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Via Federal E-rulemaking Portal: <https://www.regulations.gov/document/NOAA-NMFS-2020-0031-0006>

Attention:

Colleen Coogan, Marine Mammal & Sea Turtle Branch Chief

Email: Colleen.Coogan@noaa.gov

Phone: 978-281-9181

National Marine Fisheries Service

Greater Atlantic Regional Fisheries Office

Protected Resources

55 Great Republic Drive

Gloucester, MA 01930

Phone: 978-281-9300

Re: Taking of Marine Mammals Incidental to Commercial Fishing Operations; Atlantic Large Whale Take Reduction Plan Regulations; Atlantic Coastal Fisheries Cooperative Management Act Provisions; American Lobster Fishery; 85 Fed. Reg. 86,878 (December 31, 2020); Dkt. No. 201221-0351; RIN 0649-BJ09 and the related Draft Environmental Impact Statement

Dear Colleen Coogan:

Our firm represents Oceana, Inc. in connection with its efforts to protect North Atlantic right whales. On behalf of Oceana, Inc., we submit the enclosed comments on the Proposed Risk Reduction Rule for Entanglement in Fixed Fishing Gear in the Waters of the U.S. Northeast (86 Fed. Reg. 86,878; Dkt. No. 201221-0351; RIN 0649-BJ09) and the related Draft Environmental Impact Statement.

Sincerely,

/s/ John Rousakis

John Rousakis

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Dear Colleen Coogan:

Oceana is the largest international ocean conservation organization solely focused on protecting the world's oceans, with more than 1.2 million members and supporters in the United States, including over 340,000 members and supporters on the U.S. Atlantic seaboard. Oceana has been engaged as a stakeholder in the management of U.S. fisheries and interactions with endangered species for more than 15 years, with a particular interest in effective bycatch minimization and reducing, if not eliminating, fishing gear entanglement-related death, injury, and harm to protected species, including the critically endangered North Atlantic right whale (NARW).

¹ National Marine Fisheries Service, *Draft Environmental Impact Statement, Regulatory Impact Review, and Initial Regulatory Flexibility analysis for Amending the Atlantic Large whale Take Reduction Plan: Risk Reduction Rule* (November 2020 Draft) [hereinafter, the "Draft EIS"].

Since 2010, the recovery of NARWs has reversed and the population has now declined for a variety of reasons.² The two main human-caused threats to NARWS – vessel strikes and fishing entanglement – are the main source of the decline, and possible exacerbating causes include prey and ecosystem shifts as a result of climate change and related whale behavior changes.³ In light of Oceana's interest in protecting NARWs from entanglement in fishing gear, Oceana appreciates the opportunity to provide comments on the North Atlantic Right Whale Proposed Risk Reduction Rule for Fishing Entanglement in Fixed Fishing Gear in the Waters of the U.S. Northeast (Proposed Risk Reduction Rule) and the related Draft Environmental Impact Statement (Draft EIS). After careful review of the Proposed Risk Reduction Rule and the Draft EIS, Oceana does not believe that the measures in the Proposed Risk Reduction Rule are sufficient to save NARWs from extinction, nor do the measures meet the legal requirements of the Marine Mammal Protection Act (MMPA) or the Endangered Species Act (ESA). In addition, the related Draft EIS fails to comply with the National Environmental Policy Act (NEPA). And, both documents appear to contain "arbitrary and capricious" elements in violation of the Administrative Procedure Act (APA). Moreover, the Proposed Risk Reduction Rule must be designed to reduce takes to levels lower than the PBR, regardless of economic impacts.⁴

In order to correct the inadequacies of the Proposed Risk Reduction Rule and the Draft EIS, Oceana urges the Fisheries Service to take the following actions:

- The Fisheries Service should significantly revise the Proposed Risk Reduction Rule and Draft EIS to aim for a more ambitious risk reduction target and to incorporate measures that will adequately recover the NARW population, including the use of proven management tools such as dynamic area management, gear and vertical line reduction, geographic and temporal expansion of static, time-area management, broader use of Automatic Identification Systems (AIS), better fishery monitoring and reporting, and incentives to promote testing and adoption of ropeless gear;
- If the Fisheries Services does not significantly revise the Proposed Risk Reduction Rule and Draft EIS as detailed above, the agency should withdraw the Proposed Risk Reduction Rule and reformulate a stronger rule and Draft EIS by assessing a broader range of more effective alternative measures to protect NARWs; and
- If the Fisheries Service withdraws the Proposed Risk Reduction Rule and Draft EIS, while a new, stronger rule is being developed, the agency should immediately implement interim emergency management measures that immediately reduce mortality and serious injury below the Potential Biological

² *Id.* at 2-26.

³ Sean A. Hayes, *North Atlantic Right Whales: A Summary of Stock Status and Factors Driving Their Decline*, NOAA Fisheries (Sept. 18, 2018) at 7, https://archive.fisheries.noaa.gov/garfo/protected/whaletrp/trt/meetings/September%202018/narw_brief_for_alwtrt_09_18_18.pdf.

⁴ *Id.*

Removal (PBR) level using authority under the MMPA, ESA, and the Magnuson-Stevens Fisheries Conservation and Management Act (MSA).

LEGAL BACKGROUND

I. MARINE MAMMAL PROTECTION ACT

A. Goals of the Statute

Since 1972, the MMPA has afforded special protection to marine mammal species from a wide range of threats. To protect marine mammals, such as NARWs, from human activities, the MMPA establishes a moratorium on the “take” of marine mammals.⁵ The MMPA defines “take” as “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.”⁶ In limited circumstances, the Fisheries Service,⁷ may grant exceptions to the take moratorium, such as for the incidental, but not intentional, taking of marine mammals for certain activities, which is done via an incidental take authorization.⁸

At the heart of the MMPA's science-driven approach to conservation, management and recovery of marine mammals are the goals of maintaining the optimum sustainable population and ecosystem function of marine mammal stocks, restoring depleted stocks to their optimum sustainable population levels, and reducing mortality and serious injury (bycatch) of marine mammals incidental to commercial fishing operations to insignificant levels. To achieve these overarching goals, the MMPA prohibits taking of marine mammals, with certain exceptions, including for commercial fisheries.⁹ Ultimately, the MMPA mandates a Zero Mortality Rate Goal, *i.e.*, marine mammal mortality in commercial fisheries should achieve a zero mortality and serious injury rate to a level approaching zero, by April 2001.¹⁰ Clearly, the Zero Mortality Rate Goal for marine mammal “take” in commercial fisheries has not been met, indicating the Fisheries Service's failure to effectively implement and enforce this bedrock environmental law.

The MMPA requires fisheries to achieve an interim goal of PBR.¹¹ The PBR is calculated based on the dynamics of a species or mammal stock to be “(t)he maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while

⁵ 16 U.S.C. §§ 1361(2), 1371.

⁶ 16 U.S.C. § 1362(13).

⁷ The Fish and Wildlife Service, within the Department of the Interior, is responsible for dugongs, manatees, polar bears, sea otters and walrus. *See* U.S. Fish and Wildlife Service, *Marine Mammals*, <https://www.fws.gov/international/animals/marine-mammals.html> (last visited Feb. 27, 2021).

⁸ 16 U.S.C. § 1371(a); NOAA Fisheries, *Incidental Take Authorizations Under the Marine Mammal Protection Act*, <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act> (June 24, 2020) (listing oil and gas exploration as an activity for which incidental take authorizations have been issued).

⁹ 16 U.S.C. § 1371(a).

¹⁰ 16 U.S.C. § 1387(b).

¹¹ *Id.* § 1387(f).

allowing that stock to reach or maintain its optimum sustainable population.”¹² This requirement is the guiding metric of success for recovering marine mammal species and for incidental fishing mortality reductions. Any “take” over PBR is unauthorized. When “take” exceeds PBR, a Take Reduction Plan (TRP) (discussed below) must be developed. In addition, if a commercial fisher has not registered their vessel and received an incidental take authorization (discussed below), then any “take” of a marine mammal species is subject to a substantial civil fine and a knowing violation is subject to criminal penalties, including imprisonment (civil fines of up to \$10,000 per violation and criminal penalties of up to \$20,000 per violation and imprisonment for up to a year).¹³

In the 2018 Stock Assessment Report for NARWs, PBR was calculated to be 0.9 mortalities or incidents of serious injury per year.¹⁴ The 2019 Stock Assessment Report for NARWs calculates PBR at 0.8.¹⁵ The draft 2020 Stock Assessment Report similarly calculates PBR at 0.8.¹⁶ However, as the Fisheries Service has recently acknowledged, the population of NARWs must be revised downward – from 412 to 366 as of January 2019 – in part because “the impact of the ongoing Unusual Mortality Event (UME) – declared in 2017 and involving 42 individuals [as of October 2020] – was worse than previously thought.”¹⁷ Between October 2020 and the end of February 2021, three more NARWs have died and another three have been seriously injured.¹⁸ As a result of the increased mortality and serious injury to the species, PBR will likely be even lower in the 2021 Stock Assessment Report.¹⁹ In other words, *less than one* NARW may be killed or seriously injured by human actions each year for the species to achieve optimum sustainable population.

B. The MMPA’s “Best Scientific Evidence Available” Requirement

The MMPA was the first congressional act to include a “best available science” mandate.²⁰ The statute requires use of “best scientific evidence available” in determining any

¹² 16 U.S.C. § 1362(20).

¹³ 16 U.S.C. § 1375.

¹⁴ 2018 Marine Mammal Stock Assessment Reports, 84 Fed. Reg. 28,489, 28,496 (June 19, 2019).

¹⁵ NOAA Fisheries, *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessment Reports – 2019, North Atlantic Right Whale* (Apr. 2020) at 22, https://media.fisheries.noaa.gov/dam-migration/2019_sars_atlantic_northatlanticrightwhale.pdf.

¹⁶ NOAA Fisheries, *DRAFT - U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessment Reports – 2020, North Atlantic Right Whale* (Aug. 2020) at 51, <https://s3.amazonaws.com/media.fisheries.noaa.gov/2020-12/Draft%202020%20Atlantic-Gulf-marine%20mammal%20stock%20assessment%20reports.pdf?null>.

¹⁷ Email from Colleen Coogan to ALWTRT Members and Alternates (Oct. 26, 2020).

¹⁸ NOAA Fisheries, *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> (Mar. 1, 2021); NOAA Fisheries, *Adult North Atlantic Right Whale Found Dead off South Carolina*, <https://www.fisheries.noaa.gov/feature-story/adult-north-atlantic-right-whale-found-dead-south-carolina> (Feb. 28, 2021).

¹⁹ Email from Colleen Coogan to ALWTRT Members and Alternates (Oct. 26, 2020).

²⁰ 16 U.S.C. §§ 1361 et seq. (mandating the use of “best scientific evidence” as well as the “best scientific information available” in several provisions, including the moratorium provision at 16 U.S.C. § 1371).

waiver of the moratorium on the taking and importation of marine mammals and marine mammal products.²¹ MMPA implementing regulations also require the agency to use the “best scientific information available.”²² The Fisheries Service must therefore comply with the “best available science” mandate in analyzing incidental takes of marine mammals.

C. Take Reduction Teams/Take Reduction Plans

To achieve the goals of the MMPA, the Fisheries Service convenes Take Reduction Teams (TRTs) - interdisciplinary groups tasked with the development of Take Reduction Plans (TRPs).²³ TRT members are selected for their expertise regarding the conservation and biology of the marine mammal species or expertise regarding the fishing practices that result in the take of such species. TRTs are assembled to respond to specific needs and reconvene when the conservation needs of an MMPA-protected species necessitate changes to regulations.

The overarching goal of each TRP is “to reduce, within 5 years of [the plan’s] implementation, the incidental mortality or serious injury of marine mammals...to insignificant levels approaching a zero mortality and serious injury rate, taking into account the economics of the fishery, the availability of existing technology, and existing State or regional fishery management plans.”²⁴ This so-called Zero Mortality Rate Goal is the ultimate goal of marine mammal conservation in each TRP in the United States, with achievement of PBR acting as an intermediate step towards recovery.²⁵

Under the MMPA, the Fisheries Service may “tak[e] into account the economics of the fishery” when designing a TRP, but the long-term goal of the plan must be to reduce mortality and injury “to insignificant levels approaching a zero mortality and serious injury rate.”²⁶ In the short term, the rule must be designed to reduce takes to levels lower than the PBR, regardless of economic impacts.²⁷

To accomplish this important task, each TRP contains a review of recent stock assessments and estimates of the total number of marine mammals being taken annually by species and by fishery. The TRP then explores recommended regulatory and voluntary measures and the expected percentage of the required reduction of mortality and serious injury that will be achieved by each measure. The TRP must also include a discussion of alternate management measures considered and reviewed by the TRT and a rationale for their rejection. Finally, a TRP

²¹ 16 U.S.C. § 1371(a)(3)(A).

²² 50 C.F.R. § 216.105(c) (“[R]egulations will be established based on the best available information.”).

²³ NOAA Fisheries, *Marine Mammal Take Reduction Plans and Teams*, <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-take-reduction-plans-and-teams> (Nov. 30, 2020).

²⁴ 16 U.S.C. § 1387(f)(2).

²⁵ 16 U.S.C. § 1387(b).

²⁶ 16 U.S.C. § 1387(f)(2).

²⁷ *Id.*

must include monitoring plans to determine the success of each measure and a timeline for achieving specific objectives of the TRP.²⁸

The Atlantic Large Whale Take Reduction Team (ALWTRT) has been in effect since 1996.²⁹ The Atlantic Large Whale Take Reduction Plan (ALWTRP) was first implemented in 1997.³⁰ The ALWTRT has advised the Fisheries Service on more than a dozen rules and regulations since then to modify fisheries managed under the ALWTRP.³¹ Recent amendments to the ALWTRP include the December 31, 2020 Proposed Risk Reduction Rule related to two of the fisheries – the lobster and Jonah crab fisheries.

D. ESA Section 7 Consultation and MMPA Section 101(a)(5) Requirements

ESA-listed marine mammal stocks fall under the jurisdiction of both the MMPA and ESA, and the Fisheries Service has a concurrent responsibility to satisfy the requirements of both laws. The MMPA and the ESA work in tandem to protect endangered marine mammals. Indeed, Congress “intended that the decision processes under the [MMPA and ESA] be coordinated and integrated to the maximum extent possible.”³² Congress manifested this intention by incorporating the MMPA into the ESA’s incidental take statement requirement.³³ Specifically, Section 7(b)(4)(C) of the ESA provides that when the action under consultation will incidentally take *endangered* marine mammal species, the Service must ensure that the taking “is authorized pursuant to section 101(a)(5) of the Marine Mammal Protection Act.”³⁴

As part of the Marine Mammal Authorization Program, the Fisheries Service maintains the MMPA List of Fisheries that interact with marine mammals, which is updated annually. The list includes three categories. Category I lists fisheries that have frequent incidental mortality and serious injury for a marine mammal species (i.e., greater than or equal to 50% of PBR). Category II lists fisheries with occasional incidental mortality and serious injury (i.e., greater than 1% but less than 50% PBR). Category III lists fisheries with a remote likelihood of no known incidental mortality or serious injury (less than or equal to 1% of PBR).³⁵ Effective as of February 16, 2021, the Fisheries Service’s MMPA List of Fisheries includes both the lobster and Jonah crab fisheries as Category II fisheries that have “occasional interactions” with large whales. While the NARW is listed as a marine mammal with which the lobster fishery interacts, the species is not

²⁸ NOAA Fisheries, *Marine Mammal Take Reduction Plans and Teams*, (Nov. 30, 2020).

²⁹ NOAA Fisheries, *Atlantic Large Whale Take Reduction Team Members*, <https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-mammal-protection/atlantic-large-whale-take-reduction-team-members> (Feb. 26, 2021).

³⁰ *Id.*

³¹ *Id.*

³² See 132 Cong. Rec. H10453-02 (1986) (stating the 1986 amendments to the ESA “reflect the changes to the MMPA and ... clarify the relationship between the two statutes. It is intended that the decision processes under the involved statutes be coordinated and integrated to the maximum extent practicable.”).

³³ 16 U.S.C. § 1536(b)(4).

³⁴ *Id.*

³⁵ 16 U.S.C. § 1387(c).

listed for the Jonah crab fishery.³⁶ Fisheries listed in Category I or II must apply for and receive a permit from the Fisheries Service, and U.S. flagged fishing vessels must register with the Fisheries Service and display a valid authorization decal.³⁷

Authorization of incidental take of *endangered* marine mammals, such as the NARW, for commercial fisheries with frequent (MMPA Category I)³⁸ or occasional (MMPA Category II)³⁹ incidental mortality or serious injury requires additional steps.⁴⁰ The Fisheries Service must first publish in the Federal Register a separate list of fisheries allowed to engage in such takes (“MMPA 101(a)(5)(E) list”).⁴¹ To add a fishery to the MMPA 101(a)(5)(E) list, the Fisheries Service must make certain determinations. Specifically, for every endangered marine mammal for which the Fisheries Service plans to issue an incidental take authorization, the Fisheries Service must determine:

- the incidental mortality and serious injury from the fishery will have a “negligible impact” on the species;⁴²
- a recovery plan has been developed or is being developed for the species;⁴³ and
- a monitoring program and a TRP is or will be in place for the species.⁴⁴

After making this determination for every endangered marine mammal that a fishery takes, the Fisheries Service can add the fishery to the MMPA 101(a)(5)(E) list.⁴⁵ Only upon the publication of the MMPA 101(a)(5)(E) list are vessels operating in these fisheries eligible to receive incidental take authorizations.⁴⁶ These incidental take authorizations are valid for up to three

³⁶ See NOAA Fisheries, *List of Fisheries Summary Tables*, <https://www.fisheries.noaa.gov/national/marine-mammal-protection/list-fisheries-summary-tables> (Feb. 5, 2021).

³⁷ 16 U.S.C. § 1387(c).

³⁸ MMPA Category I fisheries are fisheries that have frequent incidental mortality and serious injuries of marine mammals (whether endangered or not). *See id.*

³⁹ MMPA Category II fisheries are fisheries that have occasional incidental mortality and serious injuries of marine mammals (whether endangered or not). *See id.*

⁴⁰ 16 U.S.C. § 1387(a)(2) (noting that “[i]n the case of the incidental taking of marine mammals from species or stocks designated under this [Act] as depleted on the basis of their listing as threatened species or endangered species under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), *both this section and section 1371(a)(5)(E) of this Act shall apply*” (emphasis added)).

⁴¹ 16 U.S.C. § 1371(a)(5)(E). Please note that this is a different List of Fisheries than the one for non-endangered marine mammals called the “Marine Mammal Authorization Program.” *See* 16 U.S.C. § 1382(a).

⁴² MMPA regulations define “negligible impact” as “an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.” 50 C.F.R. § 216.103. For the latest guidance of “negligible impact” determinations in the context of MMPA Section 101(a)(5)(E), *see* National Marine Fisheries Service, Criteria for Determining Negligible Impact under MMPA Section 101(a)(5)(E) (June 17, 2020), <https://media.fisheries.noaa.gov/dam-migration/02-204-02.pdf>.

⁴³ The MMPA does not specify a timeframe for when the recovery plan must be developed. There is also no case law on point for this specific issue.

⁴⁴ 16 U.S.C. § 1371(a)(5)(E)(i).

⁴⁵ 16 U.S.C. § 1371(a)(5)(E)(ii).

⁴⁶ *Id.*

years.⁴⁷ Any incidental take of marine mammals by commercial fisheries, therefore, is illegal without the publication of an MMPA 101(a)(5)(E) list and the accompanying determinations described above. The Fisheries Service is delinquent in its duty to publish this MMPA 101(a)(5)(E) list and to issue incidental take authorizations as required by the statute.

The publication of the MMPA 101(a)(5)(E) list, however, does not conclude the Fisheries Service's duty. Since the Fisheries Service is authorizing take of *endangered* marine mammals, the ESA also applies. The Fisheries Service must publish a Biological Opinion (BiOp) with an Incidental Take Statement (ITS).⁴⁸ Moreover, that ITS must include terms and conditions that detail how the authorized take will comply with the requirements of the MMPA.⁴⁹ Thus, for *endangered* marine mammals, the ITS must contain terms and conditions to ensure that any authorized take has only a "negligible impact" on the species.⁵⁰

Even after completing these steps, the Fisheries Service's duty is not discharged. If the Fisheries Service determines that the incidental mortality or serious injury in a fishery has more than a "negligible impact" on an endangered species, then the agency must issue emergency regulations to protect the species.⁵¹

E. Emergency Action under the MMPA

If incidental mortality and serious injury during a commercial fishing season is having or is likely to have an immediate and significant adverse impact on a stock or species, and a TRP is being developed, then the Fisheries Service shall prescribe emergency regulations to reduce incidental mortality and serious injury in the fishery and approve and implement on an expedited basis, a plan to address adverse impacts.⁵² The MMPA *requires* the Fisheries Service to act to protect an endangered species when the level of incidental mortality or serious injury from an authorized commercial fishery has resulted, or is likely to result in an impact that is "more than negligible."⁵³

⁴⁷ *Id.*; 61 Fed. Reg. 64,500 (Dec 5, 1996).

⁴⁸ 16 U.S.C. § 1536(c).

⁴⁹ 16 U.S.C. § 1536(b)(4).

⁵⁰ *Id.*; 16 U.S.C § 1371(a)(5).

⁵¹ 16 U.S.C § 1371(a)(5)(E)(iii).

⁵² 16 U.S.C. § 1387(g). While the MMPA indicates that the Secretary of Commerce shall issue emergency regulations, the Secretary delegates authority to the National Marine Fisheries Service to manage marine mammals such as the NARW. The Fisheries Service can and has issued emergency regulations in the past to protect NARWs. See NOAA Fisheries, *North Atlantic Right Whale Protection; Emergency Regulations*, 62 Fed. Reg. 16,108 (April 4, 1997).

⁵³ 16 U.S.C. §§ 1371(a)(5)(E)(iii), 1387(g).

II. ENDANGERED SPECIES ACT

A. Goals of the Statute

The ESA was enacted in 1973 to “halt and reverse the trend toward species extinction, whatever the cost.”⁵⁴ The statute declares it “the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of [this] purpose.”⁵⁵ To meet this goal, Section 9 of the ESA prohibits the “take” of all endangered species, including NARWs, unless specifically authorized.⁵⁶ “Take” is defined under the ESA as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect” a protected species.⁵⁷ Exceptions to the ESA prohibition on “take” are only allowed if statutory requirements are met, including via the Section 7 consultations process.

B. ESA Section 7 Consultation

Section 7 of the ESA requires federal agencies to ensure that any action authorized, funded, or carried out by a federal agency, including the authorization of fisheries, is not likely to jeopardize the continued existence of ESA-listed species or destroy or adversely modify critical habitat.⁵⁸ ESA Section 7 consultation ends in the publication of a BiOp that not only includes a determination of whether the activity will jeopardize the continued existence of the species, but also identifies measures to mitigate the effects of the activity on the species.⁵⁹

The Fisheries Service is required to use “the best scientific and commercial data available” in analyzing impacts and formulating the BiOp.⁶⁰ For example, a BiOp must rely on the best available scientific data on the status of the species and analyze how the status of the species would be affected by the proposed action.⁶¹

“Jeopardize” 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.”⁶² When developing its jeopardy determination, “the consulting agency evaluates the current status of the listed species or critical habitat, the effects of the action, and cumulative effects.”⁶³

⁵⁴ *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978).

⁵⁵ 16 U.S.C. § 1531(c)(1).

⁵⁶ 16 U.S.C. § 1538(a)(1)(B).

⁵⁷ 16 U.S.C. § 1532(19).

⁵⁸ 16 U.S.C. § 1536(a)(2).

⁵⁹ *Id.* § 1536(c).

⁶⁰ 50 C.F.R. § 402.14(g)(8).

⁶¹ 50 C.F.R. § 402.14(g)(8), (h)(1).

⁶² 50 C.F.R. § 402.02; *see also* *Defenders of Wildlife v. Martin*, 454 F. Supp. 2d 1085, 1101 (E.D. Wash. 2006).

⁶³ *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 481 F.3d 1224, 1230 (9th Cir. 2007) (citing 50 C.F.R. § 402.14(g)(2)–(3)) (internal quotations omitted).

If an agency action related to a fishery is expected to jeopardize the species, the BiOp will include non-discretionary Reasonable and Prudent Alternatives and a list of Terms and Conditions for the fishery.⁶⁴ If the agency action related to a fishery is determined not to jeopardize the species, the BiOp will include more flexible Reasonable and Prudent Measures and a list of Terms and Conditions for the fishery.⁶⁵

Importantly, the BiOp must also include an ITS that authorizes and specifies the level of acceptable take for the fishery that will not trigger future consultation.⁶⁶ The ITS has two purposes. First, it provides a safe harbor for a specified level of incidental take.⁶⁷ A fishery authorized subject to an ITS may incidentally (but not intentionally) take endangered species, which is otherwise illegal.⁶⁸ If the fishery exceeds the take specified in the ITS, however, the safe harbor no longer applies, and the fishery and its participants are liable for violating the ESA.⁶⁹ Any person who knowingly “takes,” that is, causes lethal or sub-lethal harm to, an endangered or threatened species is subject to substantial civil and criminal penalties, including imprisonment (civil fines of up to \$25,000 per violation and criminal penalties of up to \$50,000 and imprisonment for up to a year).⁷⁰ Second, the ITS provides a trigger.⁷¹ The BiOp and ITS include a requirement that the Fisheries Service must effectively monitor takes in a fishery against the trigger specified in the ITS.⁷² If the authorized fishery exceeds the trigger, *i.e.*, the level of “take” specified in the ITS, the Fisheries Service must immediately reinstate ESA Section 7 consultation to reevaluate impacts of the fishery to ESA-listed species.⁷³ For ESA-listed marine mammals, the ITS must include a discussion of measures necessary to comply with the MMPA, which, as described above and discussed below, imposes additional conditions on the Fisheries Service’s ability to authorize the take of endangered marine mammals.

C. Emergency Action under the ESA

The Fisheries Service has authority under the ESA to take emergency action when there is an “emergency posing a significant risk to the well-being of any species of fish or wildlife or plants.”⁷⁴ When taking such emergency action, the Fisheries Service can bypass standard ESA and Administrative Procedure Act rulemaking procedures to issue emergency regulations to protect a species.⁷⁵

⁶⁴ 16 U.S.C. § 1536(b)(3)(A).

⁶⁵ *Id.* § 1536(b)(4).

⁶⁶ 50 C.F.R. § 402.14(i).

⁶⁷ *See Ctr. for Biological Diversity v. Salazar*, 695 F.3d 893, 909 (9th Cir. 2012).

⁶⁸ *Id.*

⁶⁹ 16 U.S.C. § 1540(a), (b); *see also Bennett v. Spear*, 520 U.S. 154, 170 (1997).

⁷⁰ *Id.*

⁷¹ *Ctr. for Biological Diversity*, 695 F.3d at 909.

⁷² 50 C.F.R. § 402.14(i).

⁷³ *Id.*

⁷⁴ 16 U.S.C. § 1533(b)(7).

⁷⁵ *Id.*

III. MAGNUSON-STEVENSON ACT

The Magnuson-Stevens Act of 1976 governs fishery management in U.S. federal waters. In addition to the statutory goals of fostering long-term biological and economical sustainability or marine fisheries, the Act gives the Fisheries Service authority to issue emergency regulations to address “recent, unforeseen events or recently discovered circumstances” that “present serious conservation or management problems in the fishery.”⁷⁶

IV. NATIONAL ENVIRONMENTAL POLICY ACT

Congress enacted the National Environmental Policy Act (NEPA) in 1969 to ensure that federal agencies incorporated environmental concerns into their decision-making processes.⁷⁷ In furtherance of this goal, NEPA compels federal agencies to prospectively evaluate the environmental impacts of proposed actions that they carry out, fund, or authorize. Federal agencies must prepare an Environmental Impact Statement (EIS) whenever they propose “major Federal actions significantly affecting the quality of the human environment.”⁷⁸ The EIS details the impacts of the federal action on the environment and demonstrates careful consideration of reasonable alternatives.⁷⁹

A. Scoping Process

Scoping is a critical early step in the EIS process, as it provides an opportunity for all interested stakeholders with a variety of perspectives to help inform the process. It helps to “determine the scope of issues to be addressed in depth in the analysis,” “identify concerns . . . and invite participation from affected entities,” “define the alternatives that will be analyzed,” and “identify the environmental issues that are pertinent to the proposed action.”⁸⁰ A comprehensive and equitable scoping process is essential for identifying the “reasonable range” of alternatives.

⁷⁶ 16 U.S.C. § 1855(c); 62 Fed. Reg. 44,421-42 (Aug. 21, 1997).

⁷⁷ 42 U.S.C. § 4331(a).

⁷⁸ 42 U.S.C. § 4332(C).

⁷⁹ *Id.*

⁸⁰ 40 C.F.R. § 1501.7; NOAA, *Policy and Procedures for Compliance with the National Environmental Policy Act and Related Authorities*, at 16 (January 13, 2017), <https://www.nepa.noaa.gov/docs/NOAA-NAO-216-6A-Companion-Manual-03012018.pdf>; *Citizens' Comm. to Save Our Canyons v. U.S. Forest Serv.*, 297 F.3d 1012, 1022 (10th Cir. 2002).

B. A Reasonable Range of Alternatives Must Be Explored in Any EIS

A “reasonable range” of alternatives must be evaluated in the EIS process to address the purpose and need of proposed agency action.⁸¹ Those reasonable alternatives must be rigorously explored and objectively evaluated. Each alternative must be “considered in detail...so that reviewers may evaluate their comparative merits.”⁸² “What constitutes a reasonable range of alternatives depends on the nature of the proposal and the facts in each case.”⁸³ As one court stated, the agency “must look at every reasonable alternative within the range dictated by the nature and scope of the proposal. The existence of reasonable but unexamined alternatives renders an EIS inadequate.”⁸⁴

C. Public Comments Must Be Considered in Environmental Impact Statements

Public involvement is essential to implementing NEPA; it “helps the agency understand the concerns of the public regarding the proposed action and its environmental impacts, identify controversies, and obtain the necessary information for conducting the environmental analysis.”⁸⁵ Following public comment on scoping,⁸⁶ the agency must prepare a Draft EIS, and it must distribute the Draft EIS and gather public input.⁸⁷ Specifically, the agency “must, to the extent practicable, provide the public with relevant environmental information and a meaningful opportunity to provide its views for consideration by the agency.”⁸⁸ After the Draft EIS comment period closes, the agency “must assess and consider the comments received.”⁸⁹

In formulating a Final EIS, the agency must respond by one or more of the following means to each public comment received on the Draft EIS:

- (a) modify the alternatives, including the proposed action;⁹⁰
- (b) develop and evaluate alternatives not previously given serious consideration by the agency;

⁸¹ 40 C.F.R. § 1502.14(a).

⁸² *Id.* at § 1502.14(b).

⁸³ Council on Environmental Quality, *40 Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations* (Mar. 23, 1981), <https://www.energy.gov/sites/prod/files/2018/06/f53/G-CEQ-40Questions.pdf>.

⁸⁴ *Ilio 'ulaokalani Coal. v. Rumsfeld*, 464 F.3d 1083, 1095 (9th Cir. 2006).

⁸⁵ NOAA Administrative Order Series 216-6, *Environmental Review Procedures for Implementing the National Environmental Policy Act* (May 20, 1999), https://www.nepa.noaa.gov/NAO216_6.pdf.

⁸⁶ 40 C.F.R. § 1501.7; NOAA, *Policy and Procedures for Compliance with the National Environmental Policy Act and Related Authorities*, at 16 (January 13, 2017); *Citizens'*, 297 F.3d at 1022.

⁸⁷ NOAA, *Policy and Procedures for Compliance with the National Environmental Policy Act and Related Authorities*, at 16 (January 13, 2017).

⁸⁸ *Id.* at 17.

⁸⁹ *Id.*

⁹⁰ The agency has broad discretion to modify the alternatives considered in the Draft EIS based on input received during the public comment process. Substantial changes to the scope of alternatives considered in the Draft EIS may require the preparation of a Supplemental EIS followed by an additional public comment period. 42 U.S.C. § 4332(C)(iii); *Dubois v. U.S. Dept. of Agric.*, 102 F.3d 1273 (1st Cir. 1996), certiorari denied 521 U.S. 1119 (1997).

- (c) supplement, improve or modify its analyses;
- (d) make factual corrections; or
- (e) explain why the comments do not warrant further agency response, citing the sources, authorities or reasons that support the agency's position and, if appropriate, indicate those circumstances that would trigger agency reappraisal or further response.⁹¹

D. NEPA's "Best Available Science" Requirement

NEPA requires agencies to "[u]tilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment."⁹² The White House Council on Environmental Quality's (CEQ) NEPA regulations provide standards for an EIS's information requirements and preparation.⁹³ An EIS must clearly present information and analysis of the environmental consequences that form the scientific and analytic basis for consideration of reasonable alternatives.⁹⁴ In preparing an EIS, agencies must "insure the professional . . . [and] scientific integrity, of the discussions and analyses in environmental impact statements."⁹⁵ In so doing, they must identify the methodologies used, and must explicitly refer to the scientific and other sources of information relied upon for conclusions set forth in the EIS.⁹⁶ The information included in an EIS "must be of a high quality," and must allow for "[a]ccurate scientific analysis, expert agency comments, and public scrutiny."⁹⁷ The agency must also discuss responsible opposing views.⁹⁸

When information "relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives," the CEQ regulations require that the agency either: (1) determine that the cost of obtaining such information is "exorbitant or the means to obtain it are not known," or (2) obtain the information and include it in the EIS.⁹⁹

⁹¹ 40 C.F.R. § 1502.9(c); NOAA, *Policy and Procedures for Compliance with the National Environmental Policy Act and Related Authorities*, at 17 (January 13, 2017).

⁹² 42 U.S.C. § 4332(A).

⁹³ 40 C.F.R. pt. 1502. In some instances, federal departments and agencies have promulgated additional regulations governing applicable NEPA standards. See, e.g., 43 C.F.R. pt. 46 (specific NEPA regulations for agencies within the United States Department of the Interior); 36 C.F.R. pt. 220 (specific NEPA regulations for the United States Forest Service).

⁹⁴ 40 C.F.R. §§ 1502.14, 1502.16.

⁹⁵ *Id.* § 1502.24; see also *Save the Peaks Coal. v. U.S. Forest Serv.*, 669 F.3d 1025, 1037-38 (9th Cir. 2012) (agencies have a "duty to ensure the scientific integrity of the [EISs] discussion and analysis"); *League of Wilderness Defenders-Blue Mountains Biodiversity Project v. U.S. Forest Serv.*, 689 F.3d 1060, 1073-75 (9th Cir. 2012) (an agency must "ensure the 'scientific integrity' of the discussions and analyses in an EIS" (quoting 40 C.F.R. § 1502.24)).

⁹⁶ 40 C.F.R. § 1502.24.

⁹⁷ *Id.* § 1500.1(b).

⁹⁸ *Id.* § 1502.9(b).

⁹⁹ *Id.* § 1502.22.

The underlying purpose of the CEQ regulations is to ensure that agencies, to the greatest extent possible, have access to and include in environmental analyses all available information necessary to assess impacts and make a reasoned choice between alternatives.¹⁰⁰ In sum, NEPA, its implementing regulations, and agency guidance all recognize that an effective impact analysis and the agency's evaluation of alternatives must be based on relevant high-quality data and other information.

Federal agencies also have continuing obligations pursuant to NEPA and must take a "hard look" at the environmental effects of planned actions both well before and after a proposal has received initial approval.¹⁰¹ Federal agencies also have an ongoing duty to obtain high-quality information, accurate scientific analysis, and "full and fair discussion" of direct and indirect environmental impacts.¹⁰² Even after an EIS has been finalized, if "[t]he agency makes substantial changes in the proposed action that are relevant to environmental concerns" or "there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts," an EIS "shall" be supplemented.¹⁰³

V. ADMINISTRATIVE PROCEDURE ACT

In an effort to ensure public participation in the informal rulemaking process, the Administrative Procedure Act (APA) requires agencies to provide the public with adequate notice of a proposed rule followed by a meaningful opportunity to comment on the rule's content.¹⁰⁴ Additionally, "[matters] of great importance, or those where the public submission of facts will be either useful to the agency or a protection to the public, should naturally be accorded more elaborate public procedures."¹⁰⁵ In reviewing an agency rulemaking, "courts have focused on whether the agency provided an 'adequate' opportunity to comment—of which the length of the comment period represents only one factor for consideration."¹⁰⁶

The APA delineates the standard of judicial review courts use to determine the validity of agency actions. A reviewing court shall "hold unlawful and set aside agency action, findings, and conclusions found to be:

¹⁰⁰ See *id.* §§ 1500.1, 1502.14.

¹⁰¹ *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 374 (1989).

¹⁰² 40 C.F.R. §§ 1500.1(b), 1502.1, 1502.16(a),(b); *Friends of Clearwater v. Dombeck*, 222 F.3d 552, 557 (9th Cir. 2000) (explaining that "an agency that has prepared an EIS . . . must be alert to new information that may alter the results of its original environmental analysis").

¹⁰³ 40 C.F.R. § 1502.9(c)(1)(i),(ii); *Marsh*, 490 U.S. at 374.

¹⁰⁴ 5 U.S.C. § 553 (b)–(c).

¹⁰⁵ Todd Garvey, Cong. Research Serv., R41546, A Brief Overview of Rulemaking and Judicial Review, at 2 (2017), <https://fas.org/sgp/crs/misc/R41546.pdf>.

¹⁰⁶ *Id.* at n.14 (stating that "Executive Order 12866, which provides for presidential review of agency rulemaking via the Office of Management and Budget's Office of Information and Regulatory Affairs, states that the public's opportunity to comment, 'in most cases should include a comment period of not less than 60 days.' Exec. Order No. 12866, § 6(a), 58 Fed. Reg. 51,735 (Oct. 4, 1993).").

- (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;
- (B) contrary to constitutional right, power, privilege, or immunity;
- (C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;
- (D) without observance of procedure required by law;
- (E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or
- (F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court. In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.”¹⁰⁷

FACTUAL BACKGROUND

I. CHRONOLOGY OF NOTABLE AGENCY ACTIONS TO REDUCE TAKES OF LARGE WHALES IN ATLANTIC FISHERIES

Since its inception in 1996, the ALWTRT has developed a series of regulations to minimize takes of large whales, including NARWs, in U.S. Atlantic fisheries from Florida to the Canadian border.¹⁰⁸ These regulations were then implemented by the Fisheries Service to create, remove, and modify gear restrictions and to impose time-area management strategies to meet the goals and requirements of the MMPA and ESA.

These actions include two 2002 actions to create dynamic area management (DAM) and seasonal area management (SAM) programs,¹⁰⁹ a June 2007 rule to expand the Southeast U.S. Restricted Area and modify regulations for the gillnet fishery,¹¹⁰ an October 2007 gear modification that eliminated the DAM program, replaced it with gear modifications and expanded SAM areas,¹¹¹ and most recently a “trawling up” rule to increase the minimum number of lobster traps that can be fished together on a string or “trawl” of traps in order to reduce the amount of vertical lines in the water.¹¹²

¹⁰⁷ 5 U.S.C. § 706(2).

¹⁰⁸ ALWTRP Interim Final Rule, 62 Fed. Reg. 39,157 (July 22, 1997). Conservation of minke, humpback, and fin whales is also included in this plan.

¹⁰⁹ DAM Final Rule, 67 Fed. Reg. 1133 (Jan. 9, 2002); SAM Interim Final Rule, 67 Fed. Reg. 1142 (Jan. 9, 2002).

¹¹⁰ SE Modifications Final Rule, 72 Fed. Reg. 34,632 (June 25, 2007).

¹¹¹ Broad-based gear modification final rule, 72 Fed. Reg. 57,104 (Oct. 5, 2007).

¹¹² Final Rule, 79 Fed. Reg. 36,586 (June 27, 2014).

A. RESULTS OF PAST EFFORTS AND CURRENT NEED FOR AGENCY ACTION

The ALWTRP significantly changed the management, administration and operations of a range of fisheries in the U.S. Atlantic. These measures had moderate success from the implementation of the ALWTRP in the 1990s through 2010.¹¹³ During this time, large whales, particularly NARWs, experienced moderate recovery from a population size in the mid-200s to more than 480 in 2010.¹¹⁴

Since 2010, the recovery of NARWs has reversed and the population has now declined for a variety of reasons.¹¹⁵ The two main human-caused threats to NARWS – vessel strikes and fishing entanglement – are the main source of the decline, and possible exacerbating causes include prey and ecosystem shifts as a result of climate change and related whale behavior changes.¹¹⁶ In 2017, responding to an elevated number of observed NARW deaths, the Fisheries Service declared an Unusual Mortality Event (UME) for NARWs which is currently ongoing.¹¹⁷ A UME is defined under the MMPA as “a stranding that is unexpected; involves a significant die-off of any marine mammal population; and demands *immediate* response.”¹¹⁸

¹¹³ NOAA Fisheries, *Team Reaches Nearly Unanimous Consensus on Right Whale Survival Measures*, <https://www.fisheries.noaa.gov/feature-story/team-reaches-nearly-unanimous-consensus-right-whale-survival-measures> (Feb. 3, 2021).

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ Sean A. Hayes, *North Atlantic Right Whales: A Summary of Stock Status and Factors Driving Their Decline*, NOAA Fisheries (Sept. 18, 2018) at 7; Moore et al., *Assessing North Atlantic right whale health: threats, and development of tools critical for conservation of the species*, Dis. Aquat. Org. Vol. 143: 205-226 (Feb. 25, 2021) <https://www.int-res.com/articles/feature/d143p205.pdf>.

¹¹⁷ NOAA Fisheries, *2017-2019 North Atlantic Right Whale Unusual Mortality Event*, NOAA Fisheries, <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2019-north-atlantic-right-whale-unusual-mortality-event> (Mar. 1, 2021).

¹¹⁸ 16 U.S.C. § 1421(h)(6). The MMPA defines “stranding” as “an event in the wild in which (A) a marine mammal is dead and is – (i) on the beach or shore of the United States; or (ii) in the waters under the jurisdiction of the United States (including any navigable waters); or (B) a marine mammal is alive and is – (i) on a beach or shore of the United States and unable to return to the water; (ii) on a beach or shore of the United States and, although able to return to the water, is in need of apparent medical attention; or (iii) in the waters under the jurisdiction of the United States (including any navigable waters), but is unable to return to its natural habitat under its own power or without assistance.” 16 U.S.C. § 1421(h)(3).

B. Current Status of the NARW Population

Once abundant in the oceans with a population range between 9,000 to 21,000 animals,¹¹⁹ the NARW is currently one of the most endangered large whales on the planet.¹²⁰ Today, only around 360 NARWs remain, with fewer than 80 breeding females.¹²¹

North Atlantic right whales do not reach reproductive maturity until around 10 years of age. They typically only produce one calf after a year-long pregnancy every three to five years.¹²² However, the trauma caused by chronic fishing gear entanglements and other stressors has now increased the calving interval to every 7.6 years.¹²³ As of February 16, 2021, there have been 15 new calves born for the 2020/2021 breeding season, including five calves from first-time mothers.¹²⁴ However, on February 13, 2021 a months-old calf stranded in Florida after being struck by a vessel, making the total number of surviving calves this year 14.¹²⁵

Since the UME began, a total of 34 dead NARWs have been found (21 in Canada and 13 in the United States). The leading cause of death for the UME is “human interaction,” with the two greatest threats being entanglements in fishing gear and vessel strikes.¹²⁶ Additionally, 14 live whales have been documented with serious injuries from entanglements in fishing gear and vessel strikes.¹²⁷ Actual whale mortality is likely much higher than these observed numbers, since observed NARW carcasses only accounted for 36% of all estimated deaths between 1990-2017.¹²⁸

¹¹⁹ Monsarrat S, Pennino MG, Smith TD, et al. (2016) A spatially explicit estimate of the prewhaling abundance of the endangered North Atlantic right whale: *Eubalaena glacialis* Historical Abundance. *Conservation Biology* 30: 783–791. doi: 10.1111/cobi.12664; E.H. Buck, *The North Atlantic Right Whale: Federal Management Issues*. Library of Congress: Congressional Research Service. Report No.: RL30907 (Mar. 29, 2001).

¹²⁰ NOAA Fisheries, *Species Directory – North Atlantic Right Whale*, <https://www.fisheries.noaa.gov/species/north-atlantic-right-whale> (last visited Jan. 28, 2021).

¹²¹ H.M. Pettis et al., *North Atlantic Right Whale Consortium 2020 Annual Report Card*, https://www.narwc.org/uploads/1/1/6/6/116623219/2020narwcreport_cardfinal.pdf (last visited Feb. 16, 2021).

¹²² Scott D. Kraus, *Reproductive Parameters of the North Atlantic Right Whale*, 2 *J. Cetacean Res. Manage.* (Special Issue) 23 (2001).

¹²³ H.M. Pettis et al., *North Atlantic Right Whale Consortium 2020 Annual Report Card*, <https://www.narwc.org/report-cards.html> (last visited Feb. 16, 2021).

¹²⁴ NOAA Fisheries, *North Atlantic Right Whale Calving Season 2021*, <https://www.fisheries.noaa.gov/national/endangered-species-conservation/north-atlantic-right-whale-calving-season-2021> (Feb. 17, 2021).

¹²⁵ NOAA Fisheries, *North Atlantic Right Whale Calf Stranded Dead in Florida*, <https://www.fisheries.noaa.gov/feature-story/north-atlantic-right-whale-calf-stranded-dead-florida> (Feb. 17, 2021).

¹²⁶ NOAA Fisheries, *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> (Mar. 1, 2021).

¹²⁷ *Id.*

¹²⁸ Kraus SD, Brown MW, Caswell H, Clark CW et al. (2005) North Atlantic right whales in crisis. *Science* 309: 561–562; *see also* Richard Pace et al., *Cryptic Mortality of North Atlantic Right Whales*, *Conservation Science and Practice* Vol. 3, Issue 2 (Feb. 2, 2021), <https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/csp2.346>.

According to the Fisheries Service, the lobster and crab fisheries deploy about 93% of the fixed fishing gear in the waters of the U.S. Northeast where NARWs often transit and/or aggregate.¹²⁹ The fixed fishing gear used by these fisheries generally involves vertical buoy lines that connect down to lobster or crab traps/pots on the ocean floor, with ground lines connecting strings of multiple traps into a “trawl.” With over 900,000 buoy lines deployed annually in these two U.S. fisheries alone, these vertical lines in the water column present a significant threat of entanglement for NARWs.¹³⁰

Fishing gear lines have been seen wrapped around NARWs' mouths, fins, tails and bodies, which slows them down, making it difficult to swim, reproduce and feed, and can kill them.¹³¹ The lines cut into the whales' flesh, leading to life-threatening infections, and are so strong that they can sever fins and tails and cut into bone.¹³²

II. RULEMAKING PROCESS FOR THE PROPOSED RISK REDUCTION RULE

A. 2017-2018 ALWTRT Meetings

In response to the necessity of reducing serious injury and mortality of NARWs in fixed-gear fisheries, the ALWTRT met throughout 2017 and 2018 to explore current issues and challenges facing NARWs in the U.S. Atlantic. These ALWTRT meetings discussed the threats to the species, as well as alternatives for mitigating the threats. The meetings culminated in a meeting in October 2018, where the ALWTRT accepted and discussed nine alternative proposals from ALWTRT members to reduce takes of NARWs. The alternatives included new time-area management options, gear reductions, and gear restrictions and modifications. This meeting served as a precursor to a 2019 meeting where the ALWTRT would attempt to reach consensus on which alternative(s) to recommend.¹³³

B. 2019 ALWTRT Meeting

Following a delay caused by a federal government shutdown, the ALWTRT met in April 2019 to seek consensus on modifications to the ALWTRP to reduce takes to below PBR. Prior to the meeting, the Fisheries Service provided the ALWTRT with a clear goal for the meeting to meet the needs of the species: reduce mortalities and serious injuries of NARWs in

¹²⁹ NOAA Fisheries, *Fact Sheet - Proposed “Risk Reduction Rule” to Modify the Atlantic Large Whale Take Reduction Plan* (Dec. 31, 2020), <https://media.fisheries.noaa.gov/2021-01/TRTFactSheetRev011221.pdf?null>.

¹³⁰ *Draft EIS* Vol. II at Appendix 5.1, Exhibit 8.

¹³¹ NOAA Fisheries, *Young Right Whale Likely Died from Entanglement*, <https://www.fisheries.noaa.gov/feature-story/young-right-whale-likely-died-entanglement#:~:text=Young%20Right%20Whale%20Likely%20Died%20from%20Entanglement%20September,to%20the%20information%20scientists%20obtained%20from%20the%20necropsy>. (Sept. 7, 2018); Rachel M. Cassoff et al., *Lethal Entanglement in Baleen Whales*, 96 *Diseases of Aquatic Organisms* 175 (2011).

¹³² Cassoff, *supra* note 128.

¹³³ *Atlantic Large Whale Take Reduction Plan: The Take Reduction Team – Meetings*, NOAA Fisheries, <https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/index.html> (last visited August 16, 2019).

U.S. fisheries to below the NARW PBR level at that time of 0.9 via a 60% to 80% reduction of mortalities and serious injuries from current levels.¹³⁴ The Fisheries Service suggested that the ALWTRT use a “relative risk reduction decision support tool” to compare alternative measures to identify a suite of management strategies and tools using a common metric rather than evaluate options independently.¹³⁵

Following days of intense discussion, the ALWTRT ultimately decided, by majority but not consensus opinion, to set state-specific risk reduction targets based on vertical line reduction and weak rope that is designed to come apart when entangled with a large whale.¹³⁶ This suite of measures was supported by all voting members of the ALWTRT except one, who opposed because they did not think the strategy went far enough to meet the goals and requirements of the MMPA and ESA.

C. NEPA Scoping Process

On August 2, 2019, the Fisheries Service published a Notice of Intent (NOI) to develop an Environmental Impact Statement to modify the ALWTRP to reduce serious injury and mortality of large whales in commercial trap/pot fisheries along the U.S. East Coast.¹³⁷ The purpose and need as described in the Notice of Intent is “to fulfill the mandates of the MMPA to reduce impacts of fisheries on large whale species below their PBR level.”¹³⁸ The public scoping process for the Draft EIS ended on September 16, 2019.¹³⁹ Public scoping meetings were attended by over 800 people, and the Fisheries Service received over 89,200 written comments.¹⁴⁰ After the public scoping process ended, additional scoping meetings were in January and February of 2020 held by Maine, New Hampshire, Massachusetts and Rhode Island.¹⁴¹ Oceana provided comments at public hearings and in writing.¹⁴²

Following the end of the notice and comment period on September 16, 2019, the Fisheries Service continued the development of the Proposed Risk Reduction Rule and the related Draft EIS. While the Fisheries Service considered the TRT's April 2019 near-consensus

¹³⁴ Letter from Colleen Coogan, *Take Reduction Target Letter*, NOAA Fisheries (April 5, 2019), https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/April%202019/06_take_reduction_target_letter-april52019.html.

¹³⁵ Michael J. Asaro, *Summary of April 2019 Atlantic Large Whale Take Reduction Team Meeting*, NOAA Fisheries (June 13, 2019), <https://s3.amazonaws.com/nefmc.org/NEFMC-TRT-Presentation-June-2019-Asaro.pdf>.

¹³⁶ NOAA Fisheries, *Cross Caucus Outcomes as Presented and Voted Upon 4/26/19*, https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/April%202019/Meeting%20Materials/cross_caucus_outcomes_as_presented_and_voted_upon_4_26_19.pdf (last visited August 15, 2019).

¹³⁷ Notice of Intent to Prepare Environmental Impact Statement, Request for Comments, 84 Fed. Reg. 37,822 (Aug. 2, 2019).

¹³⁸ Notice of Intent to Prepare Environmental Impact Statement, Request for Comments, 84 Fed. Reg. 37,822 (Aug. 2, 2019).

¹³⁹ Draft EIS Vol. I at 10-319.

¹⁴⁰ *Id.*

¹⁴¹ *Id.* at 1-20.

¹⁴² Oceana Comment Letter on Atlantic Large Whale Take Reduction Plan Scoping (Sept. 16, 2019), attached as Appendix II.

consensus recommendation,¹⁴³ the Draft EIS states that “most of the measures in the Alternative Two (preferred) come from New England states and after frequent meetings and close collaboration with trap/pot fishermen.”¹⁴⁴ This statement appears to indicate that there were extensive interactions outside of the statutory processes that heavily influenced the outcome of the NEPA scoping process. And, even after this timeframe, the Trump Administration’s Office of Management and Budget, Office of Information and Regulatory Affairs sat on the Proposed Risk Reduction Rule without further action for six months; in fact, the Administration did not release the rule until New Year’s Eve - December 31, 2020, with a deadline of March 1, 2021 for public comment.¹⁴⁵

D. Proposed Risk Reduction Rule

The Proposed Risk Reduction Rule includes two alternatives to the status quo (considered **Alternative 1**).¹⁴⁶

Alternative 2 is the agency’s preferred alternative. This alternative would involve:

- **Trawling Up** - Increase the number of traps per trawl (a trawl is a string of traps) based on area fished and miles fished from shore in the Northeast Region (Maine to Rhode Island). In some regions, trawls will go from 3 traps per trawl to 8; in other areas, up to 10, 15, or 25 traps per trawl; and in one location, a minimum of 45 traps per trawl and an allowance of a trawl 1.75 miles long.
- **Modify Existing Closed Areas** - Extend the state waters portion of the existing Massachusetts Restricted Area by one month through May *or* until surveys demonstrate that whales have left the area and no more than 3 whales remain.
- **Create New Closed Areas** - Creation of up to two new seasonal restricted areas south of Nantucket (February through April) and in the Gulf of Maine (October through January).
- **Ropeless** - Redefine existing closure areas to be areas closed to fishing with persistent buoy lines. This will allow use of ropeless gear in the closed areas under Exempted Fishing Permits.
- **Weak Rope** - Conversion of vertical buoy line to weak rope, or insertions in buoy lines of weaker rope or other weak inserts, with a maximum breaking strength of 1,700 lbs (771.1 kg).
- **Gear Marking** - Require expanded gear marking that differentiates vertical lines by state and expands into areas previously exempt from gear marking. Maine is already using state-specific marking.¹⁴⁷

Alternative 3 would involve:

- **Vertical Line Cap** - Reduce the amount of line in the water by capping lines at 50% of the lines fished in 2017 in federal and non-exempt waters throughout the Northeast. The

¹⁴³ Draft EIS Vol. I at 3-48 (Table 3.1).

¹⁴⁴ *Id.* at 1-23.

¹⁴⁵ Office of Information and Regulatory Affairs, *OIRA Conclusion of EO 12866 Regulatory Review*, <https://www.reginfo.gov/public/do/eoDetails?rrid=130845> (last visited Feb. 25, 2021).

¹⁴⁶ Draft EIS Vol. I at 3-54 (stating that “[u]nder Alternative 1, NMFS would continue with status quo.”).

¹⁴⁷ Draft EIS Vol. I at 3-54 to 3-56 (detailing the measures included under Alternative 2, the agency’s preferred alternative).

only exception is in offshore Lobster Management Area (LMA) Three that includes the outer Gulf of Maine and Georges Bank regions.

- **Trawling Up** - A seasonal increase in the minimum traps per trawl requirement would be implemented in offshore areas (LMA Three), requiring a minimum of 45 traps per trawl of maximum 1.75 miles in length.
- **Modification of Existing Closed Areas** - The entire Massachusetts Restricted area would be extended from for a month to the end of May, but with a “soft closure” in May, meaning that it could be opened if surveys demonstrate whales have left the restriction area.
- **New Closed Areas** - Three new seasonal restricted areas would be created, including a seasonal restricted period for LMA One in the Gulf of Maine (October – February), a summer restricted area north of Georges Bank at Georges Basin (May – August). Fishing with ropeless gear would be allowed during these seasons. Two seasonal restricted area options (February – April) are analyzed south of Cape Cod and the southern coast of Massachusetts (much larger than the Alternative 2 area).
- **Ropeless** - Redefine existing closure areas to be closed to fishing with persistent buoy lines. This will allow use of ropeless gear in the closed areas under exempted fishing permits.¹⁴⁸

DISCUSSION

I. THE DRAFT EIS VIOLATES NEPA AND THE APA

A. The Fisheries Service Should Appropriately Consider the Strategies Recommended by Oceana in its Scoping Comments

As part of the NEPA scoping process, the Fisheries Service was required to identify reasonable alternatives to the Proposed Risk Reduction Rule (i.e., Alternative 2 (agency's preferred alternative)) to be evaluated in the Draft EIS.¹⁴⁹ The scoping process provides an opportunity for stakeholders to propose alternative strategies, and the agency must consider whether such proposed strategies are reasonable and therefore should be examined in detail in the Draft EIS.¹⁵⁰ During the scoping process for the Proposed Risk Reduction Rule, Oceana submitted comments recommending several proven and effective fisheries management strategies to strengthen the Proposed Risk Reduction Rule, including the use of focused dynamic management areas, expanded use of static management areas, enhanced monitoring of whale locations, fishing effort, catch, bycatch and entanglement, and broader use of AIS.¹⁵¹ The

¹⁴⁸ Draft EIS Vol. I at 3-56 to 3-58 (detailing the measures included under Alternative 3).

¹⁴⁹ 40 C.F.R. § 1502.14.

¹⁵⁰ 40 C.F.R. § 1501.7; NOAA, *Policy and Procedures for Compliance with the National Environmental Policy Act and Related Authorities*, at 16 (January 13, 2017), <https://www.nepa.noaa.gov/docs/NOAA-NAO-216-6A-Companion-Manual-03012018.pdf>; *Citizens'*, 297 F.3d at 1022.

¹⁵¹ Oceana Comment Letter on Atlantic Large Whale Take Reduction Plan Scoping (Sept. 16, 2019), attached as Appendix II.

Fisheries Service’s refusal to consider and evaluate these effective and reasonable strategies violated NEPA and was arbitrary and capricious under the APA.

1. The Fisheries Service’s Rejection of Strategies Because they were “Unpopular with Stakeholders” was Arbitrary and Capricious

An agency’s action is arbitrary and capricious under the APA if the agency “relied on factors that Congress has not intended it to consider.”¹⁵² In the NEPA scoping context, whether a proposed strategy is “reasonable” and warrants examination in a Draft EIS, is determined relative to the purpose of the proposed action.¹⁵³ Specifically, “an alternative is properly excluded from consideration in an environmental impact statement only if it would be reasonable for the agency to conclude that the alternative does not bring about the ends of the federal action.”¹⁵⁴

In preparing the Draft EIS, the Fisheries Service refused to evaluate strategies proposed by Oceana and other stakeholders, including trap reductions, enhanced weak line requirements, static area closures, and gear marking requirements, on grounds that such strategies were “unpopular with stakeholders.”¹⁵⁵ First, it is unclear what “unpopular” means in this context, and which stakeholders are being referred to. Does “unpopular” mean that some stakeholders raised objections to the alternative? How valid were those objections? The Draft EIS does not say. One can only conclude that if there was enough opposition to an alternative, the Fisheries Service scrapped it. The approach begs the question, however, of how weak rope became so central among the management strategies in the Proposed Risk Reduction Rule, as there has been opposition to weak rope from scientists and conservation organizations. Second, the popularity of a proposed strategy with stakeholders is not relevant to the purpose of the Proposed Risk Reduction Rule. Congress intended federal agencies to base NEPA scoping decisions on purpose and need rather than popularity.¹⁵⁶ The Fisheries Service should not have excluded alternatives proposed by Oceana and other stakeholders unless the agency found that such strategies would not “fulfill the mandates of the MMPA to reduce impacts of fisheries on large whale species below their PBR level.”¹⁵⁷ To reject Oceana’s proposed strategies based on popularity rather than effectiveness violates the agency’s obligation under NEPA to take a “hard look” at the impacts of its actions.¹⁵⁸ It is also arbitrary and capricious under the APA.¹⁵⁹

¹⁵² *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983); 5 U.S.C. § 706(2).

¹⁵³ *Anglers Conservation Network v. Pritzker*, 139 F.Supp.3d 102, 118-19 (D.D.C. 2015).

¹⁵⁴ *Id.*, quoting *City of Alexandria, Va. v. Slater*, 198 F.3d 862, 867 (D.C.Cir. 1999).

¹⁵⁵ Draft EIS Vol. I at 3-78 to 3-82.

¹⁵⁶ *Anglers*, 139 F.Supp.3d at 118.

¹⁵⁷ Notice of Intent to Prepare Environmental Impact Statement, Request for Comments, 84 Fed. Reg. 37,822 (Aug. 2, 2019).

¹⁵⁸ *See Marsh*, 490 U.S. at 374.

¹⁵⁹ *See Motor Vehicle Mfrs.*, 463 U.S. at 43; 5 U.S.C. § 706(2).

2. The Fisheries Service's Basis for Rejecting the Dynamic Closure Option is Invalid

As noted above, Oceana recommended that the Fisheries Service explore the use of dynamic area management strategies to reduce risks to NARWs. The Fisheries Service rejected that option, on the grounds that it was “[n]ot currently feasible with regulatory process.”¹⁶⁰ It is unclear what that statement means. It is unclear what regulatory process the Fisheries Service is referring to, or why the option is infeasible. Indeed, as discussed above, dynamic closures had been employed in the fishery in the past (between 2002 and 2009), and such closures have been and continue to be used by Canada with demonstrated positive outcomes.¹⁶¹ For example, in 2020, Canada had no reported fishing gear entanglements.¹⁶² The Fisheries Service's vague and indecipherable dismissal of this option violates the agency's obligation under NEPA to take a “hard look” at the impacts of its actions.¹⁶³ It is also arbitrary and capricious under the APA.¹⁶⁴

3. The Fisheries Service May Not Reject Strategies Because the Agency Would Prefer That Such Measures Be Taken By Other Agencies

The Fisheries Service also rejected several proposed trap reduction strategies because the Fisheries Service would “prefer fishery management to be done by [the Atlantic State Marine Fisheries Commission/New England Fisheries Management Council].”¹⁶⁵ Under NEPA, a federal agency “cannot refuse to give serious consideration to environmental factors merely because it thinks that another agency should assume responsibility.”¹⁶⁶ Indeed, a federal agency must still consider a reasonable alternative even if such alternative is “outside of the agency's jurisdiction or control.”¹⁶⁷ The Fisheries Service therefore violated NEPA by rejecting proposed strategies during the scoping process on grounds that the agency would prefer another agency to implement such strategies.

¹⁶⁰ Draft EIS Vol. I at 3-79.

¹⁶¹ Fisheries And Oceans Canada, *Backgrounder: Protecting North Atlantic Right Whales*, <https://www.canada.ca/en/fisheries-oceans/news/2019/02/backgrounder-protecting-north-atlantic-right-whales.html> (Feb. 15, 2019); Transport Canada, *Backgrounder: Protecting North Atlantic Right Whales*, <https://tc.canada.ca/en/backgrounder-protecting-north-atlantic-right-whales-0> (Feb. 18, 2021).

¹⁶² Cassidy Chisholm, *Canada stays course on North Atlantic right whale protections*, CBC News, (Feb. 18, 2021), <https://www.cbc.ca/news/canada/nova-scotia/north-atlantic-right-whales-protections-1.5918075#> (noting that “[n]o right whale deaths were reported in Canadian waters in 2020”). For more information on Canada's 2021 measures to protect NARWs, see Transport Canada, *Backgrounder: Protecting North Atlantic Right Whales*, (Feb. 18, 2021), <https://tc.canada.ca/en/backgrounder-protecting-north-atlantic-right-whales-0>.

¹⁶³ See *Marsh*, 490 U.S. at 374.

¹⁶⁴ See *Motor Vehicle Mfrs.*, 463 U.S. at 43.

¹⁶⁵ Draft EIS Vol. I at 3-79.

¹⁶⁶ 42 U.S.C. § 4332; *Natural Resources Defense Council, Inc. v. Securities and Exchange Commission*, 432 F.Supp. 1190, 1207 (D.D.C. 1977), reversed by *Natural Resources Defense Council Inc., v. Securities and Exchange Commission*, 606 F.2d 1031 (D.C.Cir. 1979).

¹⁶⁷ 42 U.S.C. § 4332; *Monarch Chemical Works, Inc. v. Exxon*, 466 F.Supp. 639, 651 (D.Ne. 1979).

B. The Fisheries Service Conducted Post-Scoping Meetings and Closed Meetings with Industry and Government

Scoping meetings appear to have been conducted outside of the MMPA and NEPA processes, preventing stakeholders who were unaware of or not included in those meetings from responding to any matters discussed. The public scoping process for the Draft EIS ended on September 16, 2019.¹⁶⁸ Public scoping meetings were attended by over 800 people, and the Fisheries Service received over 89,200 written comments.¹⁶⁹ Yet, as the Draft EIS notes, after that process ended, scoping meetings were held by Maine, New Hampshire, Massachusetts and Rhode Island in January and February of 2020.¹⁷⁰ The Draft EIS also states that “most of the measures in the Alternative Two (preferred) come from New England states and after frequent meetings and close collaboration with trap/pot fishermen.”¹⁷¹ This statement appears to indicate that there were extensive interactions outside of the statutory processes that heavily influenced the outcome of those processes. While the views of states and trap/pot fishermen are important to developing workable regulations to protect NARWs, those views must be aired and considered as part of a public, multi-stakeholder process. The failure to do so calls into question the validity of the preferred alternative and is inconsistent with NEPA.

C. In the Draft EIS, the Fisheries Service Failed to Consider a Reasonable Range of Alternatives for Reducing Risks to NARWs in the Lobster and Jonah Crab Fisheries

The Fisheries Service did not consider a reasonable range of alternatives for reducing risks to NARWs in the Draft EIS. Apart from the status quo, “No Action” alternative, the Fisheries Service evaluated only two alternatives.¹⁷² The Fisheries Service’s own guidance requires that it should “consider and analyze the impacts of a reasonable range of alternatives to the proposed action The broader the purpose and need statement, the broader the range of alternatives that must be analyzed.”¹⁷³ While there is no set rule for what constitutes a reasonable number of alternatives, in the context of similarly complex fisheries rulemakings, courts have found that evaluation of just two alternatives, apart from the No Action alternative, was insufficient, and violated the law.¹⁷⁴ The Fisheries Service did not lack for alternatives to consider, as Oceana and other stakeholders recommended a number of risk reduction measures

¹⁶⁸ Draft EIS Vol. I at 10-319.

¹⁶⁹ *Id.*

¹⁷⁰ *Id.* at 1-20.

¹⁷¹ *Id.* at 1-23.

¹⁷² One federal court has held that the “no action alternative is in fact no alternative at all—taking no action would result in a plain violation” of the ESA and MMPA. *Flaherty v. Bryson*, 850 F. Supp. 2d 38, 72 (D.D.C. 2012) (rejecting NMFS’ rule that only considered “three” alternatives, including a no-action alternative, but rejected at least six suggested additional alternatives without evaluating them in the NEPA Environmental Assessment).

¹⁷³ NOAA, *Policy and Procedures for Compliance with the National Environmental Policy Act and Related Authorities* (January 13, 2017) at 9 <https://www.nepa.noaa.gov/docs/NOAA-NAO-216-6A-Companion-Manual-03012018.pdf>.

¹⁷⁴ *Flaherty*, 850 F. Supp. 2d at 72; *Guindon v. Pritzker*, 31 F. Supp. 3d 169, 181 (D.D.C. 2014) (when vacating rule that applied less biologically conservative alternative, court held that consideration of only three quota alternatives, including a no-action alternative, violated the Magnuson Stevens Act).

that the Fisheries Service dismissed with little justification.¹⁷⁵ Rather, the Fisheries Service appeared to have focused on a limited set of measures proposed by the states and the industry, and ignored other viable alternatives. As the Draft EIS states, “[t]he proposed rule with two notable exceptions combines risk reduction measures as proposed by the New England states or as discussed with the Atlantic Offshore Lobsterman’s Association.”¹⁷⁶ The Fisheries Service rejected and failed to seriously evaluate dozens of other alternatives proposed by Oceana and other stakeholders, including other line reduction, area closure, and monitoring measures, dismissing many for inappropriate reasons such as being “unpopular with stakeholders.”¹⁷⁷ In order to meet its obligations under NEPA, the Fisheries Service must expand the Draft EIS and consider a wider range of alternatives, including alternatives raised by a wider array of stakeholders.

If the consideration of a full range of alternatives would cause a delay in the development of the final rule, the Fisheries Service should issue emergency or interim regulations to reduce risks to NARWs in the interim. Under the MMPA, when the Fisheries Service finds a likely occurrence of incidental deaths or severe injuries of marine mammals that are having or are projected to likely have an immediate and significant negative effect on the species’ population or stock, the Fisheries Service must “prescribe emergency regulations that . . . reduce incidental mortality and serious injury in the fishery.”¹⁷⁸

In addition to considering a reasonable range of risk reduction methods, the Draft EIS should also evaluate a reasonable range of strategies for monitoring the effectiveness of the Proposed Risk Reduction Rule and determining when future action is required. Specifically, a Take Reduction Plan under the MMPA must include monitoring plans to determine the success of each measure and a timeline for achieving the specific objectives of the Take Reduction Plan.¹⁷⁹ Currently, monitoring of the fisheries under the ALWTRP is poor, with low-quality information about catch, effort, bycatch and other fundamental characteristics of the fisheries. As detailed in Discussion Section VI(B) below, the Draft EIS should have evaluated a reasonable range of monitoring strategies such as those proposed by Oceana during the scoping process, including spatial monitoring, AIS, and catch and bycatch monitoring.¹⁸⁰

D. The Draft EIS Must Include Consideration of the Cumulative Impacts of All Human Activities on NARWs

The Draft EIS is fundamentally flawed in that it fails to take into account the cumulative effects on NARWs of all human activities. The Fisheries Service acknowledges in the Draft EIS,

¹⁷⁵ Draft EIS Vol. I at 3-78 to 3-82.

¹⁷⁶ Draft EIS Vol. I at 3-54.

¹⁷⁷ Draft EIS Vol. I 3-78 to 3-82.

¹⁷⁸ 16 U.S.C. § 1387(g)(1).

¹⁷⁹ 16 U.S.C. § 1387(f); NOAA Fisheries, *Marine Mammal Take Reduction Plans and Teams*, <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-take-reduction-plans-and-teams> (Nov. 30, 2020).

¹⁸⁰ Oceana Comment Letter on Atlantic Large Whale Take Reduction Plan Scoping (Sept. 16, 2019), attached as Appendix II.

as well as the Proposed Risk Reduction Rule, that NARWs spend a considerable amount of time in Canadian waters, and that significant NARW mortality occurs in those waters.¹⁸¹ Nonetheless, the Fisheries Service chose to ignore that mortality when setting the PBR of 0.9, against which all of the alternatives in the Draft EIS are measured. The Fisheries Service states:

[I]f a stock spends half its time in U.S. waters, PBR would be divided by two, resulting in a U.S. PBR for right whales of 0.5. Thus, the U.S. fishery related mortality would need to be reduced to below 0.5 (instead of 0.9 as is currently the goal). The Atlantic Scientific Review Group (established under MMPA sec. 117) that advises NMFS on Stock Assessment Reports, including PBR calculations, does not support this approach yet because we do not have sufficient information to apportion time spent in U.S. versus Canadian waters. Therefore, the U.S. target goal remains 0.9; however, NMFS did consider the relative threat including the time right whales spend in U.S. and Canadian waters when apportioning the unattributed entanglement incidents to create the risk reduction target, as described below.¹⁸²

This statement is astounding, because in essence, it says that since the Fisheries Service does not have *exact* figures regarding how much time NARWs spend in Canadian waters, it will assume that they spend *no time* there, with the result being that the PBR of 0.9 may be two or three times what is actually necessary for protection of the species from extinction. In fact, the Fisheries Service itself states in the Draft EIS that “it can be assumed that about 50% of right whale mortalities and serious injuries occur in each country.”¹⁸³ And, in the Proposed Risk Reduction Rule, the Fisheries Service stated that, “[f]or the purposes of creating a risk reduction target, NMFS assigned half of these right whale entanglement incidents of unknown origin to U.S. fisheries.”¹⁸⁴ Why the Fisheries Service did not use the 50% number or any other reasonably supportable figure in setting the PBR remains a mystery. By the Fisheries Service’s own logic, the PBR should probably be 0.5 or lower. Since the purpose of the Draft EIS is to evaluate alternatives for reducing risks to NARW in order to achieve the PBR of 0.9, it is fatally flawed, and invalid.

In addition, it is unclear whether and how the Fisheries Service factored in other risks to NARWs, such as vessel strikes, in setting the risk reduction target analyzed in the Draft EIS and chosen in the Proposed Risk Reduction Rule. It stands to reason that since vessel strikes are a significant cause of NARW mortality and serious injury,¹⁸⁵ the risk reduction target against which the alternatives were analyzed would reflect that fact. That is, it would be set at a level that takes into account the impacts of vessel strikes and other activities, recognizing that the impacts of those activities will likely continue, and possibly increase. As the Draft EIS notes with regard to vessel strikes:

¹⁸¹ Proposed Rule at 86,880; Draft EIS Vol. I at 1-5, 2-38.

¹⁸² Proposed Rule at 86,880.

¹⁸³ Draft EIS Vol. I at 2-38.

¹⁸⁴ Proposed Rule at 86,880.

¹⁸⁵ Draft EIS Vol. I at 2-29, 2-30, 8-271.

Fatal ship strikes have recently increased in occurrence as North Atlantic Right Whales shift north to locate their preferred prey species, *C. finmarchicus* into areas where they did not previously frequent and where mitigation measures were not yet in place (see chapter 2 and (Themelis et al. 2016, Davies and Brillant 2019, Plourde et al. 2019, Sharp et al. 2019)).¹⁸⁶

Instead, the Fisheries Service set its risk reduction target at the lowest end of the range it was considering, apparently not accounting for other mortality, citing cost considerations for not requiring stronger measures.¹⁸⁷

The Fisheries Service analyzed alternatives for reducing risks to NARWs from trap/pot fisheries by 60%, in order to reduce the PBR from 2.2 to 0.9. However, since it is known that vessel strikes and other activities will continue to contribute to mortality and serious injury, perhaps even more so, the Draft EIS must analyze mortality and serious injury from *all causes* to ensure that the chosen Risk Reduction Rule will not exceed 0.9. Because the Draft EIS fails to properly account for all of the major threats to NARWs, it is inconsistent with NEPA and arbitrary and capricious under the APA.

II. THE DRAFT EIS AND PROPOSED RISK REDUCTION RULE ARE NOT BASED ON THE BEST AVAILABLE SCIENCE, AND SHOULD BE UPDATED

The Draft EIS and Proposed Risk Reduction Rule are based primarily on data from 2017 and earlier, although more recent data is available. As noted above, NEPA, the MMPA and the ESA all require that agencies use the best scientific information available to them in their decision-making processes.¹⁸⁸ Because the Fisheries Service failed to use important scientific information that was available to it in developing the Proposed Risk Reduction Rule and in evaluating the proposed alternatives in the Draft EIS, both the rule and the Draft EIS are invalid and must be updated. Some of the key data that the Fisheries Service relied upon was data on the NARW population, data on mortality, and data on the number and location of buoy lines in the lobster and Jonah crab fisheries. Yet, although it is now 2021, the Draft EIS and Proposed Risk Reduction Rule are based on 2017 baseline data.¹⁸⁹

A. NARW Population Data

The Draft EIS states that the most recent population estimate for NARWs is 411 in 2017.¹⁹⁰ Since that time, however, the population has experienced a steep decline, to approximately 360 whales.¹⁹¹ The Unusual Mortality Event declared by the Fisheries Service in

¹⁸⁶ Draft EIS Vol. I at 8-271.

¹⁸⁷ Proposed Rule at 86,880.

¹⁸⁸ 42 U.S.C. § 4332(2)(A); 16 U.S.C. § 1371(a)(3)(A); 50 C.F.R. § 402.14(g)(8).

¹⁸⁹ Proposed Rule at 86,881, 86,890; Draft EIS Vol. I at 2-41, 3-66, 3-75.

¹⁹⁰ Draft EIS Vol. I at 2-35.

¹⁹¹ H.M. Pettis et al., *North Atlantic Right Whale Consortium 2020 Annual Report Card*, https://www.narwc.org/uploads/1/1/6/6/116623219/2020narwcreport_cardfinal.pdf (last visited Feb. 16, 2021).

2017 is still ongoing.¹⁹² Salient and up-to-date scientific facts are crucial when setting policy to protect the species.

The estimated maximum NARW productivity used in the Draft EIS (0.04) is also a large over-estimate that could not be sustained under recent conditions.¹⁹³ While single-year production has exceeded 0.04 in the past, this output is not sustainable in the long-term due to the small fraction of reproductively active females and the 3-year minimum interval between successful calving events.¹⁹⁴

B. Mortality and Serious Injury Data

The data on mortality and serious injury are also critical, yet once again, the Fisheries Service used data from 2017 as the baseline for determining the amount of risk reduction necessary to achieve the PBR of 0.9, despite the dramatic decline of the NARW population since 2017. The Fisheries Service also failed to account for ongoing NARW mortalities that are expected to continue even after implementation of the Proposed Risk Reduction Rule, which will further reduce the PBR between now and 2030.

C. Number and Location of Buoy Lines in Water

The Draft EIS is also based on stale data from 2017 regarding the number and location of buoy lines in the water.¹⁹⁵ Even though the model was run in November 2019, it still looks back to 2017 and the Draft EIS Appendix gives no reason that the agency could not update this for more recent years other than the fact that the agency simply did not do the data collection and updating as it should have done. The Draft EIS needs to update this model to use the most recent annual data available or justify the use of the 2017 estimate as best scientific information available that is statistically representative of the lobster and crab fisheries today.

D. Decision Support Tool / Co-Occurrence Model

In order to evaluate the various proposed risk reduction measures that comprise the two alternatives considered in the Draft EIS, NMFS relied heavily on a model known as the Decision Support Tool (DST). That model, in turn, relies on other models, including the NMFS Vertical Line/Co-occurrence Model developed by Integrated Economics, Inc. (Co-occurrence Model).¹⁹⁶

¹⁹² Under the Marine Mammal Protection Act, an Unusual Mortality Event (UME) is defined as “a stranding that – (A) is unexpected; (B) involves significant die-off of any marine mammal population; and (C) demands immediate response.” 16 U.S.C. § 1421h(6); NOAA Fisheries, *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> (Mar. 1, 2021).

¹⁹³ P. Corkeron et al., *The Recovery of North Atlantic Right Whales, Eubalaena glacialis, Has Been Constrained by Human-Caused Mortality*, 5 Royal Society Open Science 11 (2018), <https://royalsocietypublishing.org/doi/pdf/10.1098/rsos.180892>.

¹⁹⁴ S.A. Hayes et al., *US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2017 (Second Edition)*, NOAA Technical Memorandum NMFS-NE-245 (2018), <https://repository.library.noaa.gov/view/noaa/22730>.

¹⁹⁵ Draft EIS Vol. I at 3-60, 3-66.

¹⁹⁶ Draft EIS Vol. I at 1-21, 3-65, 3-66.

These models use information about whale distribution, buoy line numbers, and configurations of trap/pot gear to estimate risks to NARWs. Specifically, the DST defines these risks as the product of: (1) the density of lines in space and time as estimated in the Co-occurrence Model; (2) the density of whales in space and time, and; (3) an estimate of gear threat based on the breaking strength of ropes.¹⁹⁷

Unfortunately, as further detailed in the attached Evaluation of National Marine Fisheries Service's Proposed Amendment to the ALWTRP of Dr. Sean Brilliant of the Dalhousie University Department of Oceanography (Brillant Opinion), attached here as Appendix I, the DST is critically flawed in its reliance on an estimate of gear threat that significantly overemphasizes the contribution of rope strength to entanglement risk.¹⁹⁸ The gear threat value is based on opinions and not scientific evidence, and is heavily influenced by one study – Knowlton et al. (2015) – that has been misinterpreted to mean that rope strength is the determinant of entanglement injury, an unproven premise.¹⁹⁹ In fact, the degree to which rope strength influences the severity of injury is unknown.

The DST has other critical limitations, including that there is a large amount of unacknowledged uncertainty in the outputs of the model, due in part to the relatively small data sets that inform the model, and the lack of validation of model outputs.²⁰⁰ As a result, risk estimates produced by the model convey disproportionately greater precision than the data that inform the model.²⁰¹ These concerns are reflected in peer reviews of the DST, which recommended caution in its use.²⁰² By failing to account for the uncertainty inherent in the DST, NMFS overestimated the effectiveness of the selected methods for reducing risks to NARWs.²⁰³ As a result, the selected alternative is unlikely to succeed in meeting the PBR.

Oceana recognizes that rulemaking can be a long, cumbersome process, but the fact that the process for developing the Draft EIS and Proposed Risk Reduction Rule has been grinding forward for several years does not excuse the Fisheries Service from ensuring that the Draft EIS and the Proposed Risk Reduction Rule are based on the most current scientific and factual information, particularly on such critical points as NARW population, mortality and serious injury, as well as the number and location of buoy lines. The Fisheries Service's failure to use the best scientific information available undermines the validity of the Draft EIS and Proposed Risk Reduction Rule, and violates the "best available science" mandates set forth in NEPA, the MMPA, and the ESA.

¹⁹⁷ *Id.* at 3-65, 3-66.

¹⁹⁸ Brilliant Opinion at 5.

¹⁹⁹ *Id.*; A.R. Knowlton et al., *Effects of Fishing Rope Strength on the Severity of Large Whale Entanglements*, 30 *Conservation Biology* 318-328 (Jul. 17, 2015), <https://onlinelibrary.wiley.com/doi/full/10.1111/cobi.12590>.

²⁰⁰ Brilliant Opinion at 5.

²⁰¹ *Id.* at 5-6.

²⁰² *Id.* at 5; W.D. Bowen, *Independent Peer Review of the North Atlantic Right Whale Decision Support Tool*, Center for Independent Experts (CIE) Program External Independent Peer Review Report (December 2019); J. van der Hoop, *Review of the North Atlantic Right Whale Decision Support Tool*, Center for Independent Experts (CIE) Program External Independent Peer Review Report (December 2019); J. How, *Center for Independent Expert Independent Peer Review of the North Atlantic Right Whale Decision Support Tool* (December 2019).

²⁰³ Brilliant Opinion at 6.

The agency should update the Draft EIS and Proposed Risk Reduction Rule to incorporate relevant data from 2018 and 2019. If that process would delay important protections for NARWs, the agency should, as is required by law, use its emergency or interim rulemaking authority under the MMPA, ESA, and MSA to immediately implement temporary measures while the permanent rule is revised.

III. THE PROPOSED RISK REDUCTION RULE VIOLATES THE MMPA

A. The Proposed Risk Reduction Rule Is Not Based on the Best Available Science, and Should be Updated

As discussed in Discussion Section II above, the Proposed Risk Reduction Rule and Draft EIS are based on outdated and incomplete scientific information. This violates the MMPA's requirement that the Fisheries Service use the "best scientific information available" in analyzing whether or not to authorize incidental takes.²⁰⁴

B. The Target Risk Reduction Should be Adjusted to 80% to Ensure That the Final Rule Reduces Takes Below Current PBR and Achieves the Long-Term Zero Mortality Rate Goal

The Fisheries Service chose the lowest possible target within the 60% to 80% risk reduction range previously identified as necessary to save NARWs from extinction.²⁰⁵ The 60% to 80% range was first identified by the Fisheries Service in its 2019 Take Reduction Team decision.²⁰⁶ Since that time, a significant decline in the population of NARWs has occurred. At a minimum, the Fisheries Service should have selected a risk reduction target at the top of the 60% to 80% range or perhaps even higher as needed, whichever is more protective, to account for the further decline of the species.

Instead, the Fisheries Service selected the lowest possible risk reduction target of 60%, inappropriately basing its decision on economic factors. Under the MMPA, the Fisheries Service may "tak[e] into account the economics of the fishery" when designing a take reduction plan, but the long-term goal of the plan must be to reduce mortality and injury "to insignificant levels approaching a zero mortality and serious injury rate."²⁰⁷ In the short term, the rule must be designed to reduce takes to levels less than the PBR, regardless of economic impacts.²⁰⁸ Instead of basing its risk reduction target on these goals, the Fisheries Service chose 60% because of "the challenges achieving [an 80%] target without large economic impacts to the fishery."²⁰⁹ The 60%

²⁰⁴ 16 U.S.C. § 1371(a)(3)(A); 50 C.F.R. § 216.105(c) ("[R]egulations will be established based on the best available information.").

²⁰⁵ Letter from Colleen Coogan, *Take Reduction Target Letter*, NOAA Fisheries (April 5, 2019), https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/April%202019/06_take_reduction_target_letter_april52019.html.

²⁰⁶ Draft EIS Vol. I at 3-47, 3-48, Table 3.1.

²⁰⁷ 16 U.S.C. § 1387(f)(2).

²⁰⁸ *Id.*

²⁰⁹ Proposed Rule at 86,880.

risk reduction target is inconsistent with the purpose of take reduction plans developed under the MMPA. The risk reduction target should be increased to 80% or higher to ensure that the short-term take reduction goal and long-term Zero Mortality Rate Goal are achieved.

As noted in the attached Brilliant Opinion, the 60% target will not reduce NARW mortality, and it was chosen despite extensive statements and discussions in the Draft EIS and other key documents indicating that the target is too low. Significantly, the Draft EIS, the Draft BiOp, and the NARW Conservation Framework all recognize that estimates of the number of mortalities and serious injuries of NARWs are underestimates.²¹⁰ In fact, a discussion of cryptic mortality in the Draft EIS concludes that the risk reduction target should be 83%, a number that is treated as the upper end of the risk reduction range.²¹¹ There is simply no valid basis for choosing the lowest end of the range as the risk reduction target.

C. The Fisheries Service's Actions to Protect NARWs, Including the Proposed Risk Reduction Rule, Violate the MMPA's Timing Requirements

The MMPA requires that the NARW PBR level be achieved within six months of the ALWTRP's implementation.²¹² As demonstrated by the need for the Proposed Risk Reduction Rule, the prior ALWTRP never achieved PBR for NARWs and thus clearly violated this requirement of the MMPA. The Proposed Risk Reduction Rule would also utterly fail to meet the six-month deadline, as it relies on delayed measures and future Fisheries Service actions over the next 10 years to achieve PBR and prevent the decline of the NARW population.²¹³ Furthermore, implementation of the Proposed Risk Reduction Rule was already delayed for nearly six months as it sat in the Trump Administration's OIRA.²¹⁴

The MMPA also mandated a Zero Mortality Rate Goal for all marine mammals by April 2001.²¹⁵ Clearly, the Zero Mortality Rate Goal for NARWs has not been met nearly twenty years after the statutory deadline, indicating the Fisheries Service's failure to effectively implement and enforce this bedrock environmental requirement. With only 360 NARW individuals remaining, the species needs viable and effective protections immediately as required under the MMPA.

²¹⁰ Brilliant Opinion at 4.

²¹¹ *Id.*; Draft EIS at 2-39.

²¹² 16 U.S.C. § 1387(f)(2).

²¹³ NMFS, *Draft Endangered Species Act Section 7 Consultation Biological Opinion*, Consultation No. GARFO-2017-00031 ("Draft BiOp") at 24, Table 2 – Actions to be taken under the Framework.

²¹⁴ Office of Information and Regulatory Affairs, *OIRA Conclusion of EO 12866 Regulatory Review*, <https://www.reginfo.gov/public/do/eoDetails?rid=130845> (last visited February 25, 2021).

²¹⁵ 16 U.S.C. § 1387(b).

IV. THE DRAFT BIOLOGICAL OPINION, INCIDENTAL TAKE STATEMENT, AND NARW CONSERVATION FRAMEWORK RELATED TO THE PROPOSED RISK REDUCTION RULE VIOLATE THE ESA AND THE MMPA

The recently issued Draft BiOp,²¹⁶ Incidental Take Statement (ITS), and NARW Conservation Framework rely heavily on the Proposed Risk Reduction Rule and future Fisheries Service actions over the next 10 years related to other fisheries to achieve its goal of preventing further decline of the NARW population.²¹⁷ With only 360 individuals remaining, the species does not have 10 years to wait; viable and effective measures must be put in place immediately as required under the MMPA and ESA.

Since the Proposed Risk Reduction Rule is utterly inadequate for the task at hand (and could be weakened or paired down in the final version of the rule), the Draft BiOp and ITS also fail to meet the requirements of the ESA and MMPA. The MMPA and ESA are intended to work in tandem to protect endangered marine mammals. Congress intended that the decision processes under the two statutes “be coordinated to the maximum extent possible,”²¹⁸ and manifested that intention by incorporating the MMPA into the ESA’s incidental take statement requirement.²¹⁹ But the Draft BiOp and the Proposed Risk Reduction Rule appear to be misaligned in ways that will have serious consequences for the species.

A full discussion of the shortcomings of the Draft BiOp, ITS, and NARW Conservation Framework can be found in Oceana’s Comment Letter on the Draft BiOp, which was submitted to the agency on February 19, 2021 and is attached here as Appendix III.

V. COMMENTS ON THE STRATEGIES PROPOSED IN THE RANGE OF ALTERNATIVES

A. Trawling Up

Every vertical line in the water increases the entanglement risk for NARWs. Oceana strongly supports the use of trawling up requirements as one method to reduce the number of vertical lines. When combined with a line cap (as discussed below), trawling up measures encourage efficiency in the fisheries, allowing the fisheries to continue operating while minimizing the risk of vertical line entanglement. As acknowledged in the Draft EIS, however, trawling up requirements cannot allow for the use of stronger line in either the vertical or ground lines, which increases the risk of serious injury or mortality as a result of entanglement, especially with respect to very long trawls and entanglements with NARW juveniles and calves.²²⁰

²¹⁶ Draft BiOp.

²¹⁷ Draft BiOp at 24, Table 2 – Actions to be taken under the Framework.

²¹⁸ See 132 Cong. Rec. H10453-02 (1986) (stating the 1986 amendments to the ESA “reflect the changes to the MMPA and ... clarify the relationship between the two statutes. It is intended that the decision processes under the involved statutes be coordinated and integrated to the maximum extent practicable.”).

²¹⁹ 16 U.S.C. § 1536(b)(4).

²²⁰ Draft EIS Vol. I at 5-161, 9-297.

B. Line Cap

Oceana strongly supports the use of a line cap to further incentivize efficiency in the fisheries and reduce the number of vertical lines threatening NARWs. A line cap would provide a concrete metric for vertical line reduction, which the Fisheries Service could compare against current baseline vertical line levels. A line cap would allow the Fisheries Service to better track implementation of the Proposed Risk Reduction Rule and hold the fisheries accountable, which in turn would encourage the fisheries to adopt trawling up measures at an increased pace. A 50% line cap reduction would reduce entanglement risk by 45% in federal waters, making this one of the most effective strategies analyzed in the Draft EIS.²²¹

The Fisheries Service acknowledged in the Draft EIS that trawling up alone will not be sufficient to reduce vertical line numbers without a cap on the total number of lines.²²² The Draft EIS states that “without a constraint on the total number of lines that can be fished, such as that suggested in Alternative Three, there is no mechanism to prohibit latent effort from being activated. Many fishermen who hold lobster licenses do not actively fish at all, and many active fishermen do not fish all of the traps that have been allocated to them.”²²³ The Fisheries Service should incorporate a line cap into the Proposed Risk Reduction Rule to hold the industry accountable and ensure that trawling up requirements result in a concrete, measurable decrease in vertical lines.

C. Time-Area Management

The most effective strategy to minimize fishery bycatch and entanglements is to avoid interactions and minimize the effects of interactions that occur. To accomplish effective time-area management, regulations must shift fishing effort away from places and times where whales are present or expected. The Fisheries Service has used this strategy and explicit authority granted by the MMPA²²⁴ to create management areas in U.S. waters, including existing static seasonal management areas in the ALWTRP.

1. Oceana Strongly Supports the Use of Static, Seasonal Area Management, Which Should Be Fully Analyzed in the Final EIS and Expanded in Any Final Risk Reduction Rule

Oceana strongly supports the use of new and expanded static, seasonal area management (SAM) in times and areas where NARWs have been documented in recent years. While the alternatives analyzed in the Draft EIS include static SAM, the proposed closures are far too short and do not cover current known aggregations of NARWs.²²⁵

²²¹ Draft EIS Vol. I at 6-220.

²²² *Id.* at 5-139.

²²³ *Id.*

²²⁴ 16 U.S.C. § 1387(f)(9).

²²⁵ Draft EIS Vol. I at 3-62.

In particular, Southern New England static SAM should be expanded to account for NARW sightings south of Nantucket and Martha's Vineyard, which regularly trigger the vessel speed management areas year round. The area south of Nantucket and Martha's Vineyard is just one example of the areas and times that should be included within the static SAM strategies analyzed in the Final EIS and included in any final Risk Reduction Rule. Other areas that should be considered include offshore areas of New York, New Jersey, and Virginia. More broadly, the Draft EIS should be expanded to consider a full range of areas and times when NARWs have been observed and/or are expected to be present. A series of time-area management proposals based on different criteria were proposed to the ALWTRT in October 2018, and Oceana encourages the Fisheries Service to include each of these areas in the alternatives considered in the Final EIS and in any final Risk Reduction Rule.²²⁶

The Draft EIS should also be expanded in the Final EIS to consider the establishment of an annual review process to evaluate potential management areas and establish new static seasonal management areas in regions and seasons where NARWs congregate. This review process should include a schedule for the review as well as criteria to evaluate and a method to monitor the efficacy of the areas for NARW protection.

Oceana also supports the Fisheries Service's use of vertical line closures in static SAM locations, as this approach will encourage innovation and adoption of ropeless fishing technology. These ropeless areas will need to be monitored closely, however, to ensure compliance and to protect against vessel strikes in areas that were previously closed to all fishing activities. The Draft EIS should be expanded in the Final EIS to evaluate strategies for monitoring and preventing vessel strikes in ropeless SAM locations.

2. Oceana Strongly Supports the Use of Dynamic Area Management, Which Should Be Incorporated Into the Alternatives Analyzed in the Final EIS and In Any Future Risk Reduction Rule

Oceana strongly supports the use of dynamic area management (DAM) as an effective tool to protect NARWs. The unpredictability of whale movements makes reactive closures in response to sightings the most efficient method to preempt unforeseen entanglements.²²⁷ DAM also minimizes disruptions to fishing activities when whales are not present.

The Fisheries Service rejected DAM from consideration in the Draft EIS, because it is "not currently feasible with [the] regulatory process."²²⁸ This rationale is unclear and conflicts with the purpose of the NEPA alternatives analysis. As noted above, it is unclear what "[n]ot currently feasible with regulatory process" means. The Fisheries Service did not indicate what regulatory process this statement refers to, or why DAM is infeasible. The Fisheries Service's

²²⁶ HSUS et al., *Proposal for October 2018 Atlantic Large Whale Take Reduction Team Meeting September 24, 2018*, NOAA Fisheries (October 2018).

²²⁷ See DAM Final Rule, 67 Fed. Reg. 1133.

²²⁸ Draft EIS Vol. I at 3-79.

vague and indecipherable dismissal of this option violates the agency's obligation under NEPA to take a "hard look" at the impacts of its actions.²²⁹ It is also arbitrary and capricious under the APA.²³⁰

DAM is a proven management tool. The Fisheries Service previously conducted DAM from 2002 to 2009.²³¹ Canada has successfully utilized DAM to protect whales since 2018.²³² In fact, as dynamic management once again proved effective in 2020, resulting in zero observed entanglements, Canada just announced it will be continuing its dynamic management efforts for 2021 to reduce and ideally prevent entanglement in fishing gear.²³³ As noted in the attached Brilliant Opinion, the absence of DAM in the chosen alternative is a significant limitation, and DAM deserves a more complete assessment and consideration as a NARW risk reduction alternative.²³⁴ Without DAM, the Proposed Risk Reduction Rule may be unable to respond to new data or changes in the distribution of NARW.²³⁵

Significant advances in monitoring technologies since 2009 would further increase the effectiveness and efficiency of a modern DAM program. Moreover, the Draft EIS supports the feasibility of some form of DAM, by including a dynamic management strategy in Alternative 3, which would require the dynamic closure of the LMA1 Seasonal Restricted Area when certain triggers are met.²³⁶

Although more complicated to administer than static SAM, DAM clearly benefits fisheries. Focused DAM can be much smaller and of shorter duration than SAM. Further, DAM are based on current presence of NARWs and avoid the risk of managing fishing where NARWs are not present. In recent research, dynamic management strategies have been found to "both support economically viable fisheries and meet mandated conservation objectives in the face of changing ocean conditions."²³⁷

²²⁹ See *Marsh*, 490 U.S. at 374.

²³⁰ See *Motor Vehicle Mfrs.*, 463 U.S. at 43; 5 U.S.C. § 706(2); *Anglers*, 139 F.Supp.3d at 118.

²³¹ DAM Final Rule, 67 Fed. Reg. 1133 (Jan. 9, 2002); SAM Interim Final Rule, 67 Fed. Reg. 1142 (Jan. 9, 2002); SE Modifications Final Rule, 72 Fed. Reg. 34,632 (June 25, 2007).

²³² 67 Fed. Reg. 20,699 (Apr. 26, 2002); 67 Fed. Reg. 44,092 (July 1, 2002); 67 Fed. Reg. 71,900 (Dec. 3 2002); 68 Fed. Reg. 69,968 (Dec. 3, 2003); 74 Fed. Reg. 7824 (Feb. 20, 2009); Fisheries and Oceans Canada, *Backgrounder: Protecting North Atlantic Right Whales*, (February 15, 2019), <https://www.canada.ca/en/fisheries-oceans/news/2019/02/backgrounder-protecting-north-atlantic-right-whales.html>.

²³³ Transport Canada, *Backgrounder: Protecting North Atlantic Right Whales*, (Feb. 18, 2021), <https://tc.canada.ca/en/backgrounder-protecting-north-atlantic-right-whales-0>.

²³⁴ Brilliant Opinion at 9.

²³⁵ *Id.*

²³⁶ See Draft EIS Vol. I at 3-71; see also FR Notice at 86,882 ("NMFS is seeking comment on a proposal to provide that the Regional Administrator may implement the LMA1 closures only if certain triggers are met in the future. This would require the Regional Administrator to examine the available information in advance of October in any given year and determine whether a closure is necessary.")

²³⁷ E. L. Hazen et al., *A dynamic ocean management tool to reduce bycatch and support sustainable fisheries*, Sci. Adv. 4, eaar3001 (May 30, 2018), <https://advances.sciencemag.org/content/4/5/eaar3001>.

As a proven management tool, DAM should not have been excluded from the Draft EIS alternatives analysis based on regulatory infeasibility. NEPA requires the Fisheries Service to consider and evaluate in the Draft EIS reasonable alternatives that would fulfill the purpose of the Proposed Risk Reduction Rule.²³⁸ DAM is an effective tool to prevent whale mortalities and injuries. Prior and current uses of this management tool demonstrate its regulatory feasibility. DAM should not have been refused consideration in the Draft EIS simply because certain updates to the Fisheries Service's current regulatory process would be required for successful implementation. The Proposed Risk Reduction Rule is the best mechanism for updating the current regulatory process to support DAM.

The Fisheries Service should strongly consider incorporating a DAM program into the Final EIS and in any final Risk Reduction Rule. At a minimum, the final rule should give the Fisheries Service emergency authority to close areas when NARW aggregations appear.

D. Weak Rope

Oceana does not support the proposed requirement to use weak rope, line inserts, sleeves, or other contrivances ("weak rope") that theoretically allow NARWs to break free from entanglements. The reliance on weak rope is flawed in two ways that make it unsuitable for use in regulation.

First, the use of weak rope, with a breaking strength of 1,700 lbs. (771 kg), is expected, on the basis of just two studies – neither of which involved direct testing, to reduce entanglements of *adult* NARWs that can produce enough power to separate the weak rope. Aside from being questionable as best scientific information available, the two studies are insufficient to make weak rope the central management measure implemented under the Proposed Risk Reduction Rule. Weak rope has not been proven to be effective for juveniles and calves and cannot be part of a comprehensive risk management plan.²³⁹ Protecting all life stages is critical for the species' recovery. Therefore, any management strategy must provide protection for each life stage to effectively meet conservation goals and cannot be focused on benefits to just one life stage.

Second, while reducing mortality and significant injury by using weak rope will reduce the length and severity of entanglement under the MMPA requirements,²⁴⁰ the Proposed Risk Reduction Rule cannot and should not ignore the more stringent ESA requirement to avoid entanglements to protect endangered NARWs from sublethal "takes."²⁴¹ Weak rope will do nothing to reduce the sublethal "take" of listed NARWs, as they will nonetheless have

²³⁸ *Anglers*, 139 F.Supp.3d at 118.

²³⁹ Arthur LH, McLellan WA, Piscitelli MA, Rommel SA, Woodward BL, Winn JP, Potter CW, Pabst DA. 2015. *Estimating maximal force output of cetaceans using axial locomotor muscle morphology*, Marine Mammal Science May 6, 2015, <https://onlinelibrary.wiley.com/doi/abs/10.1111/mms.12230> (last visited Feb. 28, 2021).

²⁴⁰ 16 U.S.C. §§ 1361 et seq.

²⁴¹ "Take," as defined under the ESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C § 1532(3)(19).

interactions with gear that qualify as a “take,” because the entanglement and break event, if it occurs, will cause harm to the individual NARW.²⁴² As noted in the attached Brilliant Opinion, the harmful sublethal effects of entanglements are increasingly linked to the poor health and diminishing productivity of NARWs.²⁴³ The Proposed Risk Reduction Rule fails to address the problem that approximately 25% of the NARW population is entangled every year.²⁴⁴ Correcting the poor health and low reproductive rate of NARWs caused by this entanglement is as necessary for the species’ recovery as preventing deaths.²⁴⁵

Furthermore, as detailed in the attached Brilliant Opinion, the central assumption behind the Fisheries Service’s reliance on weak rope as a management tool – that reducing the severity of injury from an entanglement is the management equivalent of reducing the likelihood of entanglement – is unsupported and contrary to current knowledge of risk mitigation, which focuses on preventing injury rather than mitigating it.²⁴⁶ As a result, weak links, weak inserts, and weak rope cannot be relied upon to reduce the mortality or serious injuries of NARWs.²⁴⁷

Oceana has argued against the use of weak rope in its scoping comments on this rulemaking and repeats that opposition here.²⁴⁸ Weak rope is not a sufficient measure to reduce ESA takes and the Fisheries Service must find additional means to reduce risk by implementing other management measures that avoid interactions.

E. Gear Marking

Oceana supports gear marking and fully acknowledges that gear marking may prove useful for data collection to inform future fishery management to protect NARWs from entanglement.²⁴⁹ Gear marking is not effective, however, as a management measure to achieve the purpose and need outlined in the Draft EIS.²⁵⁰ Moreover, gear marking may distract the Fisheries Service and stakeholders from the urgent need for immediate action to reduce entanglement risks to NARWs.

²⁴² *Id.*

²⁴³ Brilliant Opinion at 8; *see also* Moore et al., *Assessing North Atlantic right whale health: threats, and development of tools critical for conservation of the species*, Dis. Aquat. Org. Vol. 143: 205-226 (Feb. 25, 2021) (“The role of sub-lethal entanglement drag in reducing NARW health and fecundity should be a major consideration in comparing the efficacy of potential mitigation measures. Thus, while 1700 lb (~773 kg) breaking strength rope may reduce mortality and severe injury, it will continue to be a source of morbidity.”).

²⁴⁴ *Id.*

²⁴⁵ *Id.*

²⁴⁶ *Id.* at 6.

²⁴⁷ *Id.*

²⁴⁸ Oceana Comment Letter on Atlantic Large Whale Take Reduction Plan Scoping (Sept. 16, 2019), attached as Appendix II.

²⁴⁹ Draft EIS Vol. I at 5-177.

²⁵⁰ Draft EIS Vol. I at 2-26, 2-28.

VI. COMMENTS ON OTHER ALTERNATIVES CONSIDERED BUT REJECTED OR NOT INCLUDED

A. The Fisheries Service Rejected a Long List of Effective Management Tools and Strategies for Invalid Reasons

The Fisheries Service rejected a long list of proven management tools and strategies based on rationales that are both invalid under NEPA, the ESA, and the MMPA, and arbitrary and capricious under the APA. As discussed above, the Fisheries Service rejected numerous effective management strategies, including line reductions, enhanced weak line requirements, and static area closures, for the unclear and invalid reason that they were “unpopular with stakeholders.”²⁵¹ Moreover, the Fisheries Service rejected dynamic area management because it is “[n]ot currently feasible with regulatory process.”²⁵² This statement is both unclear and factually inaccurate. Dynamic area management is a proven, feasible management tool. Lastly, the Fisheries Service rejected certain line reduction measures because it would “prefer fishery management to be done by [the Atlantic State Marine Fisheries Commission/New England Fisheries Management Council].”²⁵³ This rationale violates the Fisheries Service’s obligation to assess reasonable alternatives under NEPA whether or not other agencies would be involved in implementing such alternatives. The Draft EIS should be expanded to consider all of the proven management tools and strategies that were rejected for these invalid reasons.

B. The Fisheries Service Should Expand the Draft EIS to Consider a Broader Range of Enhanced Monitoring Measures

The Draft EIS fails to evaluate a reasonable range of monitoring strategies to track the effectiveness of the Proposed Risk Reduction Rule and inform decisions about further management. As noted in the attached Brilliant Opinion, the Draft EIS provides few details on monitoring; however, monitoring compliance and outcomes is critical for the success of the ALWTRP. Effective monitoring will not only require a large decrease in risk but also a large increase in monitoring.²⁵⁴

Accurate, precise, and timely monitoring of interactions with protected species are fundamental elements of both the MMPA and the ESA. Effective monitoring allows the Fisheries Service to monitor takes against the PBR (under MMPA) and ITS (under ESA) levels to determine when further management action is necessary and to ensure that affected fisheries are achieving their goals and meeting their obligations under the law. Currently, monitoring of the fisheries under the ALWTRP is poor, with low-quality fundamental information about catch, effort, bycatch and other characteristics of the fisheries. The Draft EIS should be expanded to consider additional monitoring measures that would significantly improve current fisheries monitoring, including spatial monitoring, AIS, and catch and bycatch monitoring.

²⁵¹ Draft EIS Vol. I at 3-78 to 3-82.

²⁵² *Id.* at 3-79.

²⁵³ *Id.*

²⁵⁴ Brilliant Opinion at 9.

1. Spatial Monitoring

The Draft EIS should be expanded to evaluate spatial monitoring as a potential strategy for tracking the effectiveness of the Proposed Risk Reduction Rule. Knowing where and when fishing is taking place is critical for understanding the risk of entanglement to large whales. While vessel monitoring systems have been the norm in the past in other fisheries in the Northeast region of the United States, lower-cost spatial monitoring technologies are available today that will provide necessary fine-scale information for informing fishery management.

2. Automatic Identification System

The Draft EIS should be expanded to evaluate the use of AIS to track vessel locations and movements. This technology provides high-quality, real-time information about fishing activity and is already widely used around the world. AIS is currently required on U.S. commercial fishing vessels 65 feet and longer while operating within U.S. territorial seas. AIS should not have been refused consideration in the Draft EIS based on the Fisheries Service's rationale that it is too "costly."²⁵⁵ A basic AIS tracking systems costs between \$500 and \$1,300, while a more advanced AIS system costs between \$750 and \$3,500.²⁵⁶ AIS devices also have no ongoing operating costs. In relation to the overall size and value of the lobster fishery (approx. \$600 million), for example, the cost of AIS technology is miniscule, especially in light of the benefits it provides in the form of real-time fishery monitoring not to mention safety to prevent vessel collisions.

3. Catch and Bycatch Monitoring

The Draft EIS should be expanded to consider improvements to independent catch and bycatch monitoring of the U.S. trap/pot fisheries. As discussed above, accurate, precise and timely monitoring of interactions with protected species are fundamental elements of both the MMPA and the ESA. The Fisheries Service has recognized the need to improve monitoring of Northeast region trap/pot fisheries with the recent inclusion of these fisheries in the list of "gear modes" that receive observer coverage under the Northeast Region Standardized Bycatch Reporting Methodology.²⁵⁷ At this time, however, coverage for these portions of the fishery is exceedingly low and does not generate information that is useful for informing management of the fishery or about interactions with protected species. For example, in the current observer scheduling year, the trap/pot fisheries in the entire Northeast region are scheduled to receive a total of 346 observer days to cover nearly 37,000 fishing days reported on Vessel Trip

²⁵⁵ *Id.* at 3-81.

²⁵⁶ U.S. Department of Homeland Security, U.S. Coast Guard, Navigation Center, *AIS Frequently Asked Questions #14 – What are the differences between AIS Class A and B devices?*, *Shipborne AIS Class Comparison*, https://www.navcen.uscg.gov/pdf/AIS_Comparison_By_Class.pdf (last visited Feb. 26, 2021).

²⁵⁷ NOAA, *NOAA Technical Memorandum NMFS-NE-262: 2020 Standardized Bycatch Reporting Methodology Annual Discard Report with Observer Sea Day Allocation*, (April 2020) <https://repository.library.noaa.gov/view/noaa/25522>.

Reports.²⁵⁸ This represents less than one percent of fishing trips and cannot be used as a statistically robust source to provide information about catch or bycatch in the fishery.

4. New Monitoring Technologies

The Draft EIS should also consider the implementation of new monitoring technologies that are becoming more widely available or that may become available in the future. These technologies include passive acoustic monitoring, drones, electronic monitoring, and satellite monitoring of NARW populations. The deployment of innovative monitoring technologies should be included in a comprehensive monitoring plan to fulfill the requirements of the ESA and MMPA.

Recent advances in technology hold significant promise to increase the effectiveness of NARW protection efforts. It is important to emphasize, however, that no one technology is a panacea, and these different technologies should be used in concert to provide a more complete picture of NARW behavior. Three major ways in which new technologies can help protect NARWS include: (i) by monitoring and tracking whale locations, (ii) by collecting data to evaluate the effectiveness of both voluntary and mandatory restrictions, and (iii) by monitoring vessel operations.

First, to effectively protect NARWs, it is critical to understand their behavior and distribution patterns—especially given that many protective measures are based on time and place restrictions. In particular, passive acoustic monitoring is a useful tool that allows for the detection of whales frequenting locations that are hard to discern through mere visual observation and surveys. Passive acoustic recorders can be moored to create a network to monitor NARW locations. Unlike aerial monitoring, such a network can continuously monitor for whale presence, and can do so regardless of weather and sea conditions.²⁵⁹ Recent studies using this technology have yielded a wealth of information on NARW location and behavior.²⁶⁰

In addition to installing a fixed monitoring network, underwater autonomous vehicles can also be deployed to monitor for whales. For example, underwater autonomous drones—such as Slocum gliders²⁶¹—can be deployed with passive monitoring technology and used to provide information on whale location. One recent study even found that ocean gliders could be used to

²⁵⁸ *Id.*

²⁵⁹ See NOAA Fisheries, *Tracking Technology: The Science of Finding Whales*, <https://www.fisheries.noaa.gov/feature-story/tracking-technology-science-finding-whales> (Feb. 5, 2018).

²⁶⁰ Genevieve E. Davis et al., *Long-Term Passive Acoustic Recordings Track the Changing Distribution of North Atlantic Right Whales (*Eubalaena glacialis*) from 2004 to 2014*, *Nature: Scientific Reports* 7, 13460, at 5 (Oct. 18, 2017) [hereinafter Davis et al.], <https://www.nature.com/articles/s41598-017-13359-3>.

²⁶¹ NOAA National Ocean Service, *What is an ocean glider?*, <https://oceanservice.noaa.gov/facts/ocean-gliders.html> (last updated Feb. 26, 2021); see also Woods Hole Oceanographic Institute, *Slocum Glider*, <https://www.whoi.edu/what-we-do/explore/underwater-vehicles/auvs/slocum-glider/> (last visited May 9, 2020).

gather and share information regarding whale locations in near real-time.²⁶² Under the protocol used in the study, the ocean gliders can transmit information about the tonal sounds of baleen whales to shore in near-real time, and then a human analyst can review the information to confirm the presence of the whale.²⁶³ The results can then be shared with the public and interested parties and stakeholders.²⁶⁴ The study found that using this protocol, false positive detection rates on a daily time scale were 0% for all whales, including NARWs, and missed detection rates ranged from 17-24%.²⁶⁵ These results indicate that gliders equipped with passive acoustic monitoring technology can be used to accurately determine the presence of NARWs in near-real time, and could thus be used by state and federal agencies to adopt temporary protections for NARWs in the vicinity. For instance, the Fisheries Service could collect such data to determine whether it is appropriate to designate a DAM.

In addition to ocean gliders, saildrones—which are unmanned surface vehicles “that combine wind-powered propulsion technology and solar-powered meteorological and oceanographic sensors to perform autonomous long-range data collection missions”²⁶⁶—can also be equipped with acoustic monitoring and used to track whales.²⁶⁷ Such autonomous technologies have the potential to provide valuable data to supplement and enhance the understanding of whale distributions.

Technologies for conducting aerial surveys are also evolving and becoming increasingly available. Advances are being made in drone technology that could supplement the survey efforts currently being undertaken by airplane.²⁶⁸ In addition, satellite tracking is increasingly being used as a tool to supplement existing whale tracking methods. For example, scientists from the New England Aquarium are partnering with an engineering firm to integrate satellite data with sonar and radar data, and then input the data into an algorithm to track whale movements and create a probability map of where whales are likely to travel.²⁶⁹ Indeed, the falling cost of

²⁶² Mark F. Baumgartner et al., *Slocum Gliders Provide Accurate Near Real-Time Estimates of Baleen Whale Presence From Human-Reviewed Passive Acoustic Detection Information*, *Frontiers in Marine Science* 7, at 1 (Feb. 25, 2020), <https://www.frontiersin.org/articles/10.3389/fmars.2020.00100/full>.

²⁶³ *Id.*

²⁶⁴ *Id.*

²⁶⁵ *Id.* at 6.

²⁶⁶ Saildrone, *Wind-Powered Ocean Drones*, <https://www.saildrone.com/technology> (last visited May 9, 2020).

²⁶⁷ Saildrone, *How Unmanned Surface Vehicles Use Sound to Count Fish, Whales* (Nov. 10, 2017), <https://www.saildrone.com/news/usv-use-sound-count-fish-locate-whales>; Saildrone, *Wind-Powered Ocean Drones*, <https://www.saildrone.com/technology> (last visited May 9, 2020); NOAA Fisheries, *Tracking Technology: The Science of Finding Whales*, <https://www.fisheries.noaa.gov/feature-story/tracking-technology-science-finding-whales> (Feb. 5, 2018).

²⁶⁸ Jessica Boddy, *Drones can take scientists to strange new places—like inside whale snot*, *Popular Science* (May 2, 2018), <https://www.popsci.com/drones-science-research-whale-snot/>; Josy O'Donnel, *How Technology is Helping Whale Conservation*, *Ocean Alliance*, <https://whale.org/how-technology-is-helping-whale-conservation/> (last visited May 11, 2020).

²⁶⁹ Jennifer Leman, *Why Scientists are Counting Whales from Space*, *Popular Mechanics* (Jan. 6, 2020), <https://www.popularmechanics.com/science/animals/a30420762/satellites-save-whales/>.

satellite imaging has provided a new source of valuable information to scientists regarding whale movements and behavior.²⁷⁰

In addition to improved monitoring of whales, technological advancements also offer the ability to better monitor key vessel parameters—such as identity, location, and speed—to determine if vessels are complying with measures adopted to protect NARWs. For instance, Oceana, in partnership with Google and SkyTruth, has developed Global Fishing Watch, a publicly available online tool to track vessel identity and movements.²⁷¹ Global Fishing Watch uses data from the AIS, a GPS-like device that is required on large vessels in order to avoid collisions.²⁷² Global Fishing Watch uses sophisticated computer algorithms, machine learning, and cloud computing to process more than 60 million points of information per day from more than 300,000 vessels to identify the name of the ship, type of ship, size, and where and when the ship is fishing, among other things.²⁷³ Global Fishing Watch makes this vessel tracking information available to the public through an online interactive map, and offers downloadable data in near real time, with data from January 1, 2012 to about 72 hours ago.²⁷⁴ These advancements in computing power and data processing can be used to monitor compliance with regulations designed to protect NARWs and to facilitate federal and state enforcement by identifying instances in which vessels fail to comply.

Oceana understands that monitoring rare events like NARW interactions with fishing gear is a difficult task. Because of the statutory obligations to monitor takes, however, the Final EIS must do more to explore improvements to independent monitoring of the U.S. trap/pot fisheries.

CONCLUSION

In light of Oceana's interest in protecting NARWs from entanglement in fishing gear, Oceana appreciates the opportunity to provide comments on the Proposed Risk Reduction Rule and the related Draft EIS. After careful review of the Proposed Risk Reduction Rule and the Draft EIS, Oceana does not believe that the measures in the Proposed Risk Reduction Rule are sufficient to save NARWs from extinction, nor do the measures meet the legal requirements of the MMPA or the ESA. In addition, the related Draft EIS fails to comply with NEPA. And, both documents appear to contain "arbitrary and capricious" elements in violation of the APA. Moreover, the Proposed Risk Reduction Rule must be designed to reduce takes to levels lower than the PBR, regardless of economic impacts.²⁷⁵

In order to correct the inadequacies of the Proposed Risk Reduction Rule and the Draft EIS, Oceana urges the Fisheries Service to take the following actions:

²⁷⁰ Josy O'Donnel, *How Technology is Helping Whale Conservation*, Ocean Alliance, <https://whale.org/how-technology-is-helping-whale-conservation/> (last visited May 11, 2020).

²⁷¹ Global Fishing Watch, *Partners*, <https://globalfishingwatch.org/partners/> (last visited May 8, 2020).

²⁷² Global Fishing Watch, *How it Works*, <https://globalfishingwatch.org/map-and-data/technology/> (last visited May 8, 2020).

²⁷³ *Id.*


²⁷⁴ *Id.*

²⁷⁵ 16 U.S.C. § 1387(f)(2).

- The Fisheries Service should significantly revise the Proposed Risk Reduction Rule and Draft EIS to aim for a more ambitious risk reduction target and to incorporate measures that will adequately recover the NARW population, including the use of proven management tools such as dynamic area management, gear and vertical line reduction, geographic and temporal expansion of static, time-area management, broader use of AIS, better fishery monitoring and reporting, and incentives to promote testing and adoption of ropeless gear;
- If the Fisheries Services does not significantly revise the Proposed Risk Reduction Rule and Draft EIS as detailed above, the agency should withdraw the Proposed Risk Reduction Rule and reformulate a stronger rule and Draft EIS by assessing a broader range of more effective alternative measures to protect NARWs; and
- If the Fisheries Service withdraws the Proposed Risk Reduction Rule and Draft EIS, while a new, stronger rule is being developed, the agency should immediately implement interim emergency management measures that immediately reduce mortality and serious injury below the PBR level using authority under the MMPA, ESA, and the MSA.

We appreciate the opportunity to provide input and thank you for your time. We look forward to working with and supporting the agency as it strengthens these proposals.

Sincerely,



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APPENDIX I

Evaluation of National Marine Fisheries Service's Proposed Amendment to the ALWTRP of
Dr. Sean Brilliant (Feb. 26, 2021)

(See attached.)

Evaluation of the National Marine Fisheries Service's Proposed Amendment to the Atlantic Large Whale Take Reduction Plan (ALWTRP)

Dr. Sean Brilliant, SBrilliant@dal.ca
February 26, 2021

I. Purpose

I have been asked to provide my professional evaluation of the National Marine Fisheries Service's (NMFS) December 31, 2020 proposed rule (Proposed Risk Reduction Rule) to amend its Atlantic Large Whale Take Reduction Plan (ALWTRP) and the related Draft Environmental Impact Statement (Draft EIS).

A. Qualifications

I am an experimental marine ecologist and a professional conservation biologist with experience working on conservation issues since 1993. Since 2007 I have focused particularly on fisheries entanglement issues and North Atlantic right whales (NARW), with the goal of finding ways to reduce entanglement risk to large whales while allowing fisheries to continue profitably. My work has involved engaging in and leading dialogue with all sectors involved in entanglement mitigation, carrying out and publishing scientific investigations on NARW conservation (listed in my attached C.V.), and collaborating with a variety of partners including fishers, scientists, and government managers to identify and to evaluate potential actions to achieve this goal. Since I began working on this topic, I have actively participated in U.S.-based workshops and meetings related to NARW conservation, including meetings of the Atlantic Large Whale Take Reduction Team (as an observer), and I have remained current on the research and programs that have been developed to lead and to support these efforts.

B. Materials Reviewed

To complete my assessment, I reviewed numerous reports, including:

- the Proposed Risk Reduction Rule published in the Federal Register,
- the Draft Environmental Impact Statement (both volumes) (Draft EIS),
- the Draft Biological Opinion (Draft BiOp),
- the NARW Conservation Framework,
- the PowerPoint slides from NMFS' presentation to the New England Fishery Management Council on January 28, 2021,
- the PowerPoint slides from NMFS' presentation regarding the whale population model used in the Draft BiOp for the Atlantic Scientific Review Group on February 12, 2021, and
- the peer review reports evaluating the Decision Support Tool and the Vertical Line Model/Co-Occurrence Model.

In addition, I attended meetings on January 28 and February 12, 2021 where NMFS staff presented information about some of these materials, as well as the public hearing on Feb 24, 2021. I reviewed all these materials in the limited time provided for review and comment.

C. Presented Questions

The overarching question I have been asked to answer is: will the Proposed Risk Reduction Rule (i.e.,

Alternative Two) reduce the “take” of NARW to, or below, their Potential Biological Removal (PBR), thus allowing the population of NARW to recover.

Additional questions provided and addressed include:

- Is the 60% risk reduction target set by NMFS appropriate and sufficient to achieve the PBR, or should the agency be more ambitious in its risk reduction target?
- What are the implications of the fact that the Proposed Risk Reduction Rule is based on outdated data from 2017?
- How effective are the management tools proposed by NMFS in Alternatives Two and Three at reducing the risk of NARW entanglement? Specifically, have weak rope, trawling up, gear marking, line caps, ropeless gear and time-area closures been proven to be effective tools for reducing NARW entanglement risk?
- Is dynamic area management, which was rejected in the Proposed Risk Reduction Rule, an effective tool for reducing NARW entanglement risk?
- Are the Decision Support Tool (DST) and underlying models reliable tools for making the policy decisions in the Proposed Risk Reduction Rule? What improvements could be made to the DST and underlying models to make them more reliable?

D. Summary of Assessment

Following my in-depth review of the materials mentioned above, I conclude that this proposed rule is very unlikely to accomplish the goal of reducing the “take” of NARW to, or below, their PBR.

Numerous observations support this conclusion and are presented within the sections that follow. The observations listed here are, however, the main features that support the assessment:

- 1) The use of PBR is required by the Marine Mammal Protection Act (MMPA); however, I believe the shortcomings of PBR need to be carefully considered as it is ultimately the goal of the Proposed Risk Reduction Rule. The use of PBR as a conservation goal must account for its inherent assumptions and variability, but I do not see evidence of this in this process.
- 2) A variety of methods were undertaken to determine the reduction of risk needed by US fisheries to achieve PBR for NARW, but the lowest calculated risk reduction value (60%) was selected as the target despite the most convincing consideration of the data indicating the target should be considerably higher (83%).
- 3) The Decision Support Tool (DST) and the models underlying the DST used to predict the result of various proposed regulatory actions is fraught with uncertainty and based on untested and unstated assumptions. The most serious flaw of this tool is the inclusion of a gear threat assessment which is an opinion-based, qualitative assessment presented as an objective quantitative measurement. It is used in a manner that disproportionately influences the results of the assessment with too little scientific evidence to justify its inclusion.

To ensure a reasonable chance of reducing NARW mortality to below PBR, it is strongly advised that a more ambitious risk reduction target be adopted (e.g., 83% based on estimates in Draft EIS Section 2.1.5) and that the predicted reductions of risk by proposed regulatory actions be made more realistic by removing the contribution of weak rope. The implementation of weak rope should not account for

any reduction in risk, as this relationship is an untested premise. An overestimate of the value of weak rope will result in the extinction of NARW.

I am acutely aware of the need for the amendments to the ALWTRP to reduce entanglement rates and to allow scientific research to guide regulatory actions. I do not believe the tools evaluated here in support of the amendments to the ALWTRP lack value. But their uses in this process are not adequately accounting for the limitations, assumptions, and variability of each tool. By constructing a course of action without considering the contribution of uncertainty from each tool to the next, NMFS is failing to take a precautionary approach. From among the range of estimated risk reductions needed to save NARW, NMFS is aiming for the lowest (60% risk reduction), and from among the range of possible results of regulatory actions, NMFS is assuming the most optimistic outcomes. In its current state, therefore, it is unlikely this plan will accomplish its goal.

II. Assessment

In the assessment that follows, I will briefly discuss the history of the ALWTRP as well as the current proposed amendment. I then provide my evaluation and analysis of the shortcomings of PBR, the selection of the risk reduction goal, the Decision Support Tool and underlying models, including the Vertical Line Analysis/Co-Occurrence Model, the Whale Density Model, and the Gear Threat Estimate, the proposed options for regulatory action, and the NARW Conservation Framework as well as other important, yet overlooked, considerations, including sublethal effects of non-serious injury, vessel strikes, and dynamic area management.

A. History of the ALWTRP and the 2020 Proposed Amendment to the ALWTRP

The ALWTRP was first implemented in 1997 by NMFS in response to the need to reduce the incidental take of large whales, as required by the MMPA, and it has been modified several times since, most recently in May 2015 (80 FR 30367, May 28, 2015). The current proposal to modify the plan focuses on reducing the rate of mortality and serious injury to NARW from lobster and Jonah crab trap/pot gear in the Northeast Region Trap/Pot Management Area (Northeast Region) to below the PBR for this species. Two alternative sets of regulatory actions are presented, Alternative Two (the preferred agency action) and Alternative Three, as a part of a 10-year Conservation Framework to accomplish this. Risk mitigation efforts of each alternative suite of actions focuses on reducing the number of lines in the water and reducing the breaking strength of vertical lines of certain areas.

B. Limitations of Potential Biological Removal (PBR)

The PBR is a requirement of the MMPA, however, I believe the assumptions and calculations of PBR need careful consideration, as it is ultimately the goal of the Proposed Risk Reduction Rule.

The PBR for NARW is so small that it need not be discussed in detail. Even in its current form which uses favorable estimates, this species cannot even tolerate the loss of one individual per year. This is a dire situation.

The PBR attempts to incorporate conservative values into its calculations, but for NARW, the best available science suggests that even these values are too favorable. PBR cannot be considered a precise target unless every variable used in its calculation is highly conservative. This is not the case in its use for NARW.

Following are other considerations about PBR and why the current form fails to use the best available science and, therefore, likely over-estimates a sustainable take:

The estimated maximum productivity used for NARW (0.04) is a large over-estimate, which could be sustained only theoretically, and not under recent conditions (Corkeron et al 2018). This over-estimate is also acknowledged in the US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments (Hayes et al. 2018b): “Single-year production has exceeded 0.04 in this population several times, but those outputs are not likely sustainable given the 3-year minimum interval required between successful calving events and the small fraction of reproductively active females.”

The method used by NMFS to estimate the minimum number alive, the lower value of the 60% credible interval about the median of the posterior estimate based on Pace et al (2017), is 457. This estimate is larger than other population estimates for NARW and 30% larger than the NARW Consortium estimate to the end of 2019 (i.e., 356; Pettis et al. 2021).

Although still a draft, the most recent 2020 Marine Mammal Stock Assessment Report (NOAA 2020) has been submitted to the Federal Register (<https://www.federalregister.gov/d/2020-26681>) and concludes that NARW have a PBR of 0.8. This decrease in PBR has been widely expected and acknowledged.

Finally, as the population of NARW continues to decline due to ongoing mortalities that are expected to continue even after the implementation of this proposed rule, the PBR will become smaller. Thus, during the proposed 10-year time frame for the NARW Conservation Framework to attempt to achieve its goal of the 2019 PBR, the PBR will have notably diminished even further by 2030. Precautionary measures must be taken now to avoid this outcome.

C. Selection of the Risk Reduction Goal

After considering multiple methods of evaluation and apportionment of mortalities between Canada and the US, and despite numerous statements about the uncertainty and variability of the data (Draft EIS Section 2.15), the selected risk reduction goal (i.e., 60%) was the lowest of all the estimates, and is treated as a definitive value, despite extensive discussions and statements to the contrary. The reasons why this reduction target is unlikely to reduce NARW mortality to PBR include the following:

All literature and reports related to the Proposed Risk Reduction Rule (e.g., Draft EIS, Draft Biological Opinion, and NARW Conservation Framework) state that estimates of the number of mortalities and serious injuries for NARW are underestimates. Pace et al. (2021) confirmed this premise, showing that causes of death for NARW determined from carcasses are not representative of cause-specific mortality rates because of the large proportion of cryptic mortalities.

An acknowledgement and discussion about cryptic mortality in the Draft EIS (Section 2.1.5) concludes that the risk reduction target should be 83%, but this is then treated as the upper boundary of the necessary risk reduction. A recommended, precautionary approach is that 83% be considered the central estimate of the lower boundary and, therefore, a more suitable goal to ensure success.

D. The Decision Support Tool (DST) and Underlying Models

The Decision Support Tool (DST) is a model that estimates the relative risk to kill or seriously injure whales due to entanglements. It was developed to inform the selection of various management actions by estimating the resulting reduction in entanglement risk to whales. It defines this risk as the product of three factors:

- 1) the density of lines in space and time estimated by the NMFS Vertical Line Model/Co-Occurrence Model developed by Integrated Economics (IEc) since 2004;
- 2) the density of whales in space and time estimated by the modified habitat density model of Roberts et al (2016); and
- 3) an estimate of gear threat based on the breaking strength of ropes.

The DST was reviewed by Center for Independent Experts (CIE) in 2012 and again in 2019. Important limitations were identified during this process, several of which were repeated in each set of reviews. Although NMFS states that the DST was refined based on these recommendations (Draft EIS Section 3.3.4.1), there remain important limitations in each of the components that comprise this tool.

The conclusive weakness of this tool, which raises doubts about its results, is the inclusion of an estimate of gear threat. The incorporation of this concept into the DST significantly overemphasizes the contribution of rope strength to entanglement risk by assuming it is of equivalent value to estimates of the co-occurrence of whales and fishing gear. This estimated threat value of various gear configurations is based on opinions of approximately 50 individuals (an estimate, as Figures 4.7.1a and 4.7.1b in Appendix 3.1 Decision Support Tool Model Documentation appear to be missing). The resulting blend of selected personal opinions with quantitative estimates creates a product that appears to be knowledge (e.g., Draft EIS Figure 4.7.2.1g), but is neither objective, clear, nor based on scientific evidence.

One source from which this belief about gear threat arose was the Knowlton et al (2015) study, which investigated patterns between rope strength and the severity of injuries, species, and age in large whales. This study has been interpreted as evidence that rope strength is the determinant of entanglement injury, but it is not. This research corroborated the premise that rope strength is a factor that influences the resulting injuries from entanglements, but it goes no further. There are alternative explanations for the patterns identified by Knowlton et al. (2015) that have not yet been tested (e.g., spatial distribution of rope strengths, behavioral responses during entanglements). Until alternative explanations are rejected, the degree to which rope strength influences the severity of injury is unknown.

There are other limitations to the other two models that comprise the DST (i.e., the Vertical Line Model/Co-Occurrence Model and the Roberts et al. 2016 Habitat Density Model). Most notably, the inability of the DST to account for the propagation of uncertainty from the models, the absence of validation of model outputs, and the use of relatively small sets of available data all indicate that there is a large but unreported amount of uncertainty in the products of these two models. Thus, interpretation and use of their results must account for this uncertainty. Reviewers during each of the CIE reviews recommended caution in using the DST, but it is not evident that this recommendation is being followed. An example to support this concern is that the estimates produced by these models (e.g., Appendix 3.1 Decision Support Tool Model Documentation Fig 4.1.3.b) convey disproportionately greater precision than the data that inform the models (e.g., Appendix 3.1 Decision Support Tool Model

Documentation Fig 4.1.2.4.a).

By failing to account for the uncertainty inherent in the DST, NMFS overestimated the effectiveness of the selected methods for reducing risk to NARW. As a result, the proposed amendments to the ALWTRP are likely to be ineffective, and the NARW population will continue to decline.

E. Proposed Options for Regulatory Action and Assessment

NMFS identifies two regulatory options for reducing serious injury or mortality of whales from entanglement:

- 1) reducing the likelihood of entanglement; and
- 2) reducing the severity of injury if an entanglement occurs.

NMFS assumes the former option can be accomplished by reducing the number of lines throughout the region and by establishing seasonal restricted areas, and the latter option by requiring the use of rope that breaks more easily using weak links, weak inserts, or reduced breaking-strength (i.e., weak) rope.

Treating these two options as equivalents is contrary to current and emerging knowledge of risk mitigation. According to the hierarchy of controls (www.cdc.gov/niosh/topics/hierarchy), preventative actions are always more effective in mitigating risk than efforts to reduce the damage from hazardous events. The mitigation hierarchy, an extension of this concept, is used by the IUCN in habitat protection programs (BBOP 2010), and it is becoming the core framework for bycatch mitigation (e.g., Milner-Gulland et al. 2018). The unsupported assumption that minimizing injury is equivalent to actions that prevent entanglements is a foundation of this proposed rule modification (e.g., Draft EIS Section 3.1). Thus, in selecting the regulatory options, NMFS has overemphasized the value of weak lines for reducing risk. The ALWTRP would be more likely to accomplish its goal if it prioritized preventative efforts, rather than assuming an unrealistically optimistic value of injury reduction.

1. Buoy Line Reduction

Reducing the density of buoy lines, particularly in areas and times where whales are predicted to occur at high densities, is increasingly acknowledged as the best option for reducing the amount of rope that whales may encounter (Johnson et al 2005, Brillant et al. 2017, Myers et al 2019). This can be accomplished in a variety of ways while still allowing fisheries to continue, including establishing time-area closures, establishing line caps, limiting the maximum numbers of buoy lines per license, increasing the number of traps connected in series (i.e., trawling up), and using gear that does not require persistent buoy lines (e.g., ropeless gear). Each of these are effective at reducing the occurrence of buoy lines, and thus the probability of whales becoming entangled. Among these, the most effective, according to the mitigation hierarchy, is the use of time-area closures, as this can prevent entanglements in closed areas. Closed areas can be closed only to fisheries that use persistent buoy lines, thus allowing for the innovation of fishing gear (e.g., ropeless gear). When designed with consideration for the distribution of whales, efforts to reduce buoy line densities will most likely accomplish a reduction in the entanglement rate of whales.

2. Weak Links, Weak Inserts, and Weak Rope

As discussed previously, the use of weak links, weak inserts, and weak rope are an untested premise

that cannot be relied upon to reduce the mortality or serious injuries of entangled large whales. Assessments of risk and risk reduction for various regulatory actions should only consider estimates of co-occurrence to approximate changes in entanglement risk.

Furthermore, the proposed use of weak links and weak points as an optimal alternative to fully weak rope (Draft EIS at p. 5-165) is speculative and not based on science. This distinction was explicitly discounted in Knowlton et al (2015), and this aspect of the ALWTRP for reducing entanglements is, therefore, unsupported.

The widespread implementation of options for weak rope also deserves careful consideration as there may be effects that counter the expected benefits (e.g., increased lost gear). A prudent approach would be to experimentally implement these rules in smaller areas for a period before widespread implementation, to evaluate potential unexpected consequences.

3. Assessment of Options for Regulatory Action

The preferred alternative (Alternative Two) includes regulatory actions that will reduce the number of buoy lines (by increasing trawl lengths, creating of two new restricted areas, and extending the duration of the Massachusetts Bay Restricted Area), and reduce the strength of buoy lines under various spatial management rules. This preferred alternative is predicted to reduce the risk of mortality or serious injury to NARW by at least 64.3% (Draft EIS at Table 3.4) relative to Alternative One (status quo). It is also predicted that this will reduce the number of buoy lines in the region by 18.8% to 19.2% (Draft EIS at Table 5.2).

Alternative Three would establish a cap on the number of buoy lines (50% of 2017 numbers), require increased trawl lengths, establish three new restricted areas, extend the duration of the Massachusetts Bay Restricted Area, and require a larger proportion of buoy lines to be changed to weak lines than Alternative Two. This more ambitious alternative is predicted to reduce the risk of mortality or serious injury to NARW by 69.6% to 72.6% (Draft EIS at Table 3.4) relative to Alternative One (status quo) and is expected to reduce the number of buoy lines by 50% to 50.6% (Draft EIS at Table 5.2).

Two reasons are given for the selection of the preferred suite of regulatory actions (Alternative Two) over Alternative Three (Draft EIS Section 3.3.4.2): because there was too much uncertainty among participants of the ALWTRT about the need to reduce risk by 80 percent, and because of the possible economic impacts to the fishery. These two reasons are inconsistent with the other evaluations throughout this process. The first reason can be discounted as the calculation in Draft EIS Section 2.1.5, which incorporates cryptic mortality, concludes that a reduction of 83% is necessary to achieve PBR. The second lacks an evaluation connected with the assessment of economic and social impacts (Draft EIS Section 6). In the latter, for example, the difference in first-year costs for implementing either Alternative is between 2% (Alternative 2, \$13 million; Draft EIS at p. 6-224) and 6% (Alternative 3, \$33 million; Draft EIS at p. 6-224) of the annual landed value of these fisheries (\$560 million based on 2017; Draft EIS at Table 4.7). Too little information is provided to show how this second reason was decided.

NMFS provided rationales for rejecting approximately one hundred alternative ideas from stakeholders for reducing entanglement risk. More than half of these were rejected because they were “unpopular with stakeholders”, and only approximately 12% were rejected because there was no, or insufficient risk reduction (Draft EIS at Table 3.6). Rejections of ideas because of popularity seems inconsistent with the purpose of this work, and the intended use of the DST. It does not suggest this process was based on evidence or merit.

F. The NARW Conservation Framework

The first phase of the draft NARW Conservation Framework for federal fisheries in the Greater Atlantic Region is the Proposed Risk Reduction Rule, but this is followed by three additional phases of additional risk reduction programs over a 10-year period. This approach is intended to allow necessary measures to be implemented for NARW recovery while providing a phased and flexible approach for industry. The measures in these future phases will focus on fisheries other than lobster and crab but are otherwise undefined.

To determine the additional need for risk reduction, 50-year population projection models (Linden 2020) were developed to evaluate the predicted changes in the number of female NARW after the proposed ALWTRP amendment is implemented. These models showed that risk reductions from US fisheries less than 100% would not meet ESA mandates because survival and recovery would continue to be appreciably reduced due to risks from ongoing US state and federal as well as Canadian fisheries.

The inclusion of a Conservation Framework acknowledges that the current proposed effort is not expected to achieve its goal, and its inclusion demonstrates that the Proposed Risk Reduction Rule is not timely. The implementation of additional necessary risk reduction measures is a prolonged 10-year process that removes the immediate imperative for risk reduction and weakens the overall intention of this work by delaying difficult decisions and efforts for individuals in the future.

G. Other Important Yet Overlooked Considerations

1. Sublethal Effects of Non-Serious Injuries

The harmful sublethal effects of entanglements are increasingly linked to the poor health and diminishing productivity of NARW (Christiansen et al. 2020, Moore et al. 2021). The ALWTRP and Draft EIS acknowledges this issue but responds by stating that evidence exists that reduced breaking strength rope will address this problem. For reasons previously discussed, this is not scientifically sound. Reducing the chance of killing a whale after it has become entangled is very unlikely to solve the problem of sublethal injuries.

The draft Batched Biological Opinion, released by NOAA in January 2021, also addresses these sublethal effects by citing some of the scientific investigations that have established the high entanglement rate for NARW (Knowlton et al. 2012), the energetic costs of these entanglements (van der Hoop et al. 2016, van der Hoop et al. 2017a, van der Hoop et al. 2017b), and the range of health effects caused by entanglements (Cassoff et al. 2011, Hayes et al. 2018a), including limitations on reproductive rates (Robbins et al. 2015, Pettis et al. 2017, Hayes et al. 2018a). It concludes there is insufficient evidence that sublethal effects of entanglements alone are causing a decline in the health of large whales, and that the effect of sublethal injuries on calving rates cannot be estimated currently. This conclusion ignores substantial and growing (Christiansen et al. 2020, Moore et al. 2021) evidence of the effects of sublethal injuries on the recovery of NARW, and is inconsistent with previous methods by NMFS, such as the quantification of the value of rope strength in mitigating entanglements featured in this report.

The PBR only takes into consideration the numbers of individuals removed from a stock each year, but it does not address the problem that approximately 25% of the population of NARW are entangled every year (Knowlton et al. 2012). Correcting the poor health and low reproductive rate of NARW is as necessary for its recovery as preventing deaths. The survival and recovery of this species requires, therefore, a reduction in entanglement risk that exceeds what is simply needed to achieve PBR. This

further strengthens the use of the higher risk reduction target (83%) calculated in Draft EIS (Section 2.1.5) as the minimum need for the recovery of NARW.

2. Vessel Strikes

Although vessel strikes are outside of the scope of the ALWTRP, this issue deserves consideration as even relatively small fishing vessels can kill or seriously injure NARW if they strike one (Kelley et al. 2020). Vessel strikes are acknowledged in the Draft EIS as a risk to whales in the assessment of ropeless gear (Draft EIS at p. 5-154) because this could allow fishing vessels to use closed areas more frequently. Establishing speed restrictions in areas where NARW are persistent (e.g., in closed areas) would be a prudent and substantiated measure related to fisheries management and should be included as a component of the proposed ALWTRP amendment. Without this consideration, the fishing industry will be exposing NARW to a lethal risk that remains unaccounted for because of the potential for vessel strikes.

3. Dynamic Area Management

The absence of dynamic area management plans is a significant limitation of the ALWTRP and the Conservation Framework. By opting to not use dynamic area management, the plan will rely on historic data for predicting the locations of whales and may be unable to respond to new data or unexpected short-term changes in the distribution of NARW. Dynamic area management was among the proposed, but rejected, alternatives, and the reason for the rejection was that it was not feasible. Effective use of dynamic area management can be challenging and requires a variety of supporting mechanisms (e.g., communications, enforcement), but it allows for better adaptive management, which may be important for managing activities that affect NARW, as they have demonstrably changed their distribution over the last decade. Canada has implemented a large dynamic area management program since 2017 in response to the variable distribution of NARW (DFO 2019). This option deserves a more complete assessment and consideration to be included among the suite of regulations.

4. Monitoring

The ALWTRP provides few details on monitoring, though four factors of a proposed monitoring program are briefly outlined (Draft EIS Section 3.3.6.2): Compliance monitoring; North Atlantic right whale population monitoring; Fishery monitoring; and Fishery Reporting. The Conservation Framework commits, however, to a comprehensive evaluation of a variety of factors midway through its implementation to determine if the further proposed risk reduction measures are needed in the final five years.

Monitoring the compliance and outcomes of this plan is critical for its success, but there is a paucity of details or consideration for how this will be done. Successful detection of a reduction in the rate of entanglement depends on the duration of monitoring, the magnitude of risk being reduced, and the number of observations (Pace et al. 2014). As NARW do not have time to spare for a long monitoring program, detection of successful risk reduction requires a large decrease in risk, and a large increase in monitoring effort. The midterm assessment of the Conservation Framework is, therefore, very unlikely to detect the effect of the Proposed Risk Reduction Rule (60% risk reduction) over the proposed time-period (Pace et al. 2014).

III. Conclusion

The Proposed Risk Reduction Rule to amend the ALWTRP will not reduce the deaths of NARW below PBR, nor will it allow the species to recover. This is most evident by an unfounded over-reliance on weak rope for risk reduction, the failure to include reductions of sublethal effects into its goals, the need for a long-term Conservation Framework, and the woeful population projection models (Linden 2020). Unfortunately, the Proposed Risk Reduction Rule is a heedless and unambitious plan at a time when the survival of NARW needs the exact opposite.

Sincerely,

A handwritten signature in black ink that reads "Sean Brilliant". The signature is written in a cursive, flowing style. Below the signature is a horizontal line.

Dr. Sean Brilliant

Appendix - References

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- Knowlton, A. R., Robbins, J., Landry, S., McKenna, H. A., Kraus, S. D., & B. Werner, T. (2015). Effects of fishing rope strength on the severity of large whale entanglements. *Conservation Biology*, 30, 318–328.
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Pace, R. M., Cole, T. V. N., & Henry, A. G. (2014). Incremental fishing gear modifications fail to significantly reduce large whale serious injury rates. *Endangered Species Research*, 26, 115–126.

Pace, R. M., Corkeron, P. J., & Kraus, S. D. (2017). State-space mark-recapture estimates reveal a recent decline in abundance of North Atlantic right whales. *Ecology and Evolution*, 7: 8730– 8741.

Pace, R. M., Williams, R., Kraus, S. D., Knowlton, A. R., & Pettis, H. M. (2021). Cryptic mortality of North Atlantic right whales. *Conservation Science and Practice*, (July 2020), 1–8.

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

Pettis, H. M., Rolland, R. M., Hamilton, P. K., Knowlton, A. R., Burgess, E. A., & Kraus, S. D. (2017). Body condition changes arising from natural factors and fishing gear entanglements in North Atlantic right whales *Eubalaena glacialis*. *Endangered Species Research*, 32(1), 237–249.

Robbins, J., Knowlton, A. R., & Landry, S. (2015). Apparent survival of North Atlantic right whales after entanglement in fishing gear. *Biological Conservation*, 191, 421–427.

Roberts, J. J., Best, B. D., Mannocci, L., Fujioka, E., Halpin, P. N., Palka, D. L., ... Lockhart, G. G. (2016). Habitat-based cetacean density models for the U.S. Atlantic and Gulf of Mexico. *Science Reports*, 6, 22615.

van der Hoop, J. M., Corkeron, P., Kenney, J., Landry, S., Morin, D., Smith, J., & Moore, M. J. (2016). Drag from fishing gear entangling North Atlantic right whales. *Marine Mammal Science*, 32(2), 619–642.

van der Hoop, J. M., Corkeron, P., Henry, A. G., Knowlton, A. R., & Moore, M. J. (2017a). Predicting lethal entanglements as a consequence of drag from fishing gear. *Marine Pollution Bulletin*, 115(1–2), 91–104.

van der Hoop, J. M., Nowacek, D. P., Moore, M. J., & Triantafyllou, M. S. (2017b). Swimming kinematics and efficiency of entangled North Atlantic right whales. *Endangered Species Research*, 32(1), 1–17.

Wade, P. R. (1998). Human-Caused Mortality of Cetaceans and Pinnipeds. *Marine Mammal Science*, 14(January), 1–37.

Sean W. Brilliant

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E-MAIL: seanb@cwf-fcf.org

EDUCATION

Ph.D. (Experimental Marine Ecology) 2007

Centre for Research on Ecological Impacts of Coastal Cities, University of Sydney, Sydney, Australia

M.Sc. (Marine Biology) 1999

University of New Brunswick, Saint John, Canada

B.Sc. (Marine Biology, First Class Hon.) 1993

University of New Brunswick, Saint John, Canada

APPOINTMENTS

Adjunct of the Faculty of Graduate Studies, 2011 – Present

Dalhousie University, Department of Oceanography

Senior Research Fellow 2018 – Present

IOI-Canada, Halifax, NS

Postdoctoral Fellow, 2008 – 2010

Dalhousie University (WWF-Canada)

Honorary Associate Lecturer, 2007 – 2008

Centre for Research on Ecological Impacts of Coastal Cities, University of Sydney

PROFESSIONAL EXPERIENCE

Senior Conservation Biologist, National Marine Conservation Program, 2010 – Present

Canadian Wildlife Federation

Responsible for the development and delivery of conservation projects that support the goals of the CWF and its national marine conservation programme, and to represent CWF's position and interests in marine conservation to the public, the government and other partners.

Conservation Scientist, 2007 – 2008

WWF-Canada

Responsible for the development of research program to investigate the interaction between whales and commercial fisheries.

Executive Director, 1997 – 2003

Atlantic Coastal Action Program (ACAP), Saint John NB Canada

Responsible for the direction, development, support, and supervision of programs for this community-based, multi-stakeholder, environmental management initiative.

HONOURS AND AWARDS

Commonwealth of Australia:

University of Sydney International Postgraduate Research Scholarship, 2003-2007

University of Sydney International Postgraduate Award, 2003-2007

Australian Association of Marine Science: R. Kenny Award, 2005

SERVICE

Chair, Ropeless Consortium, 2019 – Present
Ropeless Consortium

Co-Chair, National Disentanglement Advisory Committee 2019 – Present
Fisheries and Oceans Canada

Steering Committee 2019 – Present
Bay of Fundy Ecosystem Partnership

National Species at Risk Advisory Committee 2011 – Present
Environment and Climate Change Canada

SELECTED GRANTS HELD

Pew Environmental Trust Foundation (2020-2023)
Advancement of Fisheries Practices for conservation of North Atlantic right whales **\$237 517 USD**

Government of Canada Nature Fund (2019-2023)
Reducing mortality and serious injury to marine species-at-risk from entanglement in fishing gear **\$1 325 000**

Pew Environmental Trust Foundation (2019-2020)
Fisheries Practices and management for conservation of North Atlantic right whales **\$276 442 USD**

Canadian Wildlife Federation Conservation Science (2020)
Conservation of the North Atlantic right whale **\$50 000**

Government of Canada Habitat Stewardship Program (2017-2018)
Tools To Train Canada's Marine Animal Emergency Responders **\$89 107**
Establishing options to reduce Steller sea lion entanglements **\$40 405**

Government of Canada Habitat Stewardship Program (2016-2017)
Training Canadians in Preventing and Responding to Marine Animal Emergencies **\$40 864**

Canadian Wildlife Federation Conservation Science (2016, 2017)
Conservation of large marine wildlife **\$39 000, \$40 000**

Government of Canada Habitat Stewardship Program (2014-2016)
Building capacity for Canada's response to marine animal emergencies **\$114 950**

Shell Canada Fueling Change (2014)
Responding to Marine Mammal Emergencies **\$100 000**

Canadian Wildlife Federation Conservation Science (2014)
Fisheries risk analysis for leatherback turtles – evaluation and implementation **\$24 000**

Canadian Wildlife Federation Conservation Science (2013-2014)
Fisheries risk analysis for leatherback turtles **\$14 000**

Shell Canada Fueling Change (2011)
The Great Canadian Turtle Race **\$100 000**

TEACHING EXPERIENCE

Selected lectures

- Ocean Governance: Issues of Immediate Concern, International Oceans Institute, NS Canada 2020
- Ocean Governance: Policy, Law and Management. International Oceans Institute, NS Canada 2013-2020
- Ocean Summer Field Course, Dalhousie University 2018
- Continuing Education program, Dalhousie University 2018.
- Intro to Field Oceanography (BIOL/MARI/OCEA 3003), Dalhousie University 2017.
- Conversations with Ocean Scientists (OCEA1000). Dalhousie University, NS Canada 2011-2017
- LandMarks: Art + Places + Perspectives. NS College of Art and Design, NS Canada 2017
- Biology and the Human Environment (ENVS 1203). St. Mary's University, NS Canada. 2011, 2014, 2016.

Instructor, University of New Brunswick, Saint John NB Canada; 2000, 2001, 2002

Stream Ecology and Restoration (BIOL 3175; 2002)

Introductory Ecology (BIOL 2585; 2000, 2001)

PUBLICATIONS AND PRESENTATIONS

Refereed Journals

Cole AK, Brilliant SW, Boudreau SA (2021) Effects of time-area closures on the distribution of snow crab fishing effort with respect to entanglement threat to North Atlantic right whales. *ICES J. Marine Science* (*accepted*)

Kelley, D. E., Vlastic, J. P., & Brilliant, S. W. (2021). Assessing the lethality of ship strikes on whales using simple biophysical models. *Marine Mammal Science*, 37(1), 251–267.

Davies KTA, Brilliant SW (2019) Mass human-caused mortality spurs federal action to protect endangered North Atlantic right whales in Canada. *Marine Policy* 104: 157-162.

Goodman AJ, Brilliant SW, Walker TR, Bailey M, Callaghan C (2019) A Ghostly Issue: Managing abandoned, lost and discarded lobster fishing gear in the Bay of Fundy in Eastern Canada. *Oceans and Coastal Management* 181: 104925

Brilliant SW, Wimmer TSC, Rangeley RW, Taggart CT (2017) A timely opportunity to protect North Atlantic right whales in Canada. *Marine Policy*. 81: 160-166.

Brilliant SW, Vanderlaan ASM, Rangeley RW, Taggart CT (2015) Quantitative estimates of the movement and distribution of North Atlantic right whales along the northeast coast of North America. *Endangered Species Research*. 27:141-154

Brilliant SW, Trippel E (2010) Factors affecting depth profiles of trap lines in relation to entanglement potential of large whales in the lobster fishery in the Bay of Fundy. *ICES J. Marine Science*. 67: 355–364.

Terhune J, Brilliant S (1996) Harbour seal vigilance decreases over time since haul-out. *Animal Behaviour*. 51: 757-763.

Non-refereed publications

Brilliant S (2018) Is Canada Protecting its Marine Species At Risk? In: *The Future of Ocean Governance and Capacity Development*, eds. International Oceans Institute – Canada ISBN: 978-90-04-38027-1

Brilliant S (2013) An annotated bibliography of conservation issues of open-pen finfish aquaculture. Canadian Wildlife Federation, Ottawa, ON.

Selected Presentations

Brillant (2020) The Society for Marine Mammology Seminars: Editors' Select Series – [Assessing the lethality of ship strikes on whales using simple biophysical models](#). December 2020

Brillant (2020) Right Whales and Fisheries: Past, Present and Future Risk Mitigation Activities in Atlantic Canada. Atlantic Policy Congress (APC) of First Nations Chiefs Fisheries Conference. Moncton NB.

Brillant (2019) Saving the right whale needs the right kind of action. Biology Departmental Seminar, University of New Brunswick Saint John.

Brillant (2019) Finding the Right Solution to Stop Killing Whales. Mersey Tobeatic Research Institute. Caledonia NS.

Brillant S (2019) Whales and Fisheries. NS Federation of Angler and Hunters Annual Meeting. Truro NS.

Brillant S (2019) Whales, Fisheries, and Whales and Fisheries. Atlantic Policy Congress (APC) of First Nations Chiefs Fisheries Conference. Moncton NB.

Brillant, Vlastic, Kelley (2018) An interactive biophysical model to estimate physical stresses experienced by right whales as a result of vessel strikes. North Atlantic Right Whale Consortium 2018. New Bedford, MA.

Brillant S (2017) Marine Protected Areas. Sou'west Nova Scotia Lobster Forum (2017). Yarmouth, NS.

Brillant S (2017) Intertidal biodiversity workshop. Mersey Tobeatic Research Institute 6th Annual Science Conference: Biodiversity Workshop. Caledonia, NS Canada.

Brillant S (2016) Oceans of Data Panel presenter. Our Ocean Playground: Education Fair. Halifax, NS Canada

Brillant S (2016) Inspiring Brighter Futures for Conservation / Building Campaigns that Reduce Plastics in the Oceans / Engaging Youth and Young Professionals in Migratory Species Futures / Building New Constituencies for Conservation. Oceans and Islands Pavilion. World Conservation Congress. Honolulu HI, USA.

Brillant SW, Wimmer TSC, Rangeley RR, Taggart CT (2016) A scientific approach to reducing the entanglement of right whales, and other marine wildlife, in Canadian commercial fishing gear. International Marine Conservation Congress. St. John's NL Canada.

Brillant S (2015) How boaters are saving wildlife. Canadian Safe Boating Symposium. Halifax, NS Canada.

Brillant S, Nussey P (2014) Canada's Saltwater Cities: Artificial structures & biodiversity. Coastal Zone Canada Halifax, NS Canada.

Brillant S (2014) How do ropes and water (and whales) mix? Oceanography Departmental Seminar, Dalhousie University, Halifax NS Canada.

Brillant S (2013) Raising awareness of the role of MPAs in ocean conservation and sustainable development. 3rd International Marine Protected Areas Congress. Marseille, France.

Brillant SW Rangeley RR, Taggart, CT (2013) A quantitative risk analysis of Canadian commercial fishing gear to right whales and a proposed action to reduce this risk. North Atlantic Right Whale Consortium Annual Meeting. New Bedford MA USA.

Brillant S, Nussey P (2013) Canada's Saltwater Cities & Marine Biodiversity. Society for Conservation Biology International Congress for Conservation Biology. Baltimore, MD USA

Brillant S, Nussey P (2013) Detecting effects of artificial shorelines on intertidal biodiversity. Atlantic Canada Coastal and Estuarine Science Society Annual Meeting, Lawrencetown, NS Canada

Brillant S, Nussey P (2013) Detecting effects of artificial shorelines on intertidal biodiversity. Biology Departmental Seminar, University of PEI, Charlottetown, PE Canada.

Brillant S (2012) Stewardship in Canada's Oceans. SARA Advisory Committee meeting. Ottawa, ON Canada.

Brillant S (2012) Relative risk of fixed fishing gear to leatherback turtles: Maritimes & southern Gulf of St. Lawrence. Assessment of Leatherback Turtle Fisheries and Non-Fisheries Related Interactions in Atlantic Canadian Waters. Zonal Peer Review. St. Andrews, NB Canada.

Brillant SW (2011) Estimating the probability of entangling North Atlantic right whales in fishing gear in Canada. International Marine Conservation Congress. Victoria BC Canada.

Selected Keynote Addresses, Facilitated Workshops

Keynote. Nature Through Art. Toronto, ON (2019)

Keynote. Atlantic Society of Fish and Wildlife Biologists Annual Meeting. Oak Island NS (2019)

Invited Speaker. China-ASEAN Academy on Ocean Law and Governance. Hainan China. (2018)

Keynote - Bioblitz. Mersey Tobeatic Research Institute 6th Annual Science Conference: Biodiversity Workshop. Caledonia, NS Canada. (2017)

Keynote - Stakeholder Vision I. Clear Seas Symposium. Halifax, NS Canada. (2017)

Facilitator. Canadian Marine Animal Emergency Response Workshop: Incident Reporting and Information Management. Halifax NS Canada. (2016)

Keynote Speaker. Canadian Wildlife Health Cooperative Ambassadors Dinner. Toronto ON (2014)

Keynote Speaker. Canadian Rivers Institute Day Graduate Student Retreat. Charlottetown, PE Canada. (2014)

Facilitator. A Plan of Action for Shark Conservation - Atlantic Shark Forum. Halifax, NS Canada. (2014)

Facilitator. Canadian Marine Animal Emergency Response Workshop. Charlottetown, PE Canada. (2013)

STUDENT SUPERVISION

Farheen Kadwa (2020) Masters of Environmental Science. Assessing Relative Lethal Entanglement Threat to North Atlantic Right Whales (*Eubalaena glacialis*) in the Maritimes Lobster Fishery. University of Toronto, Toronto.

Nadia Dalili (2019) Masters of Marine Management (The use and value of opportunistic sightings for cetacean conservation and management in Canada). Dalhousie University, Halifax.

Alexandra Cole (2018) Masters of Marine Management (Modelling fishing effort displacement in the Southern Gulf of St Lawrence snow crab (*Chionoecetes opilio*) fishery: quantifying management measures for North Atlantic Right Whale (*Eubalaena glacialis*) entanglement prevention. Dalhousie University, Halifax.

Alexa Goodman (2018) Masters of Marine Management (A Ghostly Issue: Managing abandoned, lost, and discarded lobster fishing gear in the Bay of Fundy). Dalhousie University, Halifax.

Emiley MacKinnon (2017) Masters of Marine Management (A critical assessment and gap analysis of existing recovery strategies for the Atlantic Leatherback Sea Turtle (*Dermochelys coriacea*)). Dalhousie University, Halifax.

Hilary Dennis-Bohm (2013) B.Sc. Honours (Using a Modified Brownian Bridge Movement Model to Predict Spatial Probabilities of Leatherback Turtles in Atlantic Canada). Dalhousie University, Halifax.

Amy Ryan (2012) Masters of Marine Management (Evaluating the role and designation of critical habitat for conserving Canadian marine species at risk: a decision framework). Dalhousie University, Halifax.

Jessica McFee (2009) Masters of Marine Management (Options to Reduce North Atlantic right whale (*Eubalaena glacialis*) Entanglements by Characterizing Scotia-Fundy Fisheries). Dalhousie University, Halifax.

Robyn Foster (2000) Master of Science in Applied Economics and Finance (The Value Residents Place on the Cleanliness of Saint John Harbour/ Economic Benefits of Improving the Water Quality in the Saint John Harbour). University of New Brunswick, Saint John.

SELECTED PUBLIC MEDIA AND OUTREACH

Webinars

- CWF - Ocean Tracking Network Right whale webinars (2020)
- Canadian Conservation Corps (2018-2020)
- CWF Great Canadian Turtle Race (2013, 2015, 2016)
- Africa to America Row webinar series (2013)

Public Lectures

- Kent Building Supplies (2016) Helping Bats with White Nose syndrome. Halifax, NS.
- Halifax Boat Show (2015) Boating with Wildlife. Halifax, NS.
- Shubenacadie Wildlife Park (2015) Canada's coolest ocean creature. Shubenacadie, NS.
- Vancouver Aquarium (2015) Whales and turtles and more! Our roles marine conservation. Vancouver BC.
- University of PEI (2013) What do we mean by 'Marine Conservation' in Canada? Charlottetown, PE.

Public Media

2020

- [Even slow-moving boats likely to kill endangered right whales in a collision, study finds](#). The Guardian Dec 2020.
- [Whale zone ahead: A cetacean speed trap tags ships going over the limit](#). Monga Bay Nov 2020
- [Punctuation's mark: Can we save the critically endangered North Atlantic right whale?](#) Canadian Geographic October 2020
- [The Future of North Atlantic right whales](#). ATV News. August 2020.
- [North Atlantic right whales nearing extinction, international nature body says](#). CTV news. July 2020
- [First right whales in Gulf of St. Lawrence trigger some fisheries closures](#). Toronto Star May 2020
- [2019 was the warmest year on record for the world's oceans. What does that mean for Canada?](#) Canadian Geographic Feb 2020
- [First right whales in Gulf of St. Lawrence trigger some fisheries closures](#). Canadian Press May 2020

2019

- [Port Charlottetown, P.E.I. fishermen's group applaud changes to right whale restrictions](#). CBC 2019
- [New Brunswick fishers get \\$2 million to test gear to prevent whale entanglements](#). CTV May 2019
- [Slow response to right whale plight could have impact on Canadian fisheries, study says](#). Toronto Star

- [Ottawa Lifts Speed Limits For Gulf Of St. Lawrence After No Whales Spotted](#) Huff Post Aug 2019
- [Spate of right whale deaths has almost wiped out recent population gains.](#) National Post June 2019
- [New measures announced to protect North Atlantic right whales.](#) CTV News July 2019
- [International shipping industry under the microscope as whale death toll grows.](#) Can Press July 2019
- [Rescuers partially free 1 of 3 entangled right whales in Gulf of St. Lawrence.](#) CBC July 2019
- [6 recent deaths push rare whales closer to extinction.](#) Nat Geo July 2019
- [Endangered right whales have moved because of climate change - into dangerous waters.](#) PRI 2019
- [Two percent of the world's right whales have recently died - pushing the species closer to extinction.](#) CBS News Aug 2019
- [Saving the right whales.](#) Aug 2019
- [Why Atlantic Canada's lucrative seafood industry is concerned about Elizabeth Warren.](#) CBC Nov 2019

2018

- [These whales are suffering a slow-motion extinction](#)
- [Atlantic right whales present in Grand Manan Basin](#)
- [New fisheries closures for right whales to take effect](#)
- [New Right Whale protection plans](#)

2017

- [Federal action to protect right whales encouraging, say environmental groups.](#) CBC News. Aug 2017
- [Fisheries Canada solicits public's advice on what to do.](#) Global News. Aug 9 2017
- [Why are whales dying in the Gulf of St. Lawrence?](#) Globe and Mail. July 28, 2017
- [Experts begin autopsy on another North Atlantic right whale.](#) Globe and Mail. July 22, 2017
- [Temporary closure of a fishery can help whales and fishermen, biologist says.](#) July 17, 2017
- [Speed limit to protect whales.](#) CTV News Channel. Aug 11, 2017
- [What is the federal government doing to protect right whales?](#) Global News. Aug 3, 2017
- [Government imposes new safeguards for right whales.](#) Global TV News. July 13, 2017
- [Fisheries Department suspends some whale rescues following rescuer death/ Gov't taking steps to protect endangered animals.](#) CTV News. July 13, 2017
- [Seventh right whale found dead.](#) July 7, 2017
- [US Trade rules for seafood \(@ 0:04\).](#) CBC-TV Nova Scotia News.
- [Right whales in the Gulf of St. Lawrence.](#) CBC Shift-NB. July 17, 2017
- [What ought to be done to protect the endangered Right Whale?](#) CBC Maritime Connection. July 2017

2016

- [Dalhousie researchers may have solved mystery of right whale migration.](#) TheChronicleHerald.ca
- [App allows the public to follow whales off Atlantic coast.](#) CBC.ca
- [High-tech drones prowling Atlantic waters may have found elusive whale habitat.](#) CTV-Atlantic.
- [Saving whales from old ropes.](#) CBC Maritime Noon.
- [Researchers Use Mobile App To Find Endangered Right Whales.](#) Huffington Post Canada.
- [Where are the whales?](#) Radio Canada International.
- [Missing a whale? There's an app for that.](#) Toronto Star.
- [Researchers turn to public via rejigged app to help track down missing whales.](#) CTV News Atlantic.
- [Une étude "sans précédent" au sujet des baleines noires de l'Atlantique.](#) ICI.Radio-Canada.ca.
- [Endangered right whale sought in Atlantic marine mammal study.](#) CBC.ca.
- [Researchers turn to public via rejigged app to help track down missing whales.](#) CityNews.
- [Ottawa strengthens protections for whale populations.](#) CBC The National.
- [Sean Brilliant on right whale population.](#) CTV Atlantic Evening News with Steve Murphy.
- [Whale are you? App helps track down elusive right whales.](#) CTV Atlantic.

APPENDIX II

Oceana Comment Letter on Atlantic Large Whale Take Reduction Plan Scoping (Sept. 16, 2019)

(See attached.)

September 16, 2019

Via email to: nmfs.gar.ALWTRT2019@noaa.gov

Michael Pentony
Regional Administrator
National Marine Fisheries Service
55 Great Republic Drive
Gloucester, MA 01930-2276

Re: Comments on Atlantic Large Whale Take Reduction Plan Scoping

Oceana is the largest international ocean conservation organization solely focused on protecting the world's oceans, with more than 1.1 million members and supporters in the United States, including hundreds of thousands on the U.S. Atlantic seaboard. Oceana has been engaged as a stakeholder in the management of U.S. fisheries and interactions with endangered species for more than 15 years with a particular interest in effective catch monitoring and bycatch minimization. Oceana appreciates the opportunity to provide comments on scoping for an Environmental Impact Statement (EIS) to consider changes to the Atlantic Large Whale Take Reduction Plan (ALWTRP). This action offers the National Marine Fisheries Service an opportunity to fully evaluate the efficacy and outcomes of current large whale take reduction measures and to consider a suite of alternatives that will make necessary changes to this set of regulations for U.S. Atlantic fisheries.

It is essential that any alternatives adopted in the ALWTRP achieve the multiple requirements of the Marine Mammal Protection Act (MMPA) to reduce take, mortality and significant injury to below scientifically acceptable levels. In addition to this requirement, the changes must also meet the obligations of the Endangered Species Act to recover listed species, including the North Atlantic right whale (NARW), which has been listed as endangered since 1970. Finally, the ALWTRP must also comply with the National Environmental Policy Act (NEPA).

To achieve these goals and requirements, the Fisheries Service must include proven and effective changes to the management of the affected fisheries that will help NARWs along the path to recovery. Oceana recommends that, in addition to the alternatives included in the April 2019 ALWTRT majority alternative, the agency include the following in the reasonable range of alternatives developed and considered in the ALWTRP EIS:

- Time-area management including static and dynamic area closures;
- Gear reduction modification and line reduction: and
- Fishery monitoring and reporting.

LEGAL BACKGROUND

As it develops the current changes to the ALWTRP, the agency must comply with the requirements of NEPA, including the requirement to conduct a thorough scoping process that solicits broad input in order to identify a reasonable range of alternatives for addressing the purpose of the agency action. Once identified, those alternatives must be rigorously evaluated.

I. THE ROLE OF SCOPING UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

Congress enacted NEPA to ensure that federal agencies incorporated environmental concerns into their decision-making processes.¹ In furtherance of this goal, NEPA compels federal agencies to prospectively evaluate the environmental impacts of proposed actions that they carry out, fund, or authorize. Federal agencies must prepare an EIS whenever they propose “major Federal actions significantly affecting the quality of the human environment.”² Public involvement is essential to implementing NEPA; it “helps the agency understand the concerns of the public regarding the proposed action and its environmental impacts, identify controversies, and obtain the necessary information for conducting the environmental analysis.”³

Scoping is a critical early step in the EIS process as it provides an opportunity for parties with a variety of perspectives to help inform the process. It “sets the boundaries ... of the analysis,” “helps to identify information sources,” and “helps to focus alternatives and identif[y] issues to be addressed within the EIS.”⁴ A comprehensive scoping process is essential for identifying the “reasonable range” of alternatives that must be evaluated in the EIS process to address the purpose and need of proposed agency action.⁵ Those reasonable alternatives must be rigorously explored and objectively evaluated. Each alternative must be “considered in detail...so that reviewers may evaluate their comparative merits.”⁶ “What constitutes a reasonable range of alternatives depends on the nature of the proposal and the facts in each case.”⁷ As one court stated, the agency “must look at every reasonable alternative within the range dictated by the nature and scope of the proposal. The existence of reasonable but unexamined alternatives renders an EIS inadequate.”⁸

¹ 42 U.S.C. § 4331(a).

² *Id.* at § 4332(2)(C).

³ NOAA Administrative Order Series 216-6, *Environmental Review Procedures for Implementing the National Environmental Policy Act* (May 20, 1999), https://www.nepa.noaa.gov/NAO216_6.pdf.

⁴ 40 C.F.R. § 1501.7; National Marine Fisheries Service, *NEPA Informational Guide*, https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/docs/nepa_overview.pdf; *Citizens' Comm. to Save Our Canyons v. U.S. Forest Serv.*, 297 F.3d 1012, 1022 (10th Cir. 2002).

⁵ 40 C.F.R. § 1502.14.

⁶ *Id.* at § 1502.14(b).

⁷ Council on Environmental Quality, *40 Most Asked Questions Concerning CEQ's Nation Environmental Policy Act Regulations* (Mar. 23, 1981), <https://energy.gov/sites/prod/files/G-CEQ-40Questions.pdf>.

⁸ *Ilio 'ulaokalani Coal. v. Rumsfeld*, 464 F.3d 1083, 1095 (9th Cir. 2006).

II. THE REQUIREMENTS OF THE MARINE MAMMAL PROTECTION ACT

Since 1972 the Marine Mammal Protection Act (MMPA) has afforded special protection to marine mammal species from a wide range of threats around the world. At the heart of the MMPA's science-driven approach to conservation, management and recovery of marine mammals are the goals of maintaining the optimum sustainable population and ecosystem function of marine mammal stocks, restoring depleted stocks to their optimum sustainable population levels and reducing mortality and serious injury (bycatch) of marine mammals incidental to commercial fishing operations to insignificant levels. Ultimately, marine mammal mortality should achieve a zero mortality and serious injury rate to a level approaching zero, the Zero Mortality Rate Goal (ZMRG).

To achieve these overarching goals, the MMPA prohibits taking of marine mammals with an exception for commercial fisheries.⁹ In these instances, the MMPA requires fisheries to achieve an interim goal of Potential Biological Removal (PBR).¹⁰ The PBR is calculated based on the dynamics of a species or mammal stock to be "(t)he 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."¹¹ This requirement is the guiding metric of success for recovering marine mammal species and for incidental fishing mortality reductions.

In the most recent Stock Assessment Report for NARWs, PBR was calculated to be 0.9 mortalities or incidents of serious injury per year.¹² In other words, no more than 0.9 NARWs may be killed or seriously injured by human actions each year for the species to achieve optimum sustainable population.

A. Take Reduction Teams/Take Reduction Plans¹³

To achieve the goals of the MMPA, the Fisheries Service convenes Take Reduction Teams (TRTs) - interdisciplinary groups tasked with the development of Take Reduction Plans (TRPs). TRT members are selected for their expertise regarding the conservation and biology of the marine mammal species or expertise regarding the fishing practices that result in the take of such species. TRTs are assembled to respond to specific needs and reconvene when the conservation needs of an MMPA-protected species necessitate changes to regulations.

⁹ 16 U.S.C. §§ 1371(a), 1371(a)(5)(E)

¹⁰ 16 U.S.C. § 1387(f).

¹¹ 16 U.S.C. § 1362(20).

¹² "2018 Marine Mammal Stock Assessment Reports", 84 Fed. Reg. 28489 (June 19, 2019).

¹³ *Marine Mammal Take Reduction Plans and Teams*, NOAA Fisheries (last updated August 8, 2019), <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-take-reduction-plans-and-teams>.

The overarching goal of each TRP is “to reduce, within 5 years of the plan’s implementation, the mortality and serious injury (bycatch) of marine mammals...to insignificant levels approaching a zero mortality and serious injury rate, taking into account the economics of the fishery, the availability of existing technology, and existing state or regional fishery management plans.”¹⁴ This so-called Zero Mortality Rate Goal (ZMRG) is the ultimate goal of marine mammal conservation in each TRP in the United States with achievement of PBR acting as an intermediate step towards recovery.¹⁵

To accomplish this important task, each TRP contains a review of recent stock assessments and estimates of total number of marine mammals being taken annually by species and by fishery. The TRP then explores recommended regulatory and voluntary measures and the expected percentage of the required bycatch reduction that will be achieved by each measure. The TRP must also include a discussion of alternate management measures considered and reviewed by the TRT and a rationale for their rejection. Finally, a TRP must include monitoring plans to determine the success of each measure and a timeline for achieving specific objectives of the TRP.¹⁶

Despite any practical overlap in assessments stemming from different statutes, it is important to note that the MMPA and NEPA both have their own requirements that must be individually met.

The Atlantic Large Whale Take Reduction Team (ALWTRT) has been in effect since 1996.¹⁷ The Atlantic Large Whale Take Reduction Plan (ALWTRP) was first implemented in 1997.¹⁸ The ALWTRT has advised the Fisheries Service on more than a dozen rules and regulations since then to modify fisheries managed under the ALWTRP.¹⁹

III. THE REQUIREMENTS OF THE ENDANGERED SPECIES ACT

Parallel to the requirements of the MMPA, Section 7 of the Endangered Species Act requires federal agencies to ensure that any action authorized, funded, or carried out by a federal agency, including the authorization of fisheries, is not likely to jeopardize the continued existence of listed species or destroy or adversely modify critical habitat.²⁰

¹⁴ 16 U.S.C. § 1387(f)(2).

¹⁵ 16 U.S.C. § 1387(b).

¹⁶ NOAA Fisheries Marine Mammal Take Reduction Plans and Teams Website: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-take-reduction-plans-and-teams#take-reduction-plan-content> (last visited September 6, 2019)

¹⁷ *Atlantic Large Whale Take Reduction Plan: The Take Reduction Team*, NOAA Fisheries, <https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/index.html> (last visited August 16, 2019).

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ 16 U.S.C. § 1536(a)(2).

To ensure that federal activities do not jeopardize Endangered Species Act--listed species, the Fisheries Service conducts a consultation under Section 7 of the ESA that assesses the effect of a proposed action on the species.²¹ This consultation ends in the publication of a Biological Opinion that includes a determination of whether the activity will jeopardize the continued existence of the species and identifies measures to mitigate the effects of the activity on the species.²² If the action is expected to jeopardize the species, the Biological Opinion will include non-discretionary Reasonable and Prudent Alternatives and a list of Terms and Conditions for the fishery.²³ If the fishery is determined to not jeopardize the species, the Biological Opinion will include more flexible Reasonable and Prudent Measures and a list of Terms and Conditions for the fishery.²⁴

Importantly, the Biological Opinion also includes an Incidental Take Statement (ITS) that authorizes and specifies the level of acceptable take for the fishery that will not trigger future consultation.²⁵ Like the TRP, the Biological Opinion and ITS include a requirement to effectively monitor takes against the level specified in the ITS.²⁶ In 2017, the Fisheries Service initiated Section 7 consultations for the red crab and lobster fisheries as well as a “batched” consultation for the multispecies, monkfish, dogfish, bluefish, skates, mackerel /squid/ butterfish, and summer flounder /scup/ black seabass fisheries.²⁷

FACTUAL BACKGROUND

I. CHRONOLOGY OF NOTABLE AGENCY ACTIONS TO REDUCE TAKES OF LARGE WHALES IN ATLANTIC FISHERIES

Since its inception in 1996, the ALWTRT has developed a series of regulations to minimize takes of right, humpback and fin whales in U.S. Atlantic fisheries from Florida to the Canadian border.²⁸ Conservation of minke whale is also included in this plan. These regulations were then implemented by the Fisheries Service to create, remove and modify gear restrictions and time-area management strategies to meet the goals and requirements of the MMPA and ESA.

²¹ *Id.*

²² *Id.* at (c).

²³ *Id.* at (b)(3)(A).

²⁴ *Id.* at (b)(4).

²⁵ 50 CFR § 402.14(i).

²⁶ *Id.*

²⁷ Michael J. Asaro, *Update on NOAA Fisheries Right Whale Recovery Actions*, NOAA Fisheries (November 30, 2017), https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/2017%20Nov/asaro_trtwebinar_nov2017.pdf.

²⁸ “ALWTRP Interim Final Rule”, 62 Fed. Reg. 39157 (July 22, 1997)

These actions include two 2002 actions to create dynamic area management (DAM) and seasonal area management (SAM) programs,²⁹ a June 2007 rule to expand the Southeast U.S. Restricted Area and modify regulations for the gillnet fishery,³⁰ an October 2007 gear modification that eliminated the DAM program, replaced it with gear modifications and expanded SAM areas,³¹ and most recently a “trawling up” rule to increase the minimum number of lobster traps that can be fished together on a string or “trawl” of traps in order to reduce the amount of vertical lines in the water.³²

II. RESULTS OF PAST EFFORTS AND RECENT CHANGES

The ALWTRP significantly changed the management, administration and operations of a range of fisheries in the U.S. Atlantic. These measures had moderate success from the implementation of the ALWTRP in the 1990s through 2010.³³ During this time, large whales, particularly NARWs, experienced moderate recovery from a population size in the mid-2000s to more than 480 in 2010.³⁴

Since 2010, the recovery of NARWs has reversed and the population has now declined for a variety of reasons.³⁵ Possible causes of this increase in mortality include ecosystem shift, fishery behavior changes and whale behavior changes.³⁶ In 2017, responding to an elevated number of observed right whale deaths, the Fisheries Service declared an Unusual Mortality Event (UME) for NARWs which is currently ongoing.³⁷ A UME is defined as “a stranding that is unexpected; involves a significant die-off of any marine mammal population; and demands immediate response.”³⁸

²⁹ “DAM Final Rule”, 67 Fed. Reg. 1133 (January 9, 2002); “SAM Interim Final Rule” 67 Fed. Reg. 1142 (January 9, 2002).

³⁰ “SE Modifications Final Rule”, 74 FR 34632 (June 25, 2007)

³¹ “Broad-based gear modification final rule”, 72 Fed. Reg. 57104 (October 5, 2007).

³² “Final Rule”, 79 Fed. Reg. 36586 (June 27, 2014).

³³ *Team Reaches Nearly Unanimous Consensus on Right Whale Survival Measures*, NOAA Fisheries (last updated May 10, 2019), <https://www.fisheries.noaa.gov/feature-story/team-reaches-nearly-unanimous-consensus-right-whale-survival-measures>.

³⁴ *Id.*

³⁵ *Id.*

³⁶ Sean A. Hayes, *North Atlantic Right Whales: A Summary of Stock Status and Factors Driving Their Decline*, NOAA Fisheries (September 18, 2018), https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/September%202018/narw_brief_for_alwtrt_09_18_18.pdf.

³⁷ *2017-2019 North Atlantic Right Whale Unusual Mortality Event*, NOAA Fisheries, <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2019-north-atlantic-right-whale-unusual-mortality-event> (last updated August 5, 2019).

³⁸ 16 U.S. Code § 1421h(6).

III. CURRENT RULEMAKING

A. 2017-2018 ALWTRT Meetings

In response to the necessity of reducing serious injury and mortality of NARWs in fixed-gear fisheries, the ALWTRT met throughout 2017 and 2018 to explore current issues and challenges facing NARWs in the U.S. Atlantic. These ALWTRT meetings discussed the problems as well as alternatives for mitigating these threats. The meetings culminated in a meeting in October 2018 where the ALWTRT accepted and discussed nine alternative proposals from ALWTRT members to reduce takes of NARWs. The alternatives included new time-area management options, gear reductions, and gear restrictions and modifications. This meeting served as a precursor to a 2019 meeting where the ALWTRT would attempt to reach consensus on which alternative(s) to recommend.³⁹

B. 2019 ALWTRT Meeting

Following a delay caused by a federal government shutdown, the ALWTRT met in April 2019 to seek consensus on modifications to the ALWTRP to reduce takes to below PBR. Prior to the meeting, the Fisheries Service provided the ALWTRT with a clear goal for the meeting to meet the needs of the species: reduce mortalities and serious injuries (M/SI) of NARWs in U.S. fisheries to below the NARW Potential Biological Removal (PBR) level of 0.9 via a 60-80% reduction of M/SI from current levels.⁴⁰ The Fisheries Service suggested that the ALWTRT use a “risk evaluation tool” to measure the effects of different management strategies and tools using a common metric of success rather than evaluate options independently.⁴¹

Following days of intense discussion, the ALWTRT ultimately selected, by majority but not consensus opinion, a strategy that will set state-specific risk reduction targets based on vertical line reduction and weak rope that is designed to come apart when entangled with a large whale.⁴² This suite of measures was supported by all voting members of the ALWTRT except one who opposed because she didn’t think that the strategy went far enough to meet the goals and requirements of the Marine Mammal Protection Act or the Endangered Species Act.

³⁹ *Atlantic Large Whale Take Reduction Plan: The Take Reduction Team – Meetings*, NOAA Fisheries, <https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/index.html> (last visited August 16, 2019).

⁴⁰ Letter from Colleen Coogan, *Take Reduction Target Letter*, NOAA Fisheries (April 5, 2019), [https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/April%202019/06 take reduction target letter april52019.html](https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/April%202019/06%20take%20reduction%20target%20letter%20april52019.html).

⁴¹ Michael J. Asaro, *Summary of April 2019 Atlantic Large Whale Take Reduction Team Meeting*, NOAA Fisheries (June 13, 2019), <https://s3.amazonaws.com/nefmc.org/NEFMC-TRT-Presentation-June-2019-Asaro.pdf>.

⁴² *Cross Caucus Outcomes as Presented and Voted Upon 4/26/19*, NOAA Fisheries, [https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/April%202019/Meeting%20Materials/cross caucus outcomes as presented and voted upon 4 26 19.pdf](https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/April%202019/Meeting%20Materials/cross%20caucus%20outcomes%20as%20presented%20and%20voted%20upon%204%2026%2019.pdf) (last visited August 15, 2019).

DISCUSSION

On August 2, 2019, the National Marine Fisheries Service published a Notice of Intent (NOI) to develop an Environmental Impact Statement (EIS) to modify the ALWTRP to reduce serious injury and mortality of large whales in commercial trap/pot fisheries along the U.S. East Coast.⁴³ This NOI expressed the purpose and need of this action to “fulfill the mandates of the MMPA to reduce impacts of fisheries on large whale species below their PBR level.”⁴⁴

I. CURRENT RULEMAKING MUST BE DEVELOPED IN ACCORDANCE WITH NEPA, THE MMPA AND THE ESA.

The Fisheries Service must develop any changes to the ALWTRP in careful accordance with the full range of statutes that regulate the interaction between fisheries and endangered or depleted marine mammals.

A. National Environmental Policy Act

Although the TRT process is useful for developing and vetting ideas and strategies among stakeholders, it does not replace the value of a full NEPA EIS to develop and analyze a reasonable range of alternatives. The NOI for the current amendments to the ALWTRP presents a broad directive for the rulemaking in its Purpose and Need Statement:

NMFS’ purpose for the proposed action is to fulfill the mandates of the MMPA to reduce impacts of fisheries on large whale species below their PBR level.⁴⁵

This statement should guide the EIS development for this action. Beginning with scoping, this statement should provide feedback throughout the process to ensure that a complete EIS includes a reasonable range of alternatives that address the purpose and need and achieve the requirements of the MMPA and Endangered Species Act. As discussed above, the Fisheries Service must not pre-judge alternatives presented in scoping and must instead fully consider any reasonable alternatives that address the Purpose and Need of the action to reduce takes to below PBR.

Following publication of the Draft EIS, the Fisheries Service should then select an alternative or suite of alternatives that achieve this purpose. Failing to select an alternative that analysis demonstrates would achieve the purpose and need of the action is unacceptable, contrary to the requirements of NEPA and will leave the rule ineffective and vulnerable to challenge.

⁴³ Notice of Intent, 84 Fed. Reg. 37822 (August 2, 2019).

⁴⁴ *Id.*

⁴⁵ “Notice of Intent”, 84 Fed. Reg. 37823 (August 2, 2019).

B. Marine Mammal Protection Act

The Fisheries Service should ensure that any alternatives comply with the requirements of the MMPA to reduce takes of NARWs below PBR immediately with corresponding measures to monitor takes and trigger further management action. Compliance with PBR is a crucial step towards the legally-required ZMRG for the species.

The Fisheries Service should invoke emergency regulation authority granted by the MMPA to implement emergency measures to expedite implementation of recommended ALWTRT recommendations.⁴⁶ The ongoing high rates of NARW mortality, unpredictable movements, overdue state of achieving PBR and ZMRG, as well as the critically low population of the species creates an emergency, which is not fully addressed by currently implemented measures.

C. Endangered Species Act

Any action to amend the ALWTRP must also be consistent with the parallel requirements of the Endangered Species Act and Section 7 consultations for the range of currently affected fisheries. While the MMPA requirements to reduce takes are focused on reducing serious injury and mortality, the Endangered Species Act has a far more stringent requirement to reduce takes generally, including mere interactions. Even if the consultations are incomplete, the Fisheries Service should use the ongoing consultation to advise the ALWTRP rulemaking to avoid unnecessary future rulemaking. Furthermore, any analysis of alternatives in the EIS must evaluate takes in the context of both the MMPA and Endangered Species Act requirements.

II. THE CURRENT RULEMAKING AND EIS SHOULD EXPAND THE SCOPE OF THE ACTION TO CONSIDER THE FULL RANGE OF FIXED GEAR FISHERIES THAT INTERACT WITH NORTH ATLANTIC RIGHT WHALES

The current focus of amendments to the ALWTRP is the lobster, crab trap and pot fisheries. While there is concern about these fisheries and their effects on NARWs, they are not the only risks to the species. Considering the status of NARWs, the Fisheries Service should be tackling every threat to the species that falls under the ALWTRP to minimize risk and ensure that affected fisheries achieve PBR and ZMRG.

Gillnets are a widespread gear type for many fisheries from Maine to Florida, so delaying action on gillnet fisheries for a future management action is not acceptable. The Fisheries Service should develop management alternatives for all ALWTRP fisheries in this action. Oceana submits its comments on alternatives below in the context of the full range of fisheries.

⁴⁶ 16 U.S.C. § 1387(g).

III. COMMENTS ON ATLANTIC LARGE WHALE TAKE REDUCTION TEAM MAJORITY ALTERNATIVE

The April 2019 ALWTRT majority alternative is a significant step forward for the lobster fishery in the Northeast (NE) region. This “Cross Caucus Agreement” (attached) includes state specific measures and modifications that reduce vertical lines, adopt weak lines and other strategies to meet the 60-80% reduction goal spelled out by the agency ahead of the meeting.⁴⁷

If completely and properly implemented, the near-consensus alternative is expected to reduce NARW entanglement risk enough to potentially attain PBR. However, each element of the ALWTRT alternative has weaknesses and uncertainties that need to be explored and developed in the EIS to ensure that the alternative will achieve all goals and requirements of the action.

A. State-level Implementation Questions

The ALWTRT alternative relies on measures that were crafted and fine-tuned for the needs and responsibilities of each state and the offshore Area 3 fishery. These alternatives are largely undefined for each state and cannot be properly evaluated until the respective states complete their rulemaking processes. The EIS must explore the state-federal parallel processes to clarify how these will be implemented. It is important to know what the Fisheries Service will do if a state does not fulfill its obligations according to the ALWTRT alternative and whether regulation of federal waters will be sufficient to attain PBR. This is especially true for the State of Maine that has recently withdrawn its support from the TRT process, the need for action and the suite of alternatives developed by the TRT in favor of unspecified strategies and standards.⁴⁸ The TRP will only be successful if all affected fisheries cooperate and coordinate and it is the responsibility of the Fisheries Service to ensure this plan is successful.

B. Weak Rope

Each element of the ALWTRT alternative relies on the expanded use of weak rope, line inserts, sleeves or other “contrivances” that theoretically allow NARWs to break free from entanglements. This strategy is flawed in two ways that must be fully explored and analyzed in the EIS.

First, the use of weak rope is expected to reduce entanglements of adult NARWs that can produce enough power to separate the weak rope. Weak rope has not been proven to be effective for calves and juveniles, however and cannot be part of a comprehensive risk management plan.

⁴⁷ ALWTRT “Cross Caucus Outcomes” as Presented and Voted Upon 4/26/19. ALWTRT Website, https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/April%202019/Meeting%20Materials/cross_caucus_outcomes_as_presented_and_voted_upon_4_26_19.pdf (Last visited August 30, 2019)

⁴⁸ See Maine Department of Marine Resources bulletin from Governor Janet T. Mills, dated 07/11/2019. <https://content.govdelivery.com/accounts/MEDMR/bulletins/250ce68> (Last visited September 6, 2019)

Protecting all life stages is critical for the species' recovery, as the PBR includes calves and juveniles. Therefore, any management strategy must provide protection for each life stage to effectively meet PBR and cannot be focused on benefits to just one life stage.

Second, while reducing mortality and significant injury by using weak rope will minimize entanglement under the MMPA requirements, the Fisheries Service has multiple obligations for the conservation of NARWs and cannot ignore the Endangered Species Act requirement to avoid entanglement outright to protect NARWs most effectively, especially calves/juveniles. Weak rope will do nothing to reduce the takes of listed NARWs under the Endangered Species Act as they will nonetheless have interactions with gear that qualify as "takes." If, as Oceana argues, weak rope is not a sufficient measure to reduce Endangered Species Act takes, the ALWTRT alternative must recoup the risk reduction benefits attributed to weak rope by implementing other management measures that avoid interactions.

C. Monitoring

The ALWTRT alternative includes a reference to future action to develop monitoring for the affected fisheries but offers no specifics about what the goals of the monitoring program would be. Nor does the ALWTRT alternative discuss the logistics of what is likely to be a very complicated monitoring program for a complex, diverse suite of fisheries. As we have seen with the development and refinement of the Northeast Region Standardized Bycatch Reporting Methodology, these tasks can be significantly challenging when rare events are the focus of the monitoring program.

The MMPA and Endangered Species Act require mechanisms to monitor takes against their respective threshold values (PBR, ITS, etc.), and the agency should develop effective, accurate, precise and timely monitoring options to be considered in the ALWTRT alternative. Without monitoring, this action will be deficient and cannot be approved. Oceana has included a more detailed discussion of monitoring below that should be considered in the context of any alternatives.

IV. THE CURRENT RULEMAKING SHOULD EXPLORE A FULL RANGE OF ALTERNATIVES TO MODIFY THE ATLANTIC LARGE WHALE TAKE REDUCTION PLAN TO ACHIEVE THE PURPOSE AND NEED OF THE RULE OF REDUCING TAKES TO BELOW PBR AND TOWARDS ZMRG

In addition to the alternative developed by the ALWTRT, the agency must develop and analyze a reasonable range of alternatives to achieve the goals of the action. Each of these alternatives discussed below have proven worldwide to be effective protected species interaction and bycatch minimization strategies. They merit full development in the EIS.

A. Time-Area Management

The most effective strategy to minimize fishery bycatch and entanglements is to avoid interactions and minimize the effects of interactions that occur. The agency has used this strategy and explicit authority granted by the MMPA⁴⁹ to create management areas in U.S. waters, including existing seasonal management areas in the ALWTRP.

To accomplish time-area management, regulations must shift fishing effort away from places and times where whales are present or expected. The EIS should explore two varieties of additional time-area management alternatives, which are explicitly authorized by the MMPA and have been implemented by the Fisheries Service in the past: static management areas and dynamic management areas.

1. Static Management Areas

The EIS should include alternatives to create new and expand existing static seasonal management areas in times and areas where NARWs have been documented in recent years. A series of time-area management proposals based on different criteria were proposed to the ALWTRT in October 2018, and Oceana encourages the agency to include each of these areas in the EIS.⁵⁰

Furthermore, the EIS should include alternatives to establish an annual review process to evaluate potential management areas to establish new static seasonal SAMs in regions and seasons where NARWs congregate. This process should include a schedule for the review, criteria to evaluate and method to monitor efficacy of the areas.

2. Dynamic Management Areas

In many parts of the Northeast region, NARWs are not following past migration, feeding and congregation patterns. Because of this uncertainty and the uncertainty in a rapidly changing Northwest Atlantic ecosystem, the agency needs to complement seasonal management areas with alternatives that establish criteria to create temporary reactive management areas, when sightings of NARWs are found during surveys or by other means. The alternative should also include

⁴⁹ 16 U.S.C. § 1387(f)(9).

⁵⁰ HSUS et al., *Proposal for October 2018 Atlantic Large Whale Take Reduction Team Meeting September 24, 2018*, NOAA Fisheries (October 2018), https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/October%202018/4_hsus_defender_s_cbd_alwtrp_proposal_final_9_24_18.pdf; S.D. Kraus et al., *Proposal to Reduce Serious Injury and Mortality from Entanglement of Right Whales, Fin Whales, and Humpback Whales*, NOAA Fisheries, https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/October%202018/5_neaq_trt_proposal_final_2_.pdf (last visited August 15, 2019).

monitoring requirements and criteria to dissolve these areas when whale aggregations move to other areas or disperse altogether.

Although more complicated to administer, this strategy clearly benefits fisheries. Focused dynamic management areas can be much smaller and of shorter duration than seasonal management areas. Further, dynamic areas are based on current presence and avoid the risk of managing fishing where whales are not present. In recent research dynamic management strategies have been found to “both support economically viable fisheries and meet mandated conservation objectives in the face of changing ocean conditions.”⁵¹

The Fisheries Service used a similar DAM strategy to create and dissolve management areas in the past under the ALWTRP. The DAM Program was discontinued in 2009 because of technical difficulties, monitoring requirements and concerns about enforcement capabilities. Considering that current science and technological capabilities are both far more advanced than in 2009, however, a dynamic management program deserves to be evaluated and analyzed in the EIS.

B. Gear Reduction, Modification and Line Reduction

Oceana agrees with the analysis and work that supported ALWTRT meetings suggesting that there is far too much fixed gear in the waters of the U.S. Atlantic. The amount of gear presents a clear, increased risk for whales. Such a high amount of gear may also reduce the efficiency of fisheries that are using too much effort for their level of catch.

To address this level of overcapacity in the region, Oceana encourages the Fisheries Service to include alternatives in the EIS that will reduce vertical lines and fixed gear across the region.

1. Gear and Effort Reduction

Management strategies that achieve high catch efficiency and high catch per unit effort should be the goal of any fishery. Provided that robust catch levels can be maintained, fewer traps, fewer labor hours, less fuel, and less maintenance are all benefits for a fishery. These strategies will also benefit NARWs that will face lower risk levels from less gear.

A number of studies evaluating management strategies in the United States and Canada have shown that improved fishing strategies, including significant trap reductions, can maintain catch levels. If these trap reductions result in corresponding vertical line reductions through effective regulation, this can be expected to reduce risk to NARWs.⁵²

⁵¹ E. L. Hazen et al., *A dynamic ocean management tool to reduce bycatch and support sustainable fisheries*, Sci. Adv. 4, eaar3001 (May 30, 2018), <https://advances.sciencemag.org/content/4/5/eaar3001>

⁵² Carl Wilson, *Manipulative Trapping Experiments In The Monhegan Island Lobster Conservation Area*, ME DMR Report (January 2010), https://www.nefsc.noaa.gov/coopresearch/pdfs/2005_Wilson_Monhegan_Trapping_05-

To capitalize on this win-win strategy, the EIS should explore regionwide trap reduction alternatives for NARW conservation to meet risk reduction goals.

2. Vertical Line Reduction

Every vertical line in the water increases the entanglement risk for NARWs, so the EIS should include a range of alternatives to reduce vertical lines with a clear measurable standard for this risk.

The regional reductions developed by the ALWTRT are sound and consider existing regulations that vary by region. Considering the uncertainty in state-level rulemaking, the EIS should explore specific options to reach these alternatives if state-level rulemaking processes are delayed or the states renege on the alternative that they agreed to at the April 2019 ALWTRT meeting.

3. Development and Use of New Technologies

The past few decades have seen significant improvements in technology, including for fisheries. Development and adoption of new technologies should be supported by the ALWTRP and the Fisheries Service must include alternatives in the EIS that consider existing and future new technology. Oceana encourages the Fisheries Service to use the current rulemaking to create the necessary regulatory tools to support and incentivize this innovation in the ALWTRP fisheries.

a. Ropeless Technology

Researchers around the world, including on the U.S. East and West Coasts, are currently testing different techniques to remove vertical lines from fixed gear fisheries through “ropeless” technology – some releasing a rope or deploying an air-filled bag that lifts the gear to the surface when the boat is nearby and signals to the device. Allowing and encouraging fixed gear fisheries to transition to ropeless methods to find and retrieve traps and nets could greatly reduce the dangers these fisheries pose to whales and other wildlife while allowing fisheries to continue in traditional fishing areas

Oceana encourages the Fisheries Service to use the current rulemaking to create a pathway to test and use ropeless technology in U.S. Atlantic fixed gear fisheries and to provide incentives to exempt these technologies from some regulations if and when the gear is demonstrated to be low or zero risk for whale entanglement.

[949_final.pdf](#); Myers et al., *Saving endangered whales at no cost*, Current Biology, Vol 17 No 1 (January 9, 2007), <https://www.sciencedirect.com/science/article/pii/S0960982206025267>.

Furthermore, Oceana understands the gear conflicts that exist between mobile and fixed gear fisheries in the Northeast region. While informal agreements and understandings often resolve these issues, regulatory action is sometimes needed. It appears that the Fisheries Service's intervention in coordination with the Regional Fisheries Management Councils may be necessary to support wider use of new gears. Oceana encourages the Fisheries Service to begin this work immediately to prepare new gears to be ready for use in the coming years.

Finally, Oceana encourages the Fisheries Service to prioritize development and testing of gears that will improve trap efficiency, reduce entanglement risk and otherwise respond to entanglement issues in the upcoming Bycatch Reduction Engineering Program (BREP) funding opportunity. Innovation needs financial support and the NARW crisis warrants this highly successful program's attention.

C. Fishery Monitoring and Reporting

Accurate, precise and timely monitoring of interactions with protected species are fundamental elements of both the MMPA and Endangered Species Act. Effective monitoring allows the agency to monitor takes against the PBR and ITS levels to determine when further management action is necessary to ensure that affected fisheries are achieving their goals and meeting their obligations under the law. Currently, monitoring of the fisheries under the ALWTRP is poor, with low-quality fundamental information about catch, effort, bycatch and other characteristics of the fisheries. The Fisheries Service must consider measures in the current ALWTRP action to significantly improve fisheries monitoring.

Specifically, the Fisheries Service must include alternatives in the EIS that consider requirements for spatial monitoring, effort monitoring and associated catch, bycatch and entanglement monitoring.

1. Spatial Monitoring

Knowing where and when fishing is taking place is critical for understanding the risk of entanglement to large whales. While Vessel Monitoring Systems (VMS) have been the norm in the past, lower-cost technologies are available today that will provide necessary fine-scale information for informing fishery management. The EIS should include a full consideration of VMS as well as alternative technologies to add monitoring to the TRP.

2. Automatic Identification System

Automatic Identification System (AIS) is a tracking system that automatically transmits a vessel's identity, speed and GPS location. Initially developed to prevent collisions of ships at sea, AIS is also used to exchange navigational data and to locate and identify vessels and track movements. AIS is currently required on U.S. commercial fishing vessels 65 feet and longer

while operating within the U.S. territorial sea. AIS tracking systems cost \$1,500 or less and have no operating costs while providing high-quality information about fishing activity that is already being used around the world to visualize, track and share data about global fishing activity in near real-time.⁵³

3. Private Monitoring Technology

Other monitoring technologies have been developed that provide low-cost spatial monitoring. For example, Pelagic Data Systems provides a new solar powered, low-cost technology to collect high resolution spatial data at sea.⁵⁴ The EIS should explore these alternatives as reasonable alternatives to collect important information about these fisheries.

4. Catch and Bycatch Monitoring

As discussed above, accurate, precise and timely monitoring of interactions with protected species are fundamental elements of both the MMPA and Endangered Species Act. The agency has recognized the need to improve monitoring of Northeast region trap/pot fisheries with the recent inclusion of these fisheries in the list of “gear modes” that receive observer coverage under the Northeast Region Standardized Bycatch Reporting Methodology.⁵⁵ At this time, however, coverage for these portions of the fishery are exceedingly low and does not generate information that is useful for informing management of the fishery or about interactions with protected species. For example, in the current observer scheduling year, the trap/pot fisheries in the entire Northeast region are scheduled to receive a total of 154 observer days to cover more than 38,000 fishing days reported on Vessel Trip Reports. This represents less than one half of one percent of fishing trips and cannot be used as a statistically robust source to provide information about catch or bycatch in the fishery.

Oceana understands that monitoring rare events like whale interactions is a difficult task. Because of the statutory obligations to monitor takes, however, the EIS must do more to explore improvements to independent monitoring of the U.S. trap/pot fisheries.

Oceana suggests that the Fisheries Service include alternative statistical standards for monitoring in the EIS and then explore alternatives to use both human and electronic catch monitoring.

CONCLUSION AND CALL FOR ACTION

The NARW population is in critical danger and has suffered extensive losses well beyond PBR and ZMRG for years. Existing measures have not been effective at meeting MMPA requirements or adequately reducing entanglement threats. Consequently, the Fisheries Service should utilize

⁵³ See Global Fishing Watch. [Globalfishingwatch.org](http://globalfishingwatch.org).

⁵⁴ See Pelagic Data Systems, *How It Works*, <http://www.pelagicdata.com> (last visited August 30, 2019).

⁵⁵ 2019 Standardized Bycatch Reporting Methodology Annual Discard Report with Observer Sea Day Allocation. NOAA Technical Memorandum National Marine Fisheries Service-NE-255. <https://www.nefsc.noaa.gov/publications/tm/tm255/> (last visited, August 30, 2019)

its given authorities to implement new measures for NARW protection. At current mortality and serious injury rates, NARWs are headed for functional extinction. The most logical strategy to prevent entanglement is to eliminate the chances for NARWs to encounter fishing gear. Responses to the currently ongoing UME should therefore include proposed gear reductions and modifications, fishery monitoring and reporting, and time-area management considerations.

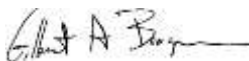
The Fisheries Service has explicit discretionary authority under the MMPA to restrict the use of fishing gear or to close areas to fishing to protect marine mammals such as NARWs. The MMPA also provides emergency authority for the Fisheries Service to restrict areas to fishing in response to an emergency scenario, such as the current critical state of NARW mortalities, which exceed PBR and statutory take reduction goal timeframes. The Endangered Species Act gives the Fisheries Service authority to protect NARWs as well. Based on the Section 7 Biological Opinion issued in 2001, the Fisheries Service determined that Dynamic Area Management was a reasonable and prudent alternative or measure. This determination led to implementation of a Dynamic Area Management Program from 2002 to 2009. Authority to implement area-based closures, among other proposed measures, under the ALWTRP remains in the MMPA. The Fisheries Service should make considerations of these alternatives a priority to prevent future mortalities and serious injury.

Oceana recommends that, in addition to the alternatives included in the April 2019 ALWTRT majority alternative, the agency include the following in the reasonable range of alternatives developed and considered in the ALWTRP EIS:

- Time-area management including static and dynamic area closures;
- Gear reduction, modification and line reduction: and
- Fishery monitoring and reporting.
-

Oceana appreciates the opportunity to provide input. Thank you for your time and consideration of these comments. We will continue to be engaged in this process moving forward.

Sincerely,



Gib Brogan

Fisheries Campaign Manager

Oceana

Attachment: ALWTRT Cross-Caucus Outcomes as Presented and Voted Upon 4/26/2019

Note the discrepancy between sleeves and 1700 lb rope – although we think they are equivalent, the sleeves provide a 43% reduction everywhere and the 1700 lb rope gets you only 31% reduction everywhere.

Region wide: Revisit need for weak link if weak lines are required.

ME: LMA1

50% VL reduction

$\frac{3}{4}$ toppers on all gear outside of 3 miles = 0.75 (weak rope) x 0.31 (1700lb rope reduction) X 0.50 (50% VL reduction) = 11.6% + 50% VL reduction = 61.5% reduction

Caution re. need to consider unintended consequences; develop best practices to avoid issues such as increasing rope diam/strength.

For all – safety exemption for young fishermen, nearshore, shallow waters – the Dwight exemption.

MA: LMA1

30% VL reduction

Sleeves or their equivalent everywhere (11% risk reduction)

24% credit for the MA Bay closure (per Burton's calculations)

Eliminate the vertical reduction for the fishermen closed out of MBRA (ca 100 fishermen out of 500 LMA1 MA fishermen, or 20% , an increase in risk across MA of 5%

24% (closure credit) + 30% (VL reduction) + 11% (sleeves or equivalent everywhere) = 65% - 5% = 60% (the 5% is an exemption for VL reduction for closed out fishermen)

(Note, some of the source data for this calculation needs confirming)

RI: (LMA 2) Indications are that they will reduce endlines by 18% in the next three years. Willing to use 1700lb sleeves or equivalent everywhere – with credit for 18% endline reduction, plus 43% sleeve reduction or equivalent, reaches approximately 60% reduction 30% from current numbers.

RI offers amendment: trawl up from 20 to 30 pots in 2/3 overlap as a component of their 30% line reduction

NH: (LMA1) General agreement of 30% VL reduction and 1700lb or sleeves throughout fishery in LMA1. Reaches 58.5% risk reduction.

Offshore/ LMA3: Needs rapid research program to address risk reduction efforts, fishermen in principal agree to reducing risk through a combination of VL reduction (underway) and other measures. Through 50 fathoms depth, 1700 lb breaking strength or equivalent; work with industry to identify the specifics of how practical, for presentation to Team. Five-year rapid research commitment related to lower weight breaking strength and other risk reduction measures. Calculate ongoing Area 3 risk reduction of 18%, 2018 – 2020. Goal: responsible like other LMAs for meeting the 60% risk reduction

General recommendations:

Re-do poll using expert elicitation methods to converge on better severity/risk reduction estimates. Address uncertainty vs. published data.

Develop monitoring plan, including whale surveys, gear surveys to monitor efficacy over time. Monitor evolution of implementation (fishermen, fisheries, innovations that can be encompassed).

APPENDIX III

Oceana Comment Letter on the Draft Biological Opinion (Feb. 19, 2021)

(See attached.)

February 19, 2021

Via email: nmfs.gar.fisheriesbiopfeedback@noaa.gov

Attention:

Jennifer Anderson, Assistant Regional Administrator for Protected Resources

Email: jennifer.anderson@noaa.gov

Phone: 978-281-9226

Sarah Bland, Assistant Regional Administrator for Sustainable Fisheries

Email: sarah.bland@noaa.gov

Phone: 978-281-9257

National Marine Fisheries Service

Greater Atlantic Regional Fisheries Office

55 Great Republic Drive

Gloucester, MA 01930

Phone: 978-281-9300

**Re: Oceana's Comments on the Draft Endangered Species Act Section 7
Consultation Biological Opinion 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]**

Dear Jennifer Anderson and Sarah Bland:

Oceana is the largest international ocean conservation organization solely focused on protecting the world's oceans, with more than 1.2 million members and supporters in the United States, including over 340,000 members and supporters on the U.S. Atlantic seaboard. Oceana has been engaged as a stakeholder in the management of U.S. fisheries and interactions with endangered species for more than 15 years, with a particular interest in effective bycatch minimization and reducing, if not eliminating, fishing gear entanglement-related death, injury, and harm to protected species, including the critically endangered North Atlantic right whale (NARW).

Oceana's Comments on the Draft BiOp

February 19, 2021

Page 2 of 24

Since 2010, the recovery of NARWs has reversed and the population has now declined for a variety of reasons.¹ The two main human-caused threats to NARWS – vessel strikes and fishing entanglement – are the main source of the decline, and possible exacerbating causes include prey and ecosystem shifts as a result of climate change and related whale behavior changes.² In 2017, due to new information on the decline of the NARW as well as the exceedance of incidental take of this protected species, the Fisheries Service reinitiated Endangered Species Act (ESA) Section 7 formal consultations for the lobster fishery and the “batched” fisheries.³ Recognizing the high degree of overlap between the Jonah crab fishery and the lobster fishery, the Fisheries Service included the Jonah crab fishery in the consultation as well.⁴ In addition, the agency included consultations on a New England Fishery Management Council essential fish habitat amendment.⁵ On January 15, 2021, the Fisheries Service issued the Draft Biological Opinion (Draft BiOp) addressing the impacts of the fisheries and the essential fish habitat amendment on ESA-listed species for public review and comment.

In light of Oceana's interest in protecting NARWs from entanglement in fishing gear, Oceana appreciates the opportunity to provide comments on the Draft BiOp. Oceana believes that the Draft BiOp fails to meet the requirements of the Endangered Species Act (ESA) as well as the Marine Mammal Protection Act (MMPA). Specifically, the Draft BiOp fails to adequately evaluate the impacts of the authorized fisheries on endangered and depleted NARWs and fails to provide a conservation framework or Reasonably Prudent Measures that will prevent the further decline of the species. The Draft BiOp is also misaligned with the Fisheries Service's recently published North Atlantic Right Whale Proposed Risk Reduction Rule for Fishing Entanglement in Fixed Fishing Gear in the Waters of the U.S. Northeast (proposed Risk Reduction Rule), and thus fails to satisfy the Fisheries Service's obligation to align its rulemakings under the ESA with the requirements of the MMPA.

¹ *Team Reaches Nearly Unanimous Consensus on Right Whale Survival Measures*, NOAA Fisheries (last updated May 10, 2019), <https://www.fisheries.noaa.gov/feature-story/team-reaches-nearly-unanimous-consensus-right-whale-survival-measures>.

² Sean A. Hayes, *North Atlantic Right Whales: A Summary of Stock Status and Factors Driving Their Decline*, NOAA Fisheries (Sept. 18, 2018) at 7, https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/September%202018/narw_brief_for_alwtrt_09_18_18.pdf.

³ Draft BiOp at 19-21 (The “batched fisheries” refers to the bluefish, Atlantic mackerel/squid/butterfish, monkfish, Northeast multispecies, Northeast skate complex, spiny dogfish, and summer flounder/scup/black seabass fisheries); see also Michael J. Asaro, *Update on NOAA Fisheries Right Whale Recovery Actions*, NOAA Fisheries (November 30, 2017) at 6, https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/2017%20Nov/asaro_trtwebinar_nov2017.pdf.

⁴ Draft BiOp at 21.

⁵ The Fisheries Service must comprehensively analyze impacts to ESA-listed species from implementation of the essential fish habitat amendment, which implicates the following New England fisheries: Atlantic deep sea red crab, Atlantic herring, Atlantic salmon, Atlantic sea scallop, monkfish, Northeast multispecies, and skate. *Id.* at 22.

In order to correct the inadequacies of the Draft BiOp, Oceana urges the Fisheries Service to take the following actions:

- specify measures that will adequately and effectively reduce risks to NARWs *now* (not 10 years from now as proposed in the NARW Conservation Framework) to prevent the further decline of the species;
- account for the notable impact on critical NARWs habitat caused by the presence of hundreds of thousands of vertical trap/pot lines;
- use “the best scientific and commercial data available” to conduct analysis of impacts to NARWs;
- reduce the number of sub-lethal NARW takes authorized in the fishery; and
- account for the cumulative effects on NARWs of vessel strikes and other human activities, including impacts in Canadian waters.

AND, in the interim . . .

- take emergency measures immediately using authority under the ESA, MMPA, and the Magnuson-Stevens Fisheries Conservation and Management Act (MSA) to significantly reduce the impact of fishing gear entanglement on NARWs (e.g., dynamic management areas).

LEGAL BACKGROUND

Formal intra-Fisheries Service consultations between the Protected Resources and the Sustainable Fisheries divisions of the Greater Atlantic Regional Fisheries Office to authorize the lobster, Jonah crab, and “batched” fisheries and to implement the essential fish habitat amendment must be conducted in accordance with the requirements of the ESA and the MMPA. The agency must also manage and authorize the fisheries and any essential fish habitat in accordance with the MSA and the Atlantic Coastal Fisheries Cooperative Management Act (ACA). A failure to abide by statutory requirements will lead to legal challenges to the final BiOp.

I. ENDANGERED SPECIES ACT

a. Goals of the Statute

The ESA was enacted in 1973 to “halt and reverse the trend toward species extinction, whatever the cost.”⁶ The statute declares it “the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of [this] purpose.”⁷ To meet this goal, Section 9 of the ESA prohibits the “take” of all endangered species, including NARWs, unless specifically authorized.⁸ “Take” is defined under the ESA as “to harass, harm, pursue, hunt, shot, wound, kill, trap, capture or collect” a protected species.⁹ Exceptions to the ESA prohibition on “take” are only allowed if statutory requirements are met, including via the Section 7 consultations process.

b. ESA Section 7 Consultation

Section 7 of the ESA requires federal agencies to ensure that any action authorized, funded, or carried out by a federal agency, including the authorization of fisheries, is not likely to jeopardize the continued existence of ESA-listed species or destroy or adversely modify critical habitat.¹⁰ ESA Section 7 consultation ends in the publication of a Biological Opinion (BiOp) that not only includes a determination of whether the activity will jeopardize the continued existence of the species but also identifies measures to mitigate the effects of the activity on the species.¹¹

The Fisheries Service is required to use “the best scientific and commercial data available” in analyzing impacts and formulating the BiOp.¹² For example, a BiOp must rely on the best available scientific data on the status of the species and analyze how the status of the species would be affected by the proposed action.¹³

“Jeopardize” 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.”¹⁴

⁶ *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978).

⁷ 16 U.S.C. § 1531(c)(1).

⁸ 16 U.S.C. § 1538(a)(1)(B).

⁹ 16 U.S.C. § 1532(19).

¹⁰ 16 U.S.C. § 1536(a)(2).

¹¹ *Id.* § 1536(c).

¹² 50 C.F.R. § 402.14(g)(8).

¹³ 50 C.F.R. § 402.14(g)(8), (h)(2).

¹⁴ 50 C.F.R. § 402.02; *see also Defenders of Wildlife v. Martin*, 454 F. Supp. 2d 1085, 1101 (E.D. Wash. 2006).

When developing its jeopardy determination, “the consulting agency evaluates the current status of the listed species or critical habitat, the effects of the action, and cumulative effects.”¹⁵

If an agency action related to a fishery is expected to jeopardize the species, the BiOp will include non-discretionary Reasonable and Prudent Alternatives and a list of Terms and Conditions for the fishery.¹⁶ If the agency action related to a fishery is determined not to jeopardize the species, the BiOp will include more flexible Reasonable and Prudent Measures and a list of Terms and Conditions for the fishery.¹⁷

Importantly, the BiOp must also include an Incidental Take Statement (ITS) that authorizes and specifies the level of acceptable take for the fishery that will not trigger future consultation.¹⁸ The ITS has two purposes. First, it provides a safe harbor for a specified level of incidental take.¹⁹ A fishery authorized subject to an ITS may incidentally (but not intentionally) take endangered species, which is otherwise illegal.²⁰ If the fishery exceeds the take specified in the ITS, however, the safe harbor no longer applies, and the fishery and its participants are liable for violating the ESA.²¹ Any person who knowingly “takes,” that is, causes lethal or sub-lethal harm to, an endangered or threatened species is subject to substantial civil and criminal penalties, including imprisonment (civil fines of up to \$25,000 per violation and criminal penalties of up to \$50,000 and imprisonment for up to a year).²² Second, the ITS provides a trigger.²³ The BiOp and ITS include a requirement that the Fisheries Service must effectively monitor takes in a fishery against the trigger specified in the ITS.²⁴ If the authorized fishery exceeds the trigger, i.e., the level of “take” specified in the ITS, the Fisheries Service must immediately reinstitute ESA Section 7 consultation to reevaluate impacts of the fishery to ESA-listed species.²⁵ For ESA-listed marine mammals, the ITS must include a discussion of measures necessary to comply with the MMPA, which, as discussed below, imposes additional conditions on the Fisheries Service’s ability to authorize the take of endangered marine mammals.

c. Emergency Action under the ESA

The Fisheries Service has authority under the ESA to take emergency action when there is an “emergency posing a significant risk to the well-being of any species of fish or wildlife or

¹⁵ *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 481 F.3d 1224, 1230 (9th Cir. 2007) (citing 50 C.F.R. § 402.14(g)(2)–(3)) (internal quotations omitted).

¹⁶ 16 U.S.C. § 1536(b)(3)(A).

¹⁷ *Id.* § 1536(b)(4).

¹⁸ 50 C.F.R. § 402.14(i).

¹⁹ *See Ctr. for Biological Diversity v. Salazar*, 695 F.3d 893, 909 (9th Cir. 2012).

²⁰ *Id.*

²¹ 16 U.S.C. § 1540(a), (b); *see also Bennett v. Spear*, 520 U.S. 154, 170 (1997).

²² 16 U.S.C. § 1540(a), (b).

²³ *Ctr. for Biological Diversity*, 695 F.3d at 909.

²⁴ 50 C.F.R. § 402.14(i).

²⁵ *Id.*

plants.”²⁶ When taking such emergency action, the Fisheries Service can bypass standard ESA and Administrative Procedure Act rulemaking procedures to issue emergency regulations to protect a species.²⁷

II. MARINE MAMMAL PROTECTION ACT

a. Goals of the Statute

Since 1972, the MMPA has afforded special protection to marine mammal species from a wide range of threats. To protect marine mammals, such as NARWs, from human activities, the MMPA establishes a moratorium on the “take” of marine mammals.²⁸ The MMPA defines “take” as “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.”²⁹ In limited circumstances, the Fisheries Service,³⁰ may grant exceptions to the take moratorium, such as for the incidental, but not intentional, taking of marine mammals for certain activities, which is done via an incidental take authorization.³¹

At the heart of the MMPA’s science-driven approach to conservation, management and recovery of marine mammals are the goals of maintaining the optimum sustainable population and ecosystem function of marine mammal stocks, restoring depleted stocks to their optimum sustainable population levels, and reducing mortality and serious injury (bycatch) of marine mammals incidental to commercial fishing operations to insignificant levels. To achieve these overarching goals, the MMPA prohibits taking of marine mammals, with certain exceptions, including for commercial fisheries.³² Ultimately, the MMPA mandates a Zero Mortality Rate Goal, i.e., marine mammal mortality in commercial fisheries should achieve a zero mortality and serious injury rate to a level approaching zero, by April 2001.³³ Clearly, the Zero Mortality Rate Goal for marine mammal “take” in commercial fisheries has not been met, indicating the Fisheries Service’s failure to effectively implement and enforce this bedrock environmental law.

The MMPA requires fisheries to achieve an interim goal of Potential Biological Removal (PBR).³⁴ The PBR is calculated based on the dynamics of a species or mammal stock to be “(t)he

²⁶ 16 U.S.C. § 1533(b)(7).

²⁷ *Id.*

²⁸ 16 U.S.C. §§ 1361(2), 1371.

²⁹ 16 U.S.C. § 1362(13).

³⁰ The Fish and Wildlife Service, within the Department of the Interior, is responsible for dugongs, manatees, polar bears, sea otters and walruses. *See* U.S. Fish and Wildlife Service, *Marine Mammals*, <https://www.fws.gov/international/animals/marine-mammals.html> (last visited Feb. 18, 2021).

³¹ 16 U.S.C. § 1371(a); Fisheries Service, *Incidental Take Authorizations under the MMPA*, <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act> (last updated June 24, 2020) (listing oil and gas exploration as an activity for which incidental take authorizations have been issued).

³² 16 U.S.C. § 1371(a), 1371(a)(5)(E).

³³ 16 U.S.C. § 1387(b).

³⁴ *Id.* § 1387(f).

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.”³⁵ This requirement is the guiding metric of success for recovering marine mammal species and for incidental fishing mortality reductions. Any “take” over PBR is unauthorized. When “take” exceeds PBR, a Take Reduction Plan (TRP) (discussed below) must be developed. In addition, if a commercial fisher has not registered their vessel and received an incidental take authorization (discussed below), then any “take” of a marine mammal species is subject to substantial civil fine and a knowing violation is subject criminal penalties, including imprisonment (civil fines of up to \$10,000 per violation and criminal penalties of up to \$20,000 per violation and imprisonment for up to a year).³⁶

In the 2018 Stock Assessment Report for NARWs, PBR was calculated to be 0.9 mortalities or incidents of serious injury per year.³⁷ The 2019 Stock Assessment Report for NARWs calculates PBR at 0.8.³⁸ The draft 2020 Stock Assessment Report similarly calculates PBR at 0.8.³⁹ However, as the Fisheries Service has recently acknowledged, the population of NARWs must be revised downward – from 412 to 366 as of January 2019 – in part because “the impact of the ongoing Unusual Mortality Event (UME) – declared in 2017 and involving 42 individuals [as of October 2020] – was worse than previously thought”; as a result, PBR will likely be even lower in the 2021 Stock Assessment Report.⁴⁰ In other words, *less than one* NARW may be killed or seriously injured by human actions each year for the species to achieve optimum sustainable population.

b. Take Reduction Teams/Take Reduction Plans

To achieve the goals of the MMPA, the Fisheries Service convenes Take Reduction Teams (TRTs) - interdisciplinary groups tasked with the development of Take Reduction Plans (TRPs).⁴¹ TRT members are selected for their expertise regarding the conservation and biology of the marine mammal species or expertise regarding the fishing practices that result in the take of such species. TRTs are assembled to respond to specific needs and reconvene when the conservation needs of an MMPA-protected species necessitate changes to regulations.

³⁵ 16 U.S.C § 1362(20).

³⁶ 16 U.S.C. § 1375(a), (b).

³⁷ “2018 Marine Mammal Stock Assessment Reports,” 84 Fed. Reg. 28,489, 28,496 (June 19, 2019).

³⁸ NOAA Fisheries, *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessment Reports – 2019, North Atlantic Right Whale* (Apr. 2020) at 6, https://media.fisheries.noaa.gov/dam-migration/2019_sars_atlantic_northatlanticrightwhale.pdf.

³⁹ NOAA Fisheries, *DRAFT - U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessment Reports – 2020, North Atlantic Right Whale* (Aug. 2020) at 45, <https://s3.amazonaws.com/media.fisheries.noaa.gov/2020-12/Draft%202020%20Atlantic-Gulf-marine%20mammal%20stock%20assessment%20reports.pdf?null>.

⁴⁰ Email from Colleen Coogan to ALWTRT Members and Alternates (Oct. 26, 2020).

⁴¹ *Marine Mammal Take Reduction Plans and Teams*, NOAA Fisheries (last updated Aug. 8, 2019), <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-take-reduction-plans-and-teams>.

The overarching goal of each TRP is “to reduce, within 5 years of [the plan’s] implementation, the incidental mortality or serious injury of marine mammals...to insignificant levels approaching a zero mortality and serious injury rate, taking into account the economics of the fishery, the availability of existing technology, and existing State or regional fishery management plans.”⁴² This so-called Zero Mortality Rate Goal is the ultimate goal of marine mammal conservation in each TRP in the United States, with achievement of PBR acting as an intermediate step towards recovery.⁴³

To accomplish this important task, each TRP contains a review of recent stock assessments and estimates of the total number of marine mammals being taken annually by species and by fishery. The TRP then explores recommended regulatory and voluntary measures and the expected percentage of the required bycatch reduction that will be achieved by each measure. The TRP must also include a discussion of alternate management measures considered and reviewed by the TRT and a rationale for their rejection. Finally, a TRP must include monitoring plans to determine the success of each measure and a timeline for achieving specific objectives of the TRP.⁴⁴

The Atlantic Large Whale Take Reduction Team (ALWTRT) has been in effect since 1996.⁴⁵ The Atlantic Large Whale Take Reduction Plan (ALWTRP) was first implemented in 1997.⁴⁶ The ALWTRT has advised the Fisheries Service on more than a dozen rules and regulations since then to modify fisheries managed under the ALWTRP.⁴⁷ Recent amendments to the ALWTRP include the December 31, 2020 proposed Risk Reduction Rule related to two of the fisheries – the lobster and Jonah crab fisheries – analyzed in the Draft BiOp.

c. ESA Section 7 Consultation and MMPA Section 101(a)(5) Requirements

ESA-listed marine mammal stocks fall under the jurisdiction of both the MMPA and ESA, and the Fisheries Service has a concurrent responsibility to satisfy the requirements of both laws. The MMPA and the ESA work in tandem to protect endangered marine mammals. Indeed, Congress “intended that the decision processes under the [MMPA and ESA] be coordinated and integrated to the maximum extent possible.”⁴⁸ Congress manifested this intention by incorporating the MMPA into the ESA’s incidental take statement requirement.⁴⁹ Specifically,

⁴² 16 U.S.C. § 1387(f)(2).

⁴³ 16 U.S.C. § 1387(b).

⁴⁴ NOAA Fisheries Marine Mammal Take Reduction Plans and Teams Website:

<https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-take-reduction-plans-and-teams#take-reduction-plan-content> (last visited Sept. 6, 2019).

⁴⁵ *Atlantic Large Whale Take Reduction Plan: The Take Reduction Team*, NOAA Fisheries, <https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-mammal-protection/atlantic-large-whale-take-reduction-plan> (last visited Aug. 16, 2019).

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ See 132 Cong. Rec. H10453-02, 132 Cong. Rec. H10453-02 (1986) (stating the 1986 amendments to the ESA “reflect the changes to the MMPA and ... clarify the relationship between the two statutes. It is intended that the decision processes under the involved statutes be coordinated and integrated to the maximum extent practicable.”).

⁴⁹ 16 U.S.C. § 1536(b)(4)(C).

Section 7(b)(4)(C) of the ESA provides that when the action under consultation will incidentally take endangered marine mammal species, the Service must ensure that the taking “is authorized pursuant to section 101(a)(5) of the Marine Mammal Protection Act.”⁵⁰

As part of the Marine Mammal Authorization Program, the Fisheries Service maintains the MMPA List of Fisheries that interact with marine mammals, which is updated annually. The list includes three categories. Category I lists fisheries that have frequent incidental mortality and serious injury for a marine mammal species (i.e., greater than or equal to 50% of PBR). Category II lists fisheries with occasional incidental mortality and serious injury (i.e., greater than 1% but less than 50% PBR). Category III lists fisheries with a remote likelihood of no know incidental mortality or serious injury (less than or equal to 1% of PBR).⁵¹ Effective as of February 16, 2021, the Fisheries Service’s MMPA List of Fisheries includes both the lobster and Jonah crab fisheries as Category II fisheries that have “occasional interactions” with large whales. While the NARW is listed as a marine mammal with which the lobster fishery interacts, the species is not listed for the Jonah crab fishery.⁵² Fisheries listed in Category I or II must apply for and receive a permit from the Fisheries Service, and U.S. flagged fishing vessels must register with the Fisheries Service and display a valid authorization decal.⁵³

Authorization of incidental take of *endangered* marine mammals, such as the NARW, for commercial fisheries with frequent (MMPA Category I)⁵⁴ or occasional (MMPA Category II)⁵⁵ incidental mortality or serious injury requires additional steps.⁵⁶ The Fisheries Service must first publish in the Federal Register a separate list of fisheries allowed to engage in such takes (“MMPA 101(a)(5)(E) list”).⁵⁷ To add a fishery to the MMPA 101(a)(5)(E) list, the Fisheries Service must make certain determinations. Specifically, for every endangered marine mammal

⁵⁰ *Id.*

⁵¹ 16 U.S.C. § 1387(c).

⁵² See NOAA Fisheries, *Marine Mammal Protection – List of Fisheries Summaries Tables*, <https://www.fisheries.noaa.gov/national/marine-mammal-protection/list-fisheries-summary-tables> (last updated Feb. 5, 2021).

⁵³ 16 U.S.C. § 1387(c).

⁵⁴ MMPA Category I fisheries are fisheries that have frequent incidental mortality and serious injuries of marine mammals (whether endangered or not). *See id.*

⁵⁵ MMPA Category II fisheries are fisheries that have occasional incidental mortality and serious injuries of marine mammals (whether endangered or not). *See id.*

⁵⁶ 16 U.S.C. § 1387(a)(2) (noting that “[i]n the case of the incidental taking of marine mammals from species or stocks designated under this Act as depleted on the basis of their listing as threatened species or endangered species under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), *both this section and section 1371(a)(5)(E) of this Act shall apply*” (emphasis added)).

⁵⁷ *Id.* § 1371(a)(5)(E). Please note that this is a different List of Fisheries than the one for non-endangered marine mammals called the “Marine Mammal Authorization Program.” *See* 16 U.S.C. § 1382(a).

for which the Fisheries Service plans to issue an incidental take authorization, the Fisheries Service must determine:

- the incidental mortality and serious injury from the fishery will have a “negligible impact” on the species;⁵⁸
- a recovery plan has been developed or is being developed for the species;⁵⁹ and
- a monitoring program and a TRP is or will be in place for the species.⁶⁰

After making this determination for every endangered marine mammal that a fishery takes, the Fisheries Service can add the fishery to the MMPA 101(a)(5)(E) list.⁶¹ Only upon the publication of the MMPA 101(a)(5)(E) list are vessels operating in these fisheries eligible to receive incidental take authorizations.⁶² These incidental take authorizations are valid for up to three years.⁶³ Any incidental take of marine mammals by commercial fisheries, therefore, is illegal without the publication of an MMPA 101(a)(5)(E) list and the accompanying determinations described above. The Fisheries Service is delinquent in its duty to publish this MMPA 101(a)(5)(E) list and to issue incidental take authorization as required by the statute.

The publication of the MMPA 101(a)(5)(E) list, however, does not conclude the Fisheries Service's duty. Since the Fisheries Service is authorizing take of *endangered* marine mammals, the ESA also applies. The Fisheries Service must publish a BiOp with an ITS.⁶⁴ Moreover, as described above, that ITS must include terms and conditions that detail how the authorized take will comply with the requirements of the MMPA.⁶⁵ Thus, for *endangered* marine mammals, the ITS must contain terms and conditions to ensure that any authorized take has only a “negligible impact” on the species.⁶⁶

Even after completing these steps, the Fisheries Service's duty is not discharged. If the Fisheries Service determines that the incidental mortality or serious injury in a fishery has more

⁵⁸ MMPA regulations define “negligible impact” as “an impact resulting from the specified activity that cannot be reasonably expected to and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.” 50 C.F.R. § 216.103. For the latest guidance of “negligible impact” determinations in the context of MMPA Section 101(a)(5)(E), see National Marine Fisheries Service, Criteria for Determining Negligible Impact under MMPA Section 101(a)(5)(E) (June 17, 2020), <https://media.fisheries.noaa.gov/dam-migration/02-204-02.pdf>.

⁵⁹ The MMPA does not specify a timeframe for when the recovery plan must be developed. There is also no case law on point for this specific issue.

⁶⁰ *Id.* § 1371(a)(5)(E)(i).

⁶¹ *Id.*

⁶² *Id.*

⁶³ 61 Fed. Reg. 64,500, 64,500 (Dec 5, 1996).

⁶⁴ 16 U.S.C. § 1536(b)(4).

⁶⁵ *Id.*

⁶⁶ *Id.*; 16 U.S.C § 1371(a)(5).

than a “negligible impact” on an endangered species, then the agency must issue emergency regulations to protect the species.⁶⁷

d. Emergency Action under the MMPA

If incidental mortality and serious injury during a commercial fishing season is having or is likely to have an immediate and significant adverse impact on a stock or species, and a TRP is being developed, then the Fisheries Service shall prescribe emergency regulations to reduce incidental mortality and serious injury in the fishery and approve and implement on an expedited basis, a plan to address adverse impacts.⁶⁸ The MMPA *requires* the Fisheries Service to act to protect an endangered species when the level of incidental mortality or serious injury from an authorized commercial fishery has resulted, or is likely to result in an impact that is “more than negligible.”⁶⁹

III. MAGNUSON-STEVENSON ACT

The Magnuson-Stevens Act of 1976 governs fishery management in U.S. federal waters. In addition to the statutory goals of fostering long-term biological and economical sustainability or marine fisheries, the Act requires the Fisheries Service to consult with relevant staff within the agency regarding any adverse effects authorizing commercial fisheries may have on essential fish habitat.⁷⁰ In addition, National Standard 9 of the MSA specifies that conservation and management measures shall, to the extent practicable, (a) minimize bycatch, and (b) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.⁷¹ The MSA also gives the Fisheries Service authority to issue emergency regulations to address “recent, unforeseen events or recently discovered circumstances” that “present serious conservation or management problems in the fishery.”⁷²

IV. ATLANTIC COASTAL FISHERIES COOPERATIVE MANAGEMENT ACT (ACA)

To facilitate effective interstate conservation and management of Atlantic coastal fishery resources, Congress authorized, via the ACA in 1993, the Atlantic States Marine Fisheries Commission (Commission), to work with states and the federal government on interstate coastal fishery management.⁷³ In particular, the Commission is the umbrella organization through which

⁶⁷ 16 U.S.C. § 1371(a)(5)(E)(iii).

⁶⁸ 16 U.S.C. § 1387(g).

⁶⁹ 16 U.S.C. §§ 1371(a)(5)(E)(iii), 1387(g).

⁷⁰ 16 U.S.C. § 1855(b)(2) (stating that “[e]ach Federal agency shall consult with the Secretary with respect to any action authorized, funded, or undertaken, or *proposed to be authorized*, funded, or undertaken by such agency that may adversely affect any essential fish habitat identified under this Act.” (emphasis added)).

⁷¹ 16 U.S.C. § 1851(a)(9).

⁷² 16 U.S.C. § 1855(c); 62 Fed. Reg. 44,421-42 (Aug. 21, 1997).

⁷³ 16 U.S.C. § 5101 *et seq.*

the states and federal government manage, via interstate fishery management plans (ISFMP), the lobster and crab fishery in the U.S. exclusive economic zone.⁷⁴ All states must implement required conservation provisions of any ISFMP; if a state or states do not, then the Fisheries Service, acting on delegated authority from the Secretary of Commerce, may impose a moratorium on fishing in the noncompliant state's waters.⁷⁵

V. RELATED LITIGATION

a. Center for Biological Diversity v. Ross

In January 2018, the Center for Biological Diversity, Defenders of Wildlife, and the Humane Society challenged the 2014 American lobster fishery BiOp under the ESA, MMPA, and APA for, among other things, failing to include an ITS in the BiOp in violation of the ESA. Conservation Law Foundation separately challenged on similar grounds, and the case was consolidated before the D.C. District Court. In April 2020, the Court decided to only address the ESA claim and found that the 2014 BiOp was invalid because it failed to include an ITS. At the remedy phase, the Court was not inclined to issue an injunction creating a closed area as requested by plaintiffs but did require the Fisheries Service to issue a new BiOp with an ITS by May 31, 2021.⁷⁶ The Draft BiOp, which is the subject of this comment letter, incorporates ESA Section 7 consultation and analysis of the impacts of the American lobster fishery on NARWs along with an ITS in an attempt to satisfy the Court's order.

b. Conservation Law Foundation v. Ross

In May 2018, Conservation Law Foundation challenged the 2018 Omnibus Essential Fish Habitat Amendment 2 to open up the Nantucket Lightship Groundfish Closure Area and the Closed Area 1 Groundfish Closure Area to groundfish fishing gear after over 20 years of being closed. Conservation Law Foundation alleged that the Fisheries Service violated the ESA due to its failure to perform ESA Section 7 consultations for the proposed opening of these closed areas. In October 2019, the D.C. District Court found that the Fisheries Service had made a clear finding in the related 2016 environmental impact statement that the openings "may affect" NARWs; therefore, the agency did not have discretion to avoid ESA Section 7 consultations. In addition, the D.C. District Court issued an injunction preventing gillnet fishing in the two closed areas until the Fisheries Service has complied with the requirements of the ESA and the Magnuson-Stevens Act for Section 7 consultations, which are required for fishery management plan amendments.⁷⁷ The Draft BiOp, which is the subject of this comment letter, incorporates ESA Section 7 consultation for the Omnibus Essential Fish Habitat Amendment 2.

⁷⁴ 50 C.F.R. § 697.5.

⁷⁵ 16 U.S.C. § 5106.

⁷⁶ *Ctr. for Biological Diversity v. Ross*, 2020 U.S. Dist. LEXIS 62550, 50 ELR 20088 (D.D.C. Apr. 2020);

⁷⁷ *Conservation Law Found. v. Ross*, 422 F. Supp. 3d 12 (D.D.C. 2019); *see also* 16 U.S.C. § 1854(a)(1)(A).

FACTUAL BACKGROUND

I. CHRONOLOGY OF NOTABLE AGENCY ACTIONS TO REDUCE TAKES OF LARGE WHALES IN ATLANTIC FISHERIES

Since its inception in 1996, the ALWTRT has developed a series of regulations to minimize takes of large whales, including NARWs, in U.S. Atlantic fisheries from Florida to the Canadian border.⁷⁸ These regulations were then implemented by the Fisheries Service to create, remove, and modify gear restrictions and to impose time-area management strategies to meet the goals and requirements of the MMPA and ESA.

These actions include two 2002 actions to create dynamic area management (DAM) and seasonal area management (SAM) programs,⁷⁹ a June 2007 rule to expand the Southeast U.S. Restricted Area and modify regulations for the gillnet fishery,⁸⁰ an October 2007 gear modification that eliminated the DAM program, replaced it with gear modifications and expanded SAM areas,⁸¹ and most recently a “trawling up” rule to increase the minimum number of lobster traps that can be fished together on a string or “trawl” of traps in order to reduce the amount of vertical lines in the water.⁸²

II. RESULTS OF PAST EFFORTS AND CURRENT NEED FOR AGENCY ACTION

The ALWTRP significantly changed the management, administration and operations of a range of fisheries in the U.S. Atlantic. These measures had moderate success from the implementation of the ALWTRP in the 1990s through 2010.⁸³ During this time, large whales, particularly NARWs, experienced moderate recovery from a population size in the mid-200s to more than 480 in 2010.⁸⁴

Since 2010, the recovery of NARWs has reversed and the population has now declined for a variety of reasons.⁸⁵ The two main human-caused threats to NARWS – vessel strikes and fishing entanglement – are the main source of the decline, and possible exacerbating causes include prey and ecosystem shifts as a result of climate change and related whale behavior

⁷⁸ ALWTRP Interim Final Rule, 62 Fed. Reg. 39,157 (July 22, 1997). Conservation of minke, humpback, and fin whales is also included in this plan.

⁷⁹ DAM Final Rule, 67 Fed. Reg. 1133 (Jan. 9, 2002); SAM Interim Final Rule, 67 Fed. Reg. 1142 (Jan. 9, 2002).

⁸⁰ SE Modifications Final Rule, 72 Fed. Reg. 34,632 (June 25, 2007).

⁸¹ Broad-based gear modification final rule, 72 Fed. Reg. 57,104 (Oct. 5, 2007).

⁸² Final Rule, 79 Fed. Reg. 36,586 (June 27, 2014).

⁸³ *Team Reaches Nearly Unanimous Consensus on Right Whale Survival Measures*, NOAA Fisheries (last updated May 10, 2019), <https://www.fisheries.noaa.gov/feature-story/team-reaches-nearly-unanimous-consensus-right-whale-survival-measures>.

⁸⁴ *Id.*

⁸⁵ *Id.*

changes.⁸⁶ In 2017, responding to an elevated number of observed NARW deaths, the Fisheries Service declared an Unusual Mortality Event (UME) for NARWs which is currently ongoing.⁸⁷ A UME is defined under the MMPA as “a stranding that is unexpected; involves a significant die-off of any marine mammal population; and demands *immediate* response.”⁸⁸

a. Current Status of the NARW Population

Once abundant in the oceans with a population range between 9,000 to 21,000 animals,⁸⁹ the North Atlantic right whale is currently one of the most endangered large whales on the planet.⁹⁰ Today, only around 360 NARWs remain, with fewer than 80 breeding females.⁹¹

North Atlantic right whales do not reach reproductive maturity until around 10 years of age. They typically only produce one calf after a year-long pregnancy every three to five years.⁹² However, the trauma caused by chronic fishing gear entanglements and other stressors has now increased the calving interval to every 10 years.⁹³ As of February 16, 2021, there have been 15 new calves born for the 2020/2021 breeding season, including five calves from first-time

⁸⁶ Sean A. Hayes, *North Atlantic Right Whales: A Summary of Stock Status and Factors Driving Their Decline*, NOAA Fisheries (Sept. 18, 2018) at 7, https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/September%202018/narw_brief_for_alwtrt_09_18_18.pdf.

⁸⁷ 2017-2019 North Atlantic Right Whale Unusual Mortality Event, NOAA Fisheries, <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2019-north-atlantic-right-whale-unusual-mortality-event> (last updated Aug. 5, 2019).

⁸⁸ 16 U.S.C. § 1421h(6). The MMPA defines “stranding” as “an event in the wild in which - (A) a marine mammal is dead and is - (i) on the beach or shore of the United States; or (ii) in the waters under the jurisdiction of the United States (including any navigable waters); or (B) a marine mammal is alive and is - (i) on a beach or shore of the United States and unable to return to the water; (ii) on a beach or shore of the United States and, although able to return to the water, is in need of apparent medical attention; or (iii) in the waters under the jurisdiction of the United States (including any navigable waters), but is unable to return to its natural habitat under its own power or without assistance.” 16 U.S.C. § 1421h(3).

⁸⁹ Monsarrat S, Pennino MG, Smith TD, et al. (2016) A spatially explicit estimate of the prewhaling abundance of the endangered North Atlantic right whale: *Eubalaena glacialis* Historical Abundance. *Conservation Biology* 30: 783–791. doi: 10.1111/cobi.12664 E.H. Buck, *The North Atlantic Right Whale: Federal Management Issues*. Library of Congress: Congressional Research Service. Report No.: RL30907 (Mar. 29, 2001).

⁹⁰ NOAA Fisheries, *Species Directory – North Atlantic Right Whale*, <https://www.fisheries.noaa.gov/species/north-atlantic-right-whale> (last visited Jan. 28, 2021).

⁹¹ H.M. Pettis et al., *North Atlantic Right Whale Consortium 2020 Annual Report Card*, https://www.narwc.org/uploads/1/1/6/6/116623219/2020narwcreport_cardfinal.pdf (last visited Feb. 16, 2021).

⁹² Scott D. Kraus, *Reproductive Parameters of the North Atlantic Right Whale*, 2 J. Cetacean Res. Manage. (Special Issue) 23 (2001).

⁹³ H.M Pettis et al., *North Atlantic Right Whale Consortium 2018 Annual Report Card*, <https://www.narwc.org/report-cards.html>.

moms.⁹⁴ However, on February 13, 2021 a months-old calf stranded in Florida after being struck by a vessel, making the total number of surviving calves this year 14.⁹⁵

Since the UME began, a total of 33 dead NARWs have been found (21 in Canada and 12 in the United States). The leading cause of death for the UME is “human interaction,” with the two greatest threats being entanglements in fishing gear and vessel strikes.⁹⁶ Additionally, 14 live whales have been documented with serious injuries from entanglements in fishing gear and vessel strikes.⁹⁷ Actual whale mortality is likely much higher than these observed numbers, since observed NARW carcasses only accounted for 36% of all estimated deaths between 1990-2017.⁹⁸

According to the Fisheries Service, the lobster and crab fisheries deploy about 93 percent of the fixed fishing gear in the waters of the U.S. Northeast where NARWs often transit and/or aggregate.⁹⁹ The fixed fishing gear used by these fisheries generally involves vertical buoy lines that connect down to lobster or crab traps/pots on the ocean floor. With over 900,000 buoy lines deployed annually in these two U.S. fisheries alone, these vertical lines in the water column present a significant threat of entanglement for NARWs.¹⁰⁰

Fishing gear lines have been seen wrapped around NARWs' mouths, fins, tails and bodies, which slows them down, making it difficult to swim, reproduce and feed, and can kill them.¹⁰¹ The lines cut into the whales' flesh, leading to life-threatening infections, and are so strong that they can sever fins and tails and cut into bone.¹⁰²

⁹⁴ NOAA Fisheries, North Atlantic Right Whale Calving Season 2021, <https://www.fisheries.noaa.gov/national/endangered-species-conservation/north-atlantic-right-whale-calving-season-2021> (last updated Feb. 17, 2021)

⁹⁵ NOAA Fisheries, North Atlantic Right Whale Calf Stranded Dead in Florida (Feb. 14, 2021), <https://www.fisheries.noaa.gov/feature-story/north-atlantic-right-whale-calf-stranded-dead-florida>.

⁹⁶ NOAA Fisheries, 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> (last updated Jan. 12, 2021).

⁹⁷ *Id.*

⁹⁸ Kraus SD, Brown MW, Caswell H, Clark CW and others (2005) North Atlantic right whales in crisis. *Science* 309: 561–562; *see also* Richard Pace et al., *Cryptic mortality of North Atlantic right whales*, *Conservation Science and Practice* Vol. 3, Issue 2 (Feb. 2, 2021), <https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/csp2.346>.

⁹⁹ NOAA Fisheries, *Fact Sheet - Proposed “Risk Reduction Rule” to Modify the Atlantic Large Whale Take Reduction Plan* (Dec. 31, 2020), <https://media.fisheries.noaa.gov/2021-01/TRTFactSheetRev011221.pdf?null>.

¹⁰⁰ NOAA Fisheries, *Draft Environmental Impact Statement, Regulatory Impact Review, and Initial Regulatory Flexibility Analysis for Amending The Atlantic Large Whale Take Reduction Plan: Risk Reduction Rule – Vol. II, Appendix 5.1, Exhibit 8* (Dec. 30, 2020), https://www.greateratlantic.fisheries.noaa.gov/public/nema/PRD/DEIS_RIR_ALWTRP_RiskReductionRule_Volume2.pdf.

¹⁰¹ NOAA Fisheries, *Young Right Whale Likely Died from Entanglement* | NOAA Fisheries. Available: [/feature-story/young-right-whale-likely-died-entanglement](https://www.fisheries.noaa.gov/feature-story/young-right-whale-likely-died-entanglement). Accessed July 31, 2019.; Rachel M. Cassoff et al., *Lethal Entanglement in Baleen Whales*, 96 *Diseases of Aquatic Organisms* 175 (2011).

¹⁰² Cassoff, *supra* note 101.

DISCUSSION

I. The Draft BiOp and Incidental Take Statement Fail to Prevent the Further Decline of the North Atlantic Right Whale

The Draft BiOp and Incidental Take Statement (ITS) rely heavily on the proposed Risk Reduction Rule and a series of future Fisheries Service actions over the next 10 years related to other fisheries to achieve the goal of preventing further decline of the NARW population.¹⁰³ With only 360 individuals remaining, the species does not have 10 years to wait; viable and effective measures must be put in place immediately as required under the MMPA and ESA.¹⁰⁴

Since the proposed Risk Reduction Rule is utterly inadequate for the task at hand¹⁰⁵ (and may not even be the final suite of risk reduction measures chosen), the Draft BiOp and ITS also fail to meet the requirements of the ESA and MMPA. The MMPA and ESA are intended to work in tandem to protect endangered marine mammals. Congress intended that the decision processes under the two statutes “be coordinated to the maximum extent possible,”¹⁰⁶ and manifested that intention by incorporating the MMPA into the ESA’s incidental take statement requirement.¹⁰⁷ But the Draft BiOp and the proposed Risk Reduction Rule appear to be misaligned in ways that will have serious consequences for the species.

a. The Fisheries Service Must Ensure That Authorization of the Fisheries in Federal Waters Does Not “Jeopardize” the Continued Existence of North Atlantic Right Whales or Result in the Destruction or Adverse Modification of Critical Habitat

The Endangered Species Act and its implementing regulations require that a BiOp include the Fisheries Service’s opinion of whether the authorization of fisheries is “likely to jeopardize the continued existence of [a] listed species or result in the destruction or adverse modification of critical habitat.”¹⁰⁸ The Draft BiOp includes a jeopardy assessment that concludes that the species will continue to decline for the next ten years and likely beyond, but not at a rate higher than it would in the absence of federal fisheries.¹⁰⁹ But the proposed Risk Reduction Rule, the Draft BiOp, and the ITS will enable the authorization of federal and state fisheries that together put over 900,000 vertical lines in the water each year in places where the

¹⁰³ Draft BiOp at 24, Table 2 – Actions to be taken under the Framework.

¹⁰⁴ See, e.g., 16 U.S.C. §§ 1387(g), 1533(b)(7).

¹⁰⁵ See Oceana’s Comment Letter on Proposed Risk Reduction Rule and Draft Environmental Impact Statement (to be filed on March 1, 2021).

¹⁰⁶ See 132 Cong. Rec. H10453-02, 132 Cong. Rec. H10453-02 (1986) (stating the 1986 amendments to the ESA “reflect the changes to the MMPA and ... clarify the relationship between the two statutes. It is intended that the decision processes under the involved statutes be coordinated and integrated to the maximum extent practicable.”).

¹⁰⁷ 16 U.S.C. § 1536(b)(4).

¹⁰⁸ 50 C.F.R. § 402.14(h); see also 16 U.S.C. § 1536(a)(2).

¹⁰⁹ Draft BiOp at 329-343.

whales are known to frequent.¹¹⁰ Since the Draft BiOp relies heavily on the measures in the proposed Risk Reduction Rule to reduce risks to NARWs, and that rule, as proposed, will not adequately reduce the number vertical lines used in the lobster and crab fisheries to protect NARWs, the authorization of those fisheries is certain to jeopardize the continued existence of NARWs.

The Fisheries Service also fails to properly evaluate the impacts on NARW critical habitat of authorizing the lobster and crab fisheries, as the ESA requires.¹¹¹ The Fisheries Service's analysis of such impacts is focused on fishery gear impacts on copepods (food source for NARWs) as well as physical impacts of the gear to the sea bottom.¹¹² But the analysis appears to dismiss the impacts to NARWs of having hundreds of thousands of vertical lines in the water in places where whales congregate. The Draft BiOp states:

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.¹¹³

Given that entanglement in fishing gear is one of the main causes of mortality to right whales, and the reason why the Fisheries Service has been required to take action under the MMPA and ESA, the statement that “whales are free to move through and around these gears” is confounding. If the whales could easily move around the gear, there would be no need for the Draft BiOp or the proposed Risk Reduction Rule. The jungle of vertical lines in the water have a major impact on the NARW's critical habitat, and the Fisheries Service ignores the requirements of the ESA when it concludes that those lines do not adversely impact such habitat.

Furthermore, because the Fisheries Service wrongly concluded that there will be no jeopardy to North Atlantic right whales or adverse modification of critical habitat, it did not propose Reasonable and Prudent Alternatives (RPAs) to avoid such jeopardy or adverse modification, as required by the ESA. The final BiOp should include such RPAs.

¹¹⁰ NOAA Fisheries, *Draft Environmental Impact Statement, Regulatory Impact Review, and Initial Regulatory Flexibility Analysis for Amending The Atlantic Large Whale Take Reduction Plan: Risk Reduction Rule* – Vol. II, Appendix 5.1, Exhibit 8 (Dec. 30, 2020).

¹¹¹ 16 U.S.C. § 1536(b)(3)(A).

¹¹² Draft BiOp at 83-88.

¹¹³ *Id.* at 87 (italics added).

b. By Its Own Terms, the NARW Conservation Framework Established in the Draft BiOp Will Not Meet the Goal of Reducing Take to Acceptable Levels for 10 Years – Until 2030

In the Draft BiOp, the Fisheries Service establishes a novel policy scheduling tool, the NARW Conservation Framework for Federal Fisheries in the Greater Atlantic Region (NARW Conservation Framework), which is apparently intended to meet the MMPA and ESA goals of restoring the stock of NARWs to sustainable levels.¹¹⁴ However, the NARW Conservation Framework appears to be at odds with the MMPA goal, as expressed in the proposed Risk Reduction Rule, of achieving a PBR for NARWs of 0.9 in the near term. The ITS that accompanies the Draft BiOp sets a level of acceptable, annual lethal take of NARWs of zero. The Draft BiOp states that, after the implementation of the measures in the proposed Risk Reduction Rule, mortality and serious injury (M/SI), which is the equivalent of lethal take, will be 2.2 for federal waters overall in 2021 (2.08 in the lobster and Jonah crab fisheries and .125 in gillnet fisheries).¹¹⁵ It appears, then, that the Draft BiOp itself contemplates that on Day One, the lobster and Jonah crab fisheries will exceed their authorized ESA lethal take by 2.08, and the MMPA PBR by 1.9. This approach is inconsistent with the requirements in both the ESA and the MMPA.

In addition to relying on the deficient, proposed Risk Reduction Rule, the NARW Conservation Framework relies on future rulemakings (tentatively scheduled to take place in 2023, 2025, and 2030) to reduce risks to NARWs in federal and state fixed gear fisheries, as well as a review of new data and an assessment of measures taken by Canada to reduce risks to North Atlantic right whales as well as other measures. If all of these pieces come together, in a best case scenario, the NARW Conservation Framework anticipates that M/SI will be reduced to 0.85 (similar to the PBR of 0.9 under the proposed Risk Reduction Rule) *by 2025*.¹¹⁶ Nevermind the fact that the PBR of 0.9 is already out-of-date and should likely be, even as of now, on the order of 0.7; moreover, PBR is likely to continue to decrease if adequate and effective measures are not put in place *now* to reduce the risk of fishing entanglement to NARWs. The Framework contemplates further evaluation and fisheries regulations between 2025 and 2030 to further reduce M/SI.¹¹⁷ So, it appears that through the NARW Conservation Framework, the Fisheries Service's "proposed action" is a 10-year endeavor that takes an extremely relaxed approach to protecting a species that is in urgent need of immediate, forceful measures to prevent further decline. The NARW Conservation Framework should be revised to reflect a more urgent approach to saving the species, and to align with the ESA goal of zero lethal takes and the MMPA goal of achieving a PBR of 0.9 in the near term.

In short, the NARW Conservation Framework lays bare the fact that the agency is not taking risk reduction measures that will come anywhere near meeting the statutory requirements

¹¹⁴ Draft BiOp at 23.

¹¹⁵ *Id.* at 24 (Table 2), 229-230 (Table 59), 328 (Table 79).

¹¹⁶ Draft BiOp at 24 (Table 2).

¹¹⁷ *Id.*

of the ESA and the MMPA. The focus of the Draft BiOp with respect to the lobster and Jonah crab fisheries should be on analyzing authorization of those fisheries under the proposed Risk Reduction Rule. By bringing in so many agency actions (e.g., “batched” fisheries; essential fish habitat amendment) as well as a novel scheduling tool, the NARW Conservation Framework, into the ESA Section 7 analysis, the agency is losing sight of its purpose and, in doing so, utterly failing to adequately address the extinction crisis at hand.

c. The Incidental Take Statement Issued With the BiOp Authorizes an Alarming Number of Sub-Lethal Takes, Which Will Significantly Impair the Recovery of the Species

To meet the ESA’s requirement and its court-ordered obligations, the Fisheries Service issued an ITS establishing the levels of lethal and non-lethal take of NARWs.¹¹⁸ With regard to lethal take, as noted above, the level was set as zero, although the Fisheries Service notes that it may amend that level following the issuance of incidental take authorizations under Section 101(a)(5)(E) of the MMPA. With regard to non-lethal take, however, the Fisheries Service proposes to allow average annual take over a five year period of 11.04% of the species, which amounts to approximately *40 takes per year* assuming a stock of approximately 360 whales. As the Draft BiOp itself notes, sub-lethal takes can have serious consequences:

It is important to note that whales may not die immediately from a vessel strike or entanglement from fishing gear but may gradually weaken or otherwise be affected so that further injury or death is likely (Hayes et al. 2018a). The 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).¹¹⁹

By way of example, the Draft BiOp mentions but does not even attempt to analyze the impacts of weak rope, which plays a key role in the agency’s preferred suite of proposed risk reduction measures.¹²⁰ Heavy reliance on weak rope, which is designed to break under the 1,700 pound force of an adult NARW *but not for juveniles and calves*, seems foolhardy at best in light of the limited testing that has been done to date. It is entirely plausible and even predictable that both lethal and sub-lethal takes are likely to occur due to weak rope. The failure of the Draft BiOp to assess takes due to weak rope or to propose a viable way to monitor and account for these takes is a clear abrogation of ESA requirements. Moreover, it begs the question of how the agency will monitor these “takes” that by design are likely not observable by sight but still must be accounted for as part of the triggering mechanism for ESA Section 7 consultations to reduce impacts of the lobster and crab fisheries on the species.

The Draft BiOp also notes that “[d]uring the first 10 years of the proposed action, the operation of the federal fisheries is likely to contribute to decreased calving rates due to the

¹¹⁸ *Id.* at 390; *see also id.* at 392 (Table 81).

¹¹⁹ *Id.* at 146.

¹²⁰ Draft BiOp at 25-26.

sublethal effects.”¹²¹ A further reduction in calving can have serious impacts on an endangered species that is already facing reduced calving rates; a population cannot recover if the number of births do not outweigh the number of deaths. Given the direct causal nexus between sub-lethal take and whale mortality and reduced fecundity, it is astonishing that the Fisheries Service sees fit to authorize such a high level of sub-lethal take. Based on the Fisheries Service's own scientific sources, it is safe to assume that some percentage of sub-lethal take results in death, so to authorize 40 such takes per year is likely the equivalent of authorizing at least several lethal takes. In fact, as a recent study shows, between 1990-2017, fishing gear entanglement accounted for the vast majority of serious injuries (87%) to NARWs, but only 49% of mortality in examined NARW carcasses. Thus, there is a pattern of entangled NARWs being more likely to die without ever having a body recovered.¹²² Here again, the Fisheries Service is violating its obligations under the ESA and MMPA to protect NARWs by turning a blind eye to the very real risks to NARWs posed by sub-lethal takes due to entanglement in fishing gear.

d. The Reasonable and Prudent Measures and Terms & Conditions Proposed in the BiOp Will Do Little to Prevent the Further Decline of NARWs

Reasonable and prudent measures (RPMs) and the related terms and conditions (T&Cs) are supposed to reduce the impact of incidental take; however, the RPMs and T&Cs offered up by the Fisheries Service in the Draft BiOp are utterly insufficient. Even worse, the RPMs and T&Cs seem to reflect the Fisheries Service's admission that the measures it has proposed to reduce entanglement risk are highly unlikely to achieve the stated goals, as required under the ESA and the MMPA. The RPMs proposed in the Draft BiOp to minimize impacts on large whales and other species are a grab bag of vague measures that will do little to prevent the further decline of NARWs. These measures, discussed below, appear to be geared more toward preserving the status quo and conserving agency resources than protecting endangered species.

1. Gear Research (RPM 1)

RPM 1 involves the development of a “Roapmap to Ropeless Fishing” within a year of the final BiOp; this RPM is nothing more than a planning exercise. This agency action does nothing to address the immediate need to protect endangered species, including NARWs, as required by the ESA and MMPA.

The Fisheries Service's offer of continued support for whale scarring research to estimate the number and severity of entanglements is a brazen admission by the Fisheries Service that the measures in the proposed Risk Reduction Rule and the related NARW Conservation Framework are wholly inadequate. The Fisheries Service must not violate the ESA and MMPA by permitting life-threatening takes from entanglements in fishing gear to continue, while sitting back and promising to document the steady decline of the species.

¹²¹ *Id.* at 338.

¹²² Richard Pace et al., *Cryptic mortality of North Atlantic right whales*, Conservation Science and Practice Vol. 3, Issue 2 (Feb. 2, 2021), <https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/csp2.346>

2. Ecological Studies (RPM 2)

In RPM 2, the Fisheries Service is merely promising to conduct additional review rather than to require immediate action that will effectively reduce “take.” While continuing to review the best available scientific data is not only important but required under the law,¹²³ the Fisheries Service already has sufficient information to understand the threat that fishing gear entanglement poses to endangered species such as NARWs and must act on that information to protect the species immediately.

3. Handling (RPM 3)

RPM 3 involves *ex post facto* instructions for what to do once a NARW or other endangered species is bycaught or entangled in fishing gear. This RPM is yet another unabashed admission of the Fisheries Service’s failure to propose measures that will *prevent* entanglement from occurring in the first place.

4. Monitoring 1 (RPM 4)

Monitoring and the issuance of an annual report of takes must clearly continue, but RPM 4 does nothing in the immediate term to minimize impacts of entanglements.

5. Monitoring 2 (RPM 5)

As to RPM 5, here again, continuing to monitor post-interaction mortality does nothing in the immediate term to minimize the impacts of entanglements.

In essence, the RPMs and T&Cs instruct commercial fisheries to continue what they have been doing and hope for a more favorable outcome. If the final BiOp is revised to find jeopardy and include RPAs, then, at a minimum, it should include more forceful, well-defined and actionable RPMs that will fulfill the ESA and MMPA requirements of minimizing the incidental take of right whales.

e. The ESA Section 7 Consultation Process Must be Reinitiated if the Take Monitoring Detailed in the BiOp Reveals that Authorized Take Levels Are Being Exceeded

The Draft BiOp details the ongoing monitoring that the Fisheries Service will undertake to determine the levels of entanglement of large whales in fishing gear authorized by the

¹²³ 16 U.S.C. § 1536(a)(2).

agency.¹²⁴ Reinitiation of the ESA Section 7 consultation process, and a new BiOp and ITS are required if such monitoring indicates that the authorized level of takes of NARWs is being exceeded.¹²⁵ Given the significant time and resources that the Fisheries Service and the various stakeholders have invested in the current ESA Section 7 process and the development of the proposed Risk Reduction Rule, Oceana urges the Fisheries Service to take much stronger, more protective emergency measures to protect NARWs now, and avoid the near certain result of having to reinitiate ESA Section 7 consultation in the near future when the next NARW is lost. With lethal takes set at zero (as they should be for NARWs) but not backed up by adequate and effective risk reduction measures, the Fisheries Service is guaranteed to find itself in a never-ending cycle of reinitiation of ESA Section 7 consultation that will only serve to further delay the immediate, emergency response required to save the NARW from further decline into functional extinction.

f. The Draft BiOp Must Be Based on the “Best Scientific and Commercial Data Available”

The Fisheries Service is required to use “the best scientific and commercial data available” in analyzing impacts and formulating the BiOp.¹²⁶ For example, a BiOp must rely on the best available scientific data on the status of the species and analyze how the status of the species would be affected by the proposed action.¹²⁷ The models used to support the Draft BiOp, including the predictive modeling of the NARW population,¹²⁸ do not adequately address significant uncertainties, require clarifications to be fully understood, and overall require strengthening of analyses.¹²⁹ As one peer reviewer aptly noted, “the conclusions and interpretations could be much better supported than they currently stand”; model validation and testing “are required in order for the scientific conclusions and interpretations included in the report to be compelling and useful in the context of informing the Section 7 formal consultation.”¹³⁰ In a recent panel discussion evaluating the models underlying the proposed Risk Reduction Rule and the Draft BiOp, a team of experts from the Atlantic Scientific Review Group opined that “(g)iven uncertainties in model/data implementation, the agency is likely overestimating the ability of the [NARW] stock to recover. Models at the moment may not be sufficiently precautionary.”¹³¹ Oceana will be submitting an expert opinion with its comment letter on the proposed Risk Reduction Rule and the Draft Environmental Impact Statement on March 1, 2021, which maintains that these models are not sufficiently precautionary and do not

¹²⁴ Draft BiOp at 398.

¹²⁵ 50 C.F.R. § 402.16.

¹²⁶ 50 C.F.R. § 402.14(g)(8).

¹²⁷ 50 C.F.R. § 402.14(g)(8), (h)(2).

¹²⁸ Daniel W. Linden (NOAA/NMFS/GARFO), Population projections of North Atlantic right whales under varying human-caused mortality risk and future uncertainty (Jan. 6, 2021).

¹²⁹ See, e.g., Wayne Getz, Independent Peer Review of NMFS Study and Report on Predictive Modeling of North Atlantic Right Whale Population (May 2020).

¹³⁰ New Peer Review for “Predictive Modeling of North Atlantic Right Whale Population” (May 2020).

¹³¹ ASRG Meeting Summary Notes, (Feb. 12, 2021).

incorporate the best scientific and commercial data available.¹³² Oceana urges the agency to review this expert opinion for purposes of the BiOp as well.

g. The Draft BiOp Must Include Consideration of Cumulative Effects of All Human Activities

As the Draft BiOp and proposed Risk Reduction Rule make clear, NARWs are subject to a variety of hazards from human activity in the United States and elsewhere, with gear entanglement and vessel strikes being the most serious. But the Draft BiOp barely accounts for other activities when determining an acceptable level of take of NARWs, and instead acknowledges their existence and proceeds to allow a level of take that will ensure the continued decline of the species. For example, the Draft BiOp appears to put a significant burden on Canada to reduce risks to whales, such that if Canada does not enact significant measures equivalent to the U.S. measures laid out in the agency's novel policy scheduling tool, the NARW Conservation Framework proposed in the Draft BiOp, the species will continue to its inexorable decline.¹³³ The Draft BiOp states that "[t]he cumulative effect of other stressors, including Canadian fisheries and U.S. and Canadian vessel strikes must be removed or abated or this species will reach a tipping point where recovery is no longer possible."¹³⁴ Rather than hope for bold action by others to prevent the extinction of the species, the Fisheries Service should assume that other measures to protect NARWs will be limited, and take bold measures itself to immediately reduce take levels.

CONCLUSION

In light of Oceana's interests in protecting NARWs from entanglement in fishing gear, Oceana appreciates the opportunity to provide comments on the Draft BiOp. Oceana believes that the Draft BiOp fails to meet the requirements of the ESA as well as the MMPA. Specifically, the Draft BiOp fails to adequately evaluate the impacts of the authorized fisheries on endangered and depleted NARWs and fails to provide Reasonably Prudent Measures that will prevent the further decline of the species. The Draft BiOp is also misaligned with the Fisheries Service's proposed Risk Reduction Rule, and thus fails to satisfy the Fisheries Service's obligation to align its rulemakings under the ESA with the requirements of the MMPA.

In order to correct the inadequacies of the Draft BiOp, Oceana urges the Fisheries Service to take the following actions:

- specify measures that will adequately and effectively reduce risks to NARWs *now* (not 10 years from now as proposed in the NARW Conservation Framework) to prevent the further decline of the species;

¹³² See Expert Opinion filed with Oceana's Comment Letter on the Proposed Risk Reduction Rule and the Draft Environmental Impact Statement (Mar. 1, 2021) (available upon request)

¹³³ Draft BiOp at 341.

¹³⁴ *Id.* at 342.

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- account for the notable impact on critical NARWs habitat caused by the presence of hundreds of thousands of vertical trap/pot lines;
- use “the best scientific and commercial data available” to conduct analysis of impacts to NARWs;
- reduce the number of sub-lethal NARW takes authorized in the fishery; and
- account for the cumulative effects on NARWs of vessel strikes and other human activities, including impacts in Canadian waters.

AND, in the interim . . .

- take emergency measures immediately using authority under the ESA, MMPA, and the MSA to significantly reduce the impact of fishing gear entanglement on NARWs (e.g., dynamic management areas).

We appreciate the opportunity to provide input and thank you for your time. We will continue to be engaged in this process moving forward.

Sincerely,



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