Gillnet Fishing via the Habitat Amendment

The Draft BiOp contains the court-ordered ESA section 7 consultation on the Omnibus Essential Fish Habitat Amendment 2 ("Habitat Amendment"). *See* Draft BiOp at 284-85; *see also Conservation Law Foundation v. Ross*, 422 F. Supp. 3d 12, 31 (Oct. 28, 2019). Despite noting that that closures benefit ESA-listed species such as right whales "due to elimination of active gear in areas where ESA-listed species are present," Draft BiOp at 193, the Draft BiOp concludes that reopening the court-ordered closures of the Nantucket Lightship Closure Area and Closure Area 1 to gillnet fishing is not likely to adversely affect right whales. *Id.* at 323. This determination is legally flawed for several reasons.

First, the consultation's risk analysis ignores new scientific data on increasing abundance and year-round use of Southern New England waters where the court-ordered closures occur. *See supra*, Section VI.B. The process to assess risk to ESA-listed species is described as follows: "To assess risk, we take into consideration our analysis of effort pre-and post-Amendment, ESA-

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[79] 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.

[80] *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).

[81] *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.

[82] *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").

listed species distribution (see Status of the Species), and documented interactions. This informs the degree of overlap between listed species and fisheries in each region. We then identify which gears pose a risk to listed species." Draft BiOp at 287. However, the consultation analysis repeatedly refers to a seasonal closure of the Southern New England waters and ignores the best available scientific data demonstrating that right whales use Southern New England waters all of the year and at higher abundance, and thus entanglement risk could increase there. *See id.* at 323 (listing the criteria evaluated and stating: "interaction risks with listed species are strongly associated with the quantity of gear in the water (e.g., number of vertical lines, gillnets, trawls), gear soak/tow duration, and the temporal and spatial overlap of the gear and protected species.").

Second, the conclusion that effort is "not likely" to shift if these closures are reopened is not reasonable. *See* Draft BiOp at 301 (Closed Area 1), 312 (Nantucket Lightship). To assess whether shifts in effort are likely to occur, the Draft BiOp first makes a series of caveated conclusory statements without support regarding the "potential to result in a shift" and the purported poor health of target stocks within the closure (while alternatively claiming fishermen fish the edges now for "spillover effects"). *Id.* Next it analyzes and compares pre-Amendment (September 1, 2016, through March 31, 2018) Vessel Trip Reports ("VTR") data to post-Amendment (April 1, 2018, through October 31, 2019) VTR data, in specified regions and by gear types. Draft BiOp at 286. Given that court-ordered closures were effective November 1, 2019, the agency's use of the limited data set obtained from a 572-day period on either side of March 31, 2018 is arbitrary, ignores the spatial and temporal aspects of the several gillnet fisheries operating there, *see* Draft BiOp at 53, 56, 57, and ignores the circumstances related to opening thousands of square miles of ocean waters to gillnet fishing that had been closed between 17 and 27 years. Draft BiOp at 288.

Third, the fisheries interaction risk analysis does not consider the impact of the increasing quotas for target stocks in the sink gillnet fisheries operating in that area or of potential latent effort in the gillnet fisheries. *See supra*, Section VI.D.

Until additional analysis is done, the ALWTRT meets to recommend gillnet measures across the Category I and II fisheries, and all relevant rulemaking is completed, all closures (ALWTRP and court-ordered) should remain in place.

H. The Conclusion that the Relevant Fisheries are Not Likely to Adversely Affect Critical Habitat for Right Whales Ignores the Best Available Scientific Data

The Draft BiOp concludes that the proposed action is not likely to adversely affect critical habitat for right whales. *See*, *e.g.*, Draft BiOp at 71, 83, Table 40. For this determination, the boundaries of the action area are defined as existing boundaries of current critical habitat designations. *Id*. at 84. For two independent reasons, this conclusion is flawed: (1) in critical habitat designated specifically as foraging habitat, the presence of vertical line diminishes the value of the foraging habitat thus adversely modifying it such that it cannot serve its intended purpose; and (2) fishing gear could interfere with prey availability in this critical habitat.

1. The Best Available Scientific Data Demonstrate that the Conservation Value of Right Whale Foraging Habitat As a Whole Is Diminished by Lines in the Water

The Draft BiOp concludes that line in the water has no impact on critical habitat, stating:

> Fixed fishing gear also does not block the entire water column or form a wall preventing access. Vertical buoy lines supporting the fixed gear may extend throughout the water column, however, the Gulf of Maine critical habitat feeding area is vast and not constricted by geological or physical barriers, therefore whales are free to move through and around these gears to reach their feeding resources. The impact of entanglements on individual animals as they access their feeding resources is addressed in section 7.2 of this analysis, but is not considered an impact to whales accessing or moving within critical habitat.

Draft BiOp at 87. This ignores the best available scientific data. The sheer number and the concentration of vertical lines in the Gulf of Maine, *see* Draft BiOp at 289–92, appreciably diminish the value of this critical habitat as a whole for the conservation (i.e., survival and recovery) of right whales. The area may be "vast," but it is a relatively small proportion of the species' total range and by definition it was established precisely to protect areas critical to foraging. It is disingenuous to state that right whales are "free to move through and around these gears," implicitly characterizing a right whale's movement through areas with fishing gear as the whale's choice rather than appropriately recognizing that fishing gear constitutes a barrier to unimpeded foraging that is imposed on the whale. The data is clear not only that right whales are more likely to get entangled when feeding because their mouths are wide open but also that there is no absolutely evidence to suggest that whales can detect or avoid fishing gear in the water column.[83] Thus, the value of the critical habitat established to protect the whale's access to prey resources is appreciably diminished by the life-threatening risks of entanglement right whales must assume when foraging in critical habitat.

In addition, NMFS's consideration unduly narrows the effects of the action by considering only the impacts of federal fisheries on critical habitat, not fishing in state waters as regulated and authorized by NMFS under the ALWTRP.

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[83] *See, e.g.*, Leiter et al. 2017; Moore, M. 2019. How we can all stop killing whales: a proposal to avoid whale entanglement in fishing gear. ICES Journal of Marine Science. 76(4): 781–786; Baumgartner, M. et al. 2007. Enormous Carnivores, Microscopic Food, and a Restaurant That's Hard to Find. In: Kraus S.D. and R.M. Rolland, (eds.). The Urban Whale: North Atlantic Right Whales at the Crossroads. Harvard University Press, Cambridge, MA at 140; Anderson Cabot Center, About the North Atlantic Right Whale, https://www.andersoncabotcenterforoceanlife.org/rightwhales/right-whales/about-right-whales/ (last visited Feb. 18, 2021); Sharp, S., W. McLellan, D. Rotstein, A. Costidis, S. Barco, K. Durham, T. Pitchford, P.-Y. Daoust, T. Wimmer, E. Couture, L. Bourque, T. Frasier, B. Frasier, D. Fauquier, T. Rowles, P. Hamilton and M. Moore. 2019. Gross and histopathologic diagnoses from North Atlantic right whale Eubalaena glacialis mortalities between 2003 and 2018. Dis. Aq. Org. 135:1-31.

2. *The Best Available Scientific Data Demonstrates that Fishing has an Effect on Prey Availability*

In concluding that the operation of the fisheries will have no adverse effects on the availability of prey because they pass through rather than are captured by fishing gear, Draft BiOp at 237, the agency has ignored the best available scientific data suggesting that fishing activity can have an effect on prey availability for right whales, and thus affect the conservation value of critical habitat.

Right whales select foraging areas based on a relatively high threshold of copepod density. *Id.* Notably, foraging areas with suitable prey density are limited relative to the overall distribution of North Atlantic right whales,[84] 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.[85] Thus, if access to prey is limited in any way, the ability of the whale to offset its energy expenditure during foraging is jeopardized.

The Draft BiOp dedicates several pages of Section 4 (Status of the Species), *see* Draft BiOp at 85–88, to explaining exactly how fishing (including using trap/pot and gillnet gear) might inhibit copepod aggregation.[86] Specifically, it states: "fixed fishing gear, such as gillnets and trap/pots, may also temporarily disturb local aggregations of copepods during the setting and hauling of gear due to turbidity caused by the sediment disturbance as the gears are set or dragged over the bottom during retrieval (Northeast Region Essential Fish Habitat Steering Committee 2002)." Draft BiOp at 87. Yet, ultimately, it concludes:

> we have determined that the effects of the fishing gears and vessels used by the fisheries in this Opinion on the availability of copepods for foraging right whales are **likely so small that they cannot be meaningfully measured, detected, or evaluated, and, therefore, insignificant**.

Id. at 88 (emphasis added). Given the declining prey availability for right whales due to climate change, *id*. at 95, these effects should not be discounted so readily. NMFS itself apparently recognizes that these prey disturbances should and could be minimized because it relies on the Massachusetts Restricted Area to "further minimize" such disturbances stating:

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[84] *Id.*

[85] 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.

[86] The Conservation Law Foundation submitted at least two public comment letters to the New England Fishery Management Council and NMFS regarding the need for a section 7 consultation on the impacts of fishing on critical habitat in the Great South Channel. That consultation has not happened.

> 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).

Draft BiOp at 87.

VII. The Draft BiOp Fails to Properly Analyze the Effects of the Action on the Recovery of Right Whales

The Draft BiOp fails to properly evaluate how the (improperly defined) actions under consultation will affect the recovery of the critically endangered right whale. Instead, the Draft BiOp largely assumes that because the fisheries will not impact the survival of the right whale, they will not impact its recovery either. In so doing, NMFS arbitrarily conflates the analysis of whether the proposed actions will jeopardize the right whale's survival with the distinct analysis of whether they will jeopardize the right whale's recovery.[87]

To "jeopardize the continued existence of" a species means "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the *survival and recovery* of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. § 402.02 (emphasis added). As courts have explained, "[t]he only reasonable interpretation of the jeopardy regulation requires NMFS to consider recovery impacts as well as survival." *Nat'l Wildlife Fed'n*, 524 F.3d at 933; *see also Gifford Pinchot Task Force v. U.S. Fish and Wildlife Serv.*, 378 F.3d 1059, 1070–71 (9th Cir. 2004) (requiring consideration of recovery in evaluation of effects on critical habitat). Recovery is a more stringent jeopardy standard than survival because "a species can often cling to survival even when recovery is far out of reach" and an agency could find jeopardy based on "injury to recovery prospects alone." *Nat'l Wildlife Fed'n*, 524 F.3d at 931–32. As such, a "singular focus on survival violate[s] the ESA." *Id.* at 932 (citation omitted).

Thus, as part of its jeopardy analysis, NMFS must identify a benchmark—a tipping point precluding recovery—against which it can gauge an action's impacts. *Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 527 (9th Cir. 2010). *See also Nat'l Wildlife Fed'n*, 524 F.3d at 936 (wildlife agency must "know roughly at what point survival and recovery will be placed at risk before it may conclude no harm will result"); *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 184 F. Supp. 3d at 892.

The Draft BiOp contains no detailed analysis of how the agency actions being consulted on will impact the right whale's recovery. Such failure is particularly glaring considering the right whale is already nearing extinction. Instead, it only focuses on the effects of the proposed action on the whale's survival. *See e.g.*, Draft BiOp at 343 ("Above, we determined that the mortality of North Atlantic right whales associated with the proposed action is not reasonably expected to cause an appreciable reduction in the likelihood of survival of the species, and we do

[87] NMFS compounds this error by narrowly defining the agency action, as described above.

not expect the proposed action to have consequential effects on NARW population potential for recovery.").

In addition, the Draft BiOp contains no analysis of the "rough point" recovery will be at risk or establish any "tipping point" metrics against which to assess the species' recovery prospects. *Nat'l Wildlife Federation*, 524 F.3d at 936. These failures are particularly troubling given NMFS's other findings in the Draft BiOp, including, for example, that the right whale "faces a high risk of extinction" and "anthropogenic threats appear to be worsening;" the right whale's "resilience to future perturbations is expected to be very low;" and the right whale "may decline towards extinction if prey conditions worsen, and anthropogenic mortalities are not reduced." Draft BiOp at 95, 326–27; *see also* 73 Fed. Reg. at 60,175 (population models "indicate that preventing the death of even one adult female could significantly affect the population's trend."); 73 Fed. Reg. 60,173, 60,176 (Oct. 10, 2008) (NMFS's statement, when the population was near what it is today, that "the population can sustain **no deaths or serious injuries** due to human causes if its recovery is to be assured." (emphasis added)). This concern is only heightened because of the agency's improper exclusion of the effects of ALWTRP-regulated state fisheries and improper inclusion of the "benefits" of the ten-year Framework in its effects analysis.

VIII. The Draft BiOp Fails to Aggregate the Effects of the Action to the Baseline and Cumulative Effects

NMFS's Draft BiOp employs an unlawful jeopardy analysis. In evaluating whether the actions under consultation will jeopardize endangered right whales and other protected species, NMFS cannot simply compare the effects of the agency action on the species to other threats—it must consider the status of the species, the impacts of the proposed action **added to** the environmental baseline **added to** cumulative effects and whether these effects **in the aggregate** are likely to jeopardize a species' survival and recovery. *See* 50 C.F.R. § 402.14(g)(3), (4), (h)(1); 16 U.S.C. § 1536(b)(3), (4).

In other words, the proper analysis "is not the proportional share of responsibility the federal agency bears for the decline in the species, but what jeopardy might result from the agency's proposed action in the present and future human and natural contexts." *Pac. Coast Fed'n of Fishermen's Ass'ns v. U.S. Bureau of Recl.*, 426 F.3d 1082, 1093 (9th Cir. 2005) (citations omitted). Were it otherwise, "a listed species could be gradually destroyed, so long as each step on the path to destruction is sufficiently modest." *Nat'l Wildlife Fed'n*, 524 F.3d at 930. But "[t]his type of slow slide into oblivion is one of the very ills the ESA seeks to prevent." *Id.*; *see also Pac. Coast Fed'n of Fishermen's Ass'ns v. Nat'l Marine Fisheries Serv.*, 265 F.3d 1028, 1036–37 (9th Cir. 2001) (holding that if "individual projects are diluted to insignificance and not aggregated," then NMFS's "assessment . . . is tantamount to assuming that no project will ever lead to jeopardy of a listed species.").

The Draft BiOp fails to conduct this required aggregate analysis.[88] For example, NMFS "compare[s] the population trajectory with no impact from the proposed action (i.e., no entanglements in federal waters) to the population trajectory that includes the anticipated impacts from the action (i.e., entanglements in federal waters)." Draft BiOp at 331. NMFS then uses this analysis to conclude that "even in the absence of the U.S. federal fisheries, the female right whale population will decline," and the fisheries therefore will not jeopardize the species. *Id.* at 332–33. And fatally, the entire modeling exercise is rendered meaningless by NMFS's improper definitions of the proposed action, which assumes the full mitigating effects if all four Framework rulemakings are implemented in the federal fisheries on schedule and are fully effective, while excluding the effects of ALWTRP-regulated fishing in state waters.

Put simply, NMFS impermissibly based its "no jeopardy" conclusions on the view that, because the right whale's prospects for survival are dismal either way, mortality, serious injury, and other impacts from federal fisheries will not leave the whales that much worse off, comparatively speaking. The ESA forbids this approach. *See Nat'l Wildlife Fed'n*, 524 F.3d at 930 (rejecting the Fisheries Service's approach where only if the effects of the action "are 'appreciably' worse than baseline conditions must a full jeopardy analysis be made").

IX. The No Jeopardy Conclusion Is Contrary to the Evidence Before the Agency

Even if the Draft BiOp used the appropriate jeopardy analysis (which it did not), the agency still has to "articulate[ ] a rational connection between the facts found and the [conclusion] made." *Pac. Coast Fed'n of Fishermen's Ass'ns v. Nat'l Marine Fisheries Serv.*, 265 F.3d at 1034. The Draft BiOp's no jeopardy conclusion does not meet this standard.

For example, NMFS's Draft BiOp states that "[t]he North Atlantic right whale population faces a high risk of extinction. The population size is small enough for the death of any individuals to have measurable effects in the projections on its population status, trend, and dynamics." Draft BiOp at 326. It further states that "[t]he species has low genetic diversity . . . and the species['] resilience to future perturbations is expected to be very low;" and that "entanglement in fishing gear appears to have had substantial health and energetic costs that affect both survival and recovery of right whales." *Id.* at 327. The agency's no jeopardy conclusion is impossible to square with these findings.

Other evidence before the agency—including numerous statements from the agency itself—also demonstrates the arbitrary nature of its conclusion. For example, in 2019, NMFS assigned the right whale "a recovery priority #1," meaning its "extinction is almost certain in the immediate future because of rapid population decline or habitat destruction, and its survival conflicts with construction, development, or economic activity."[89] Also in 2019, NMFS stated that the right whale's situation presents "an urgent conservation crisis;" that "protecting every individual is a top priority;" and that "[r]ight whales cannot withstand continued losses of mature females—

[88] Moreover, as discussed above, NMFS excluded state waters in its jeopardy analysis. Further, the "action" it consulted on was the Framework, not just the proposed ALWTRP amendments. This analysis is fundamentally flawed to begin with.

[89] NMFS, Species in the Spotlight.

we have reached a critical point."[90] And in July 2020, the International Union for the Conservation of Nature ("IUCN") reclassified the North Atlantic right whale from "endangered" to "critically endangered"—the last category before "extinct in the wild."[91] Additionally, following the death of the first known calf of the 2020–2021 breeding season, NMFS stated that "each new right whale calf brings so much hope for this critically endangered species, and losses like this have a substantial impact on their recovery."[92] Indeed, one of the agency's own scientists recently published a paper concluding that known right whale deaths—which represent only a fraction of actual right whale deaths—"suggest that the recovery of North Atlantic right whales is in serious jeopardy . . . unless substantial mitigation measures that reduce mortality and serious injury from human activities are instituted immediately."[93]

Further, because of the low population size, the PBR of the right whale is 0.7.[94] The MMPA specifies that the PBR calculations require a 0.1 recovery factor for species listed under the ESA to assure no more than a ten percent delay in recovery time. 50 C.F.R. § 229.2. If takes occur at a rate at or above the PBR, the recovery rate for the stock will be impeded by definition.[95]

Moreover, while the Draft BiOp states that entanglement in commercial fishing gear is a leading cause of right whale serious injury and mortality, it also recognizes many other activities that currently pose a threat, or will do so in the future, in its analysis of the environmental baseline and cumulative effects. These threats include vessel strikes, plastic pollution, and exposure to harmful algal blooms, among others. Draft BiOp at 143–79.

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[90] NMFS, Immediate Action Needed to Save North Atlantic Right Whales.

[91] IUCN, Almost a third of lemurs and North Atlantic Right Whale now Critically Endangered – IUCN Red List, (July 9, 2020), https://www.iucn.org/news/species/202007/almost-a-third-lemurs-and-north-atlantic-right-whalenow-critically-endangered-iucn-red-list; IUCN Red List, North Atlantic Right Whale, https://www.iucnredlist.org/species/41712/162001243 (last assessed Jan. 1, 2020).

[92] NMFS, First Known North Atlantic Right Whale Calf of the Season Washes Up Dead off North Carolina (Nov. 23, 2020), https://www fisheries.noaa.gov/feature-story/first-known-north-atlantic-right-whale-calf-season-washesdead-north-carolina.

[93] Pace, R. M. III, et al. 2021.

[94] *See, e.g.*, Colleen Coogan Presentation to the Atlantic Large Whale Take Reduction Team, Jan. 2021. While the new right whale PBR has not gone through peer review, that is irrelevant as the ESA requires NMFS to base its biological opinion on the best *available* scientific data. *See, e.g.*, *Sw. Ctr. for Biological Diversity v. Babbitt*, 215 F.3d 58, 60 (D.C. Cir. 2000) (under the best available science standard of the ESA, "[e]ven if the available scientific and commercial data were quite inconclusive, [NMFS] may—indeed must—still rely on it.").

[95] The MMPA defines PBR as "the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population;" and defines "optimum sustainable population" as the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element," 16 U.S.C. § 1362(9), (22), which is comparable to the recovery goals of the ESA.

Yet, despite the plethora of threats faced by right whales and NMFS's express recognition that these threats have a negative impact on recovery, *see, e.g.*, *id.* at 203, the Draft BiOp contradictorily concludes that the operation of the fisheries is not likely to jeopardize the right whale's continued existence. It is hard to see how the effects of the fisheries—which NMFS estimates will result in the lethal and sublethal entanglement of over 11% of the population each year in the federal fisheries alone (improperly excluding entanglements in ALWTRP-regulated state fisheries)—when added to these other threats that NMFS finds negatively impact recovery in and of themselves can have no appreciable effect on the survival or recovery of the species. *See, e.g.*, 50 C.F.R. §§ 402.02, 402.14(g) (effects of the action must be added to the environmental baseline and cumulative effects in light of the status of the species); *see also Nat'l Wildlife Fed'n*, 524 F.3d at 930. The Draft BiOp certainly provides no answer.

Indeed, the Draft BiOp's conclusions are impossible to reconcile with its findings and scientific studies referenced earlier in the opinion that if none of the observed fishery-related mortality or serious injury occurred, the right whale population in 2016 would have been more than 12% higher—totaling 506 individuals. Draft BiOp at 95. Similarly, the Draft BiOp also acknowledges that eliminating all mortalities from fisheries, including cryptic mortality, could have resulted in a 2016 population more than 24% higher—to 562 individuals, and possibly as high as 600 individuals in 2018. *Id.*[96] Other studies have reached similar conclusions, determining for example, that "the population should continue to grow even with poor prey availability and only fails to do so when whale mortalities reach 8 to 10 per year."[97] Right whale mortalities are well above that level.

X. The Draft BiOp Fails to Include a Proper Incidental Take Statement and Cannot Authorize Any Take of ESA-Listed Large Whales

The language of the ESA and its implementing regulations make clear that a biological opinion must include an incidental take statement ("ITS") if NMFS concludes that the action is likely to result in the incidental take of listed species. 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(g)(7). Where the take of an endangered marine mammal is involved, NMFS cannot issue an ITS unless and until it has first issued an MMPA take authorization under section 101(a)(5) of that statute. 16 U.S.C. § 1536(b)(4)(C). Despite the bind that that puts NMFS in here, NMFS is never excused from its mandatory duty to issue an ITS with a biological opinion because it cannot also authorize incidental take of an endangered marine mammal under the standards established in MMPA section 101(a)(5). Indeed, a federal court recently held that NMFS's prior biological opinion on the American lobster fishery was unlawful for failing to include an ITS despite recognizing that the fishery would result in the death or serious injury of 3.25 right whales per year even where the agency pled impossibility. *Ctr. for Biological Diversity v. Ross*, No. 18-112-JEB, 2020 U.S. Dist. LEXIS 62550 (D.D.C. Apr. 9, 2020).

[96] While the paper the Draft BiOp cites for this proposition considered M/SI from both U.S. and Canadian fisheries, the paper supports the notion that there would be more right whales if entanglements in U.S. fisheries ceased.

[97] Right Whale Recovery Tech Memo at 6.

The only circumstance when a biological opinion does not need to include an ITS is where the consulting agency determines that the proposed action **will not** result in any incidental takes of any listed species. *Az. Cattle Growers' Ass'n v. U.S. Fish and Wildlife Serv.*, 273 F.3d 1229, 1242 (9th Cir. 2001). In the Draft BiOp, NMFS does not conclude that an ITS is not required—nor could it—as NMFS does not determine that operation of the fisheries will not result in the incidental take of any listed species. To the contrary, NMFS concludes that both lethal and non-lethal entanglement of ESA-listed whales in the federal fisheries will continue to occur (which again unreasonably excludes take in state fisheries).

Specifically, NMFS estimates that operation of the U.S. fisheries will take an average of 15.125% of the North Atlantic right whale population per year via entanglements, an estimate that includes both lethal entanglements of 6.724 per year as well as sublethal entanglements. Draft BiOp at 226–27. After improperly excluding entanglements in ALWTRP-regulated state fisheries, *id.* at 227, and unrealistically assuming that the proposed ALWTRP measures will reduce M/SI in the federal fisheries to an annual average of 2.2, *id.* at 230, the ITS then purports to authorize sublethal take of 11.04% of the right whale population, *id.* at 392, even though NMFS explicitly assumes that this percentage will include the 2.2 average M/SI per year that will continue to occur, *id.* at 227. The Draft BiOp also estimates that the fisheries will take 1.89 fin whales per year, one sei whale per year, and one sperm whale per year via entanglements. *Id.* at 392.

Nevertheless, while NMFS's ITS purports to authorize the non-lethal take of right whales and other ESA-listed whales from entanglement in fishing gear used in federal fisheries, it does not explicitly authorize the lethal take of right whales "because the lethal incidental take of ESA-listed whales has not been authorized under section 101(a)(5) of the MMPA." Draft BiOp at 390. NMFS noted that "[f]ollowing the issuance of such authorizations, NMFS may amend this Opinion to adjust lethal incidental take allowance for these species, as appropriate." *Id.*

This approach is arbitrary for numerous reasons. First, the Draft BiOp does not include an ITS for the deaths and serious injuries of ESA-listed large whales that NMFS acknowledges will occur by operation of the fisheries in both federal and state waters. NMFS's "failure to include an ITS . . . after finding that the [fisheries have] the potential to harm the North Atlantic right whale at more than three times the sustainable rate is about as straightforward a violation of the ESA as they come." *Ctr. for Biological Diversity v. Ross*, 2020 U.S. Dist. LEXIS 62550, at *28. NMFS's approach is especially arbitrary here considering its express recognition that the level of sublethal take of right whales it purports to authorize—11.04% of the population each year—**includes "[e]ntanglements in the U.S. federal fisheries anticipated to result in M/SI."** Draft BiOp at 227 (emphasis added).

That the ITS specifies the extent of non-lethal take, contains reasonable and prudent measures ("RPMs"), and specifies terms and conditions cannot save the agency's draft ITS—"[a]ny non-ITS substitute, even one that fulfills one of several functions of an ITS, will not do." *Id*. at *27–28. That is particularly true here where the RPMs for large whales are actions that NMFS is already legally required to do under the MMPA. *See* Draft BiOp at 393–97; *see also, e.g.*, 16 U.S.C. §§ 1387(d)(1) (requiring NMFS to monitor incidental mortality and serious injury of marine mammals to, *inter alia*, "identify changes in fishing methods or technology that may

increase or decrease incidental mortality or serious injury"), 1386 (requiring stock assessments for marine mammal species that include analysis of the impacts of commercial fisheries on the stock and other factors contributing to the decline). Moreover, the RPMs—consisting of further modeling and study—will not actually mitigate the impact of take of ESA-listed whales and therefore do not serve the purpose of an RPM. *See* 50 C.F.R. § 402.14(i) (RPMs must "**minimize** [the] impact" of incidental take (emphasis added)). Indeed, the amount or extent of sublethal (and implicit lethal) take that NMFS is proposing to authorize is the same level of both non-lethal and lethal take it estimates will occur via operation of the federal fisheries aftern implementation of the ALWTRP measures. In other words, the ITS arbitrarily authorizes a level of take co-extensive with the (unlawfully limited) agency action under review.

Second, NMFS's approach—purporting to authorize non-lethal take, but not lethal take, because lethal take is not yet authorized under the MMPA—is inconsistent with the law. The MMPA prohibits all take of marine mammals unless otherwise authorized. NMFS has not—and, especially for right whales, cannot—authorize non-lethal take under section 101(a)(5)(E).[98] And the MMPA prohibits not only take via death, but also actions that capture marine mammals and "any act of pursuit, torment, or annoyance" that has the potential to injure or disturb a marine mammal, including disruption of behavioral patterns "including migration, breathing, nursing, breeding, feeding" activities. 16 U.S.C. § 1362(13), (18). While NMFS can authorize take incidental to commercial fisheries via section 118 for species not listed under the ESA, the MMPA makes clear that when ESA-listed species are at issue, both sections 101(a)(5)(E) and 118 apply. *See id.* §§ 1371(a)(5)(E), 1387(a)(2). NMFS cannot authorize sublethal take of ESA-listed marine mammals simply by issuing amendments to the ALWTRP via section 118.

Third, NMFS's draft ITS obscures the tremendous number of sublethal takes it purports to authorize by specifying this take as an annual average percentage of the population over a five-year period, i.e., 11.04% per year. Based on the current estimated population, NMFS proposes to authorize sublethal take of **nearly 38** right whales per year (not including the 2.2 M/SI that are already baked into this estimate).

NMFS's approach is especially arbitrary considering that it proposes to authorize sublethal take of other ESA-listed whales as a specific (and much smaller) number—an average of only one sublethal take of fin and sperm whales and 1.89 sei whales per year. NMFS does not explain why it proposes to authorize take as a specific number for other whale species, but a percentage of the population for right whales.

And the percentage it does propose to authorize likely underestimates the extent of sublethal take from the fisheries given that NMFS has concluded nearly 100 right whales a year exhibit new scars indicating interactions with ropes, which is nearly 30% of the current population.[99] Indeed,

[98] Indeed, NMFS may not authorize any take whatsoever—whether lethal or non-lethal—of North Atlantic right whales, or any other ESA-listed large whale, by commercial fishing operations under section 101(a)(5)(E) unless it determines that lethal take (i.e., mortality and serious injury) will have a negligible impact on that species. 16 U.S.C. § 1371(a)(5)(E)(i)(I).

[99] *See, e.g.*, Email from Colleen Coogan, NMFS to Atlantic Large Whale Take Reduction Team, RE: Take reduction target approaches considered, Apr. 18, 2019.

NMFS admits that its proposed ITS does not include the 4.085% of the population that NMFS estimates is taken via sublethal entanglements in state fisheries. *See* Draft BiOp at 227. Nor does this estimate account for the revisions that will have to be made to the agency's assumptions on total annual average M/SI in U.S. commercial fisheries based on Pace et al. 2021.

Moreover, despite recognizing in both the Draft BiOp and elsewhere (1) that the sublethal take of female right whales has harmful impacts not only to individual whales but also to the population and its prospects for recovery, *see, e,g.*, Draft BiOp at 220; (2) that "even without accounting for injury, the drag from carrying rope and other gear for long periods of time can be energetically more expensive for a female than the migratory and developmental costs of pregnancy;"[100] and (3) that "[e]ven if disentangled, there are several injuries that can have costs lasting long after disentanglement," including "trauma wounds from rope cuts that may or may not eventually heal, and damage to baleen plates that can prevent efficient filter feeding for many years since these plates grow slowly;"[101] NMFS's ITS arbitrarily treats all sublethal takes as equal.

NMFS's approach for right whales also undermines the purpose of an ITS. An ITS must "set forth a 'trigger' that, when reached, results in an unacceptable level of incidental take, invalidating the safe harbor provision, and requiring the parties to re-initiate consultation." *Ariz. Cattle Growers' Ass'n v. U.S. Fish & Wildlife*, 273 F.3d 1229, 1249 (9th Cir. 2001); 50 C.F.R. § 402.16(a)(1). Setting a level of permissible sublethal take as a percentage of the overall population will make knowing when that level of take has been exceeded impossible, particularly where (a) NMFS's official population estimates for a year are not made official until several years later; and (b) given that the vast majority of entanglements that occur each year go undetected, there is no way to calculate how many new sublethal entanglements have occurred in any given year, let alone the average entanglements each year over a five-year period. Nor is there any way to adequately monitor such takes. And by explicitly excluding M/SI from the ITS, even though the assumption on entanglement percentages itself included both lethal and non-lethal, NMFS has avoided any chance of having to reinitiate consultation based on exceedance of the ITS via detected M/SI. *See* 50 C.F.R. § 402.16(a)(1).

Further, the percentage-based ITS for sublethal take of right whales ignores the basic notion that, as the population continues to decline, the impact of sublethal takes on an even smaller population will have an ever greater impact on the species' prospects for survival and recovery. *See, e.g.*, Draft BiOp at 95, 326, 327. Yet the ITS would allow more than 11% of the right whale population to be entangled each year for five years before reinitiating consultation, no matter how small it becomes.

Fourth, NMFS's suggestion in the ITS that it will amend the ITS to authorize lethal take of right whales under the ESA at some point after it authorizes such take under the MMPA is disingenuous. NMFS has never authorized take of right whales incidental to the operation of the fisheries under either the MMPA or the ESA. Indeed, NMFS has acknowledged that it cannot

[100] *See, e.g.*, Right Whale Recovery Tech Memo at 12.

[101] *Id.*

authorize lethal take of right whales by the lobster fishery because such deaths have more than a negligible impact on the species. *See, e.g.*, *Ctr. for Biological Diversity v. Ross*, 2020 U.S. Dist. LEXIS 62550, at *26. It is the essence of arbitrary agency action for NMFS to continue to authorize these fisheries that it acknowledges will kill and seriously injure right whales at unsustainable levels when it knows it cannot lawfully authorize such take because of the critically imperiled status of the right whale.

Finally, despite recognizing that the fishery could also take right whales and other whales via fishing vessel operations, *see, e.g.*, Draft BiOp at 146, the ITS fails to specify the amount or extent of this take or include measures to mitigate the impact of this take on the species.

XI. NMFS's Authorization and Management of the Fisheries Violates its Substantive Duties under Section 7(a)(2) of the ESA

NMFS is in violation of section 7(a)(2) of the ESA. Pursuant to section 7(a)(2), NMFS is required to "insure" that any of its actions or approvals are "not likely to jeopardize the continued existence of any endangered . . . species," including North Atlantic right whales. *See* 16 U.S.C. § 1536(a)(2). This substantive duty applies to NMFS's permitting, management, and authorization of fisheries in both state and federal waters under the ALWTRP and relevant fishery management plans.

An agency violates its substantive section 7(a)(2) duty by relying on an invalid biological opinion. *Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 532 (9th Cir. 2010). Where the biological opinion is facially flawed, the action agency's reliance on it is arbitrary. *Ctr. for Biological Diversity v. BLM*, 698 F.3d 1101, 1127–28 (9th Cir. 2012); *Wild Fish Conservancy*, 628 F.3d at 532. "Where the opinion's flaws are '*legal* in nature' . . . '[d]iscerning them requires no technical or scientific expertise,' and the failure to do so may result in 'an action based on reasoning 'not in accordance with law' and . . . thus arbitrary and capricious.'" *Id.* (citations omitted).

As explained above, a federal court has already found that NMFS's existing biological opinion on the American lobster fishery is unlawful for failing to include an ITS, and further indicated that the biological opinion's jeopardy analysis may also have been unlawful for focusing solely on entanglements that lead to mortality and serious injury as defined by the MMPA, rather than the full effects of the action under the ESA. *Ctr. for Biological Diversity v. Ross*, 2020 U.S. Dist. LEXIS 62550, at *28–29. NMFS's biological opinions on other Atlantic fisheries suffer from similar flaws.[102] Yet NMFS continues to rely on these opinions in authorizing and managing the fisheries that are the subject of the Draft BiOp. This is unlawful. *See Ctr. for Biological Diversity v. Bernhardt*, 982 F.3d at 750 (holding that action agency's reliance on invalid no jeopardy biological opinions was arbitrary); *Mayo v. Jarvis*, 177 F. Supp. 3d 91, 146 (D.D.C. 2016) (same); *Ctr. for Biol. Diversity v. Nat'l Marine Fisheries Serv.*, 977 F. Supp. 2d

[102] *See, e.g.*, NMFS, Endangered Species Act Section 7 Consultation on the Continued Implementation of Management Measures for the Northeast Multispecies, Monkfish, Spiny Dogfish, Atlantic Bluefish, Northeast Skate Complex, Mackerel/Squid/Butterfish, and Summer Flounder/Scup/Black Sea Bass Fisheries [Consultation No. F/NER/2012/01956] GARFO-2012-00006, Dec. 16, 2013.

55, 90–91 (D.P.R. 2013) (holding NMFS's reliance on a biological opinion with an inadequate ITS "violated its substantive duty to ensure that the continued operation of the Fishery did not jeopardize" listed coral species).

Finalizing the Draft BiOp as written will not change this, as NMFS's Draft BiOp is invalid on its face for the reasons described above. Moreover, as also described above, new information reveals that NMFS's authorization and management of the fisheries is not only harming right whales, but actively driving the species toward extinction, which only underscores the arbitrariness of the agency's continued reliance on the facially invalid biological opinions.

XII. NMFS's Authorization and Management of the Fisheries Violates, and Will Continue to Violate, Section 9 of the ESA

NMFS is in violation of the ESA's prohibition on "taking" or causing others to take endangered species. The prohibition makes it unlawful for any person to "cause [an ESA violation] to be committed." 16 U.S.C. §§ 1538(a), (g). Courts have made clear that a "governmental third party pursuant to whose authority an actor directly exacts a taking . . . may be deemed to have violated the provisions of the ESA." *Strahan v. Coxe*, 127 F.3d 155, 163 (1st Cir. 1997).

The Draft BiOp admits that the fisheries will cause the take of endangered right whales (and other whales) via lethal and non-lethal entanglements. NMFS does not currently have a valid ITS for its authorization and management of any of the fisheries analyzed in the Draft BiOp. And its Draft BiOp does not propose a lawful ITS. By continuing to permit, authorize, and manage the fisheries, including through its implementation of management measures and the issuance of annual MMAP authorizations and fishing permits under the ALWTRP, MMPA and applicable fishery management plans, NMFS's actions have caused and will continue to cause the unpermitted take of endangered North Atlantic right whales (and other whales) in violation of section 9 of the ESA. In proposing to continue to authorize the fisheries without a valid ITS, NMFS is committing itself to continue its blatant violation of section 9 of the ESA.

XIII. NMFS Cannot Make Any Irreversible Commitment of Resources Before Consultation is Completed

Section 7(d) of the ESA provides that once a federal agency initiates consultation on an action under the ESA, the agency "shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate subsection (a)(2) of this section." 16 U.S.C. § 1536(d). Section 7(d) prohibitions remain in effect throughout the consultation period and until the federal agency has satisfied its obligations under section 7(a)(2) that the action will not result in jeopardy to the species.

While NMFS previously issued a memorandum concluding that its continued authorization of the fisheries at issue in the Draft BiOp would not violate section 7(d) of the ESA, NMFS should reexamine that conclusion in light of the plethora of new information indicating the increasingly dire status of the right whale and the role U.S. fisheries play in not only impeding the right whale's recovery but its very survival. Indeed, NMFS predicated its finding on the fact the

agency "retains the legal authority to restrict activities of fishery participants should new information require modification of current restrictions."[103] New information clearly indicates that NMFS must modify existing restrictions to save the right whale.

XIV. Conclusion

NMFS's Draft BiOp is riddled with legal inadequacies in what is the agency's apparent attempt to justify a pre-determined outcome—that continued operation of U.S. commercial fisheries will not jeopardize any listed species, including critically endangered right whales. Its approach is the essence of arbitrary agency decisionmaking and threatens to push right whales even closer to the brink of extinction. NMFS must substantially revise the Draft BiOp—and the draft ALWTRP regulation— to comply with its legal obligations under the ESA.

Sincerely,

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[103] Memorandum for Michael Pentony, Assistant Regional Administrator for Sustainable Fisheries from Kimberly Damon-Randall, Assistant Regional Administrator for Protected Resources, Reinitiating Section 7 Consultation on the Batched Fisheries, American Lobster, and Atlantic Deep-Sea Red Crab Biological Opinions, Oct. 17, 2017.

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