The Honorable Gina Raimondo
Secretary of Commerce
U.S. Department of Commerce
1401 Constitution Ave., NW
Washington, DC 20230

July 22, 2021

Dear Secretary Raimondo:

Enclosed is a petition for rulemaking signed by The Pew Charitable Trusts, Environment America, Environment Massachusetts, Georgia Wildlife Federation, and One Hundred Miles that requests immediate implementation of interim regulations to protect North Atlantic right whales from entanglement off New England's coast. These regulations are necessary and required by the mandates and authorities of the Marine Mammal Protection Act (MMPA), the Endangered Species Act (ESA), the Magnuson-Stevens Fishery Conservation and Management Act (MSA), and the Administrative Procedure Act. The Pew Charitable Trusts filed a substantially similar petition for emergency and permanent rulemaking one year ago on June 18, 2020 that was not considered and responded to as required by law. Given the inadequacy of the measures that NOAA Fisheries has indicated will be included in the long-delayed final rule amending the Atlantic Large Whale Take Reduction Plan ("ALWTRP"), and the lengthy timeline for implementing those measures likely to stretch to well over one year from now, the MMPA, ESA, and MSA plainly demand that emergency action be taken immediately to protect right whales while fully effective and legally compliant rules for the fishery are developed and implemented.

Leading scientists have concluded that right whales will be functionally extinct in the near future – during our lifetimes – unless effective measures are put in place now to protect them. If action is not taken now, it is likely that the North Atlantic right whale will be the first large whale in the Atlantic to go extinct in modern history.

The most recent population estimate is that there were 356 individual right whales alive at the end of 2019, and only approximately 70 breeding females. Beginning in 2017 when NOAA Fisheries declared that the current unusual mortality event ("UME") started, there have been 50 known right whale mortalities or serious injuries, all caused by either entanglement in fishing gear or vessel strikes. Since Pew filed the last petition in 2020 there have been eight documented deaths or serious injuries, four of which are attributable to entanglement in commercial fishing gear. The vertical ropes connecting traps on the sea floor to surface buoys are recognized as the biggest entanglement threat to right whales, with 95 percent of the vertical lines in East Coast U.S. waters belonging to the lobster and Jonah crab fishery. Clearly and indisputably, an emergency exists and has been ongoing since the start of the UME in 2017. It is the Secretary's responsibility and mandate under the MMPA and other applicable laws to immediately act and reduce risk of entanglement to right whales. This is required by law and is not subject to Secretarial discretion.

NOAA Fisheries has allowed the American lobster and Jonah crab fishery to become far out of compliance with applicable laws. The recently published biological opinion and the proposed amendments to the ALWTRP provide a grossly inadequate plan for protecting right whales, and NOAA Fisheries has implemented no actions at all that would increase protections for the North Atlantic right whale since the UME began in 2017. By contrast, in recent years, Canadian fisheries managers have developed a series of dynamic vertical line closures and appear to have successfully reduced incidents of right whale fishing gear entanglements in Canadian waters. Canada has put new rules in place to protect right whales from vertical lines every year since the emergency started in 2017, while NOAA has not taken any actions to address entanglements in the American lobster fishery since 2014.

Specifically, we request that you designate one year-round closure south of Martha's Vineyard and Nantucket, and five seasonal offshore closures in the Gulf of Maine in which the use of vertical lines in the American lobster and Jonah crab fisheries is prohibited. Targeted vertical line closures where whales congregate and interact with heavy, lethal fishing gear are the fastest and most effective management tool available to prevent the unlawful deaths and likely extinction of the North Atlantic right whale. The proposed areas have been scientifically identified as posing the greatest risk of entanglement to the critically endangered North Atlantic right whale. They are based on NOAA Fisheries' analysis of commercial fishing data showing where the riskiest gear is used, and recent science indicating where and when right whales, and their preferred prey *Calanus finmarchicus,* are present.

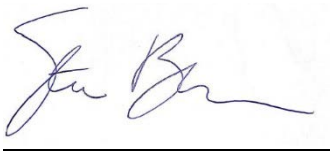
The proposed closures are designed to afford the greatest protections for right whales, while minimizing the impact on fishermen. For example, in the proposed closure south of Martha's Vineyard and Nantucket, gear *density* is low or moderate, but the *severity* of injuries by gear is high. In Maine, the vast majority of lobster landings come from inshore waters where right whales are not frequently seen. The requested closures are further offshore, in areas where heavier, more lethal gear is used. According to statistics from the state of Maine, **76 percent of Maine fishermen never fish as far offshore as the nearshore borders of the closest proposed seasonal closure**. Thus, while NOAA Fisheries develops an improved plan to transition the New England lobster and crab fishery to gear that reduces risk to right whales, these interim measures can protect the species while affecting a relatively small percentage of lobstermen in the region. Interim rules can bridge the gap between now, when whales are present in U.S. waters and constantly face the risk of entanglement, and when a new and more effective final rule can be implemented to stem these injuries and deaths, in 2022 or beyond.

As the petition shows, a simple reading of the MMPA, ESA, and MSA make it clear that the Secretary is required to immediately implement emergency regulations to protect right whales until an effective and legally compliant permanent rule is implemented on the water. Doing so will substantially reduce the risk of entanglement in trap and pot fisheries in the United States and provide this iconic species a fighting chance to avoid extinction.

Sincerely,

Peter Baker
Director, Northern Oceans Conservation
The Pew Charitable Trusts

Ben Hellerstein
State Director
Environment Massachusetts



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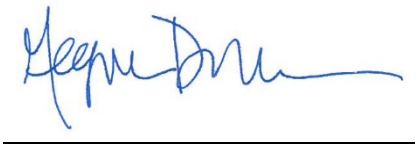

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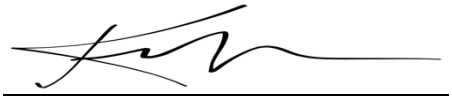

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Petition for Interim and Permanent Rulemaking
The Pew Charitable Trusts • Environment America • Environment Massachusetts • Georgia Wildlife Federation • One Hundred Miles

The Honorable Gina Raimondo
Secretary of Commerce
U.S. Department of Commerce
1404 Constitution Ave., NW
Washington, DC 20230

July 22, 2021

Re: Petition for Interim and Permanent Rulemaking Implementing Closures to Vertical Line Trap/Pot Gear Fishing and Related Measures Necessary to Protect North Atlantic Right Whales

Dear Secretary Raimondo,

The Pew Charitable Trusts, Environment America, Georgia Wildlife Federation, and One Hundred Miles hereby petition the Secretary of Commerce pursuant to Section 553 of the Administrative Procedure Act ("APA").[1] The Petitioners request that the Secretary carry out her mandatory duty under the Marine Mammal Protection Act ("MMPA"), as well as use her authority under the Endangered Species Act ("ESA") and Magnuson-Stevens Fishery Conservation and Management Act ("MSA"),[2] to immediately promulgate interim regulations to protect the North Atlantic right whale from the unlawful entanglements that are killing and seriously injuring right whales in the American lobster and Jonah crab fisheries, and initiate a rulemaking to make those regulations permanent.[3] North Atlantic right whales are listed as endangered under the ESA,[4] and need immediate help to ensure their survival. NOAA Fisheries characterizes the right whale population as "extremely low," and declining due to excessive human-caused deaths and serious injuries since 2011.[5] The Agency declared an "unusual mortality event" beginning in 2017 that has resulted in an extraordinary number (50) of right whales removed from the population through confirmed deaths (34) and documented serious injuries (16).[6] Entanglement in commercial fishing gear remains the leading cause of right

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[1] Administrative Procedure Act, 5 U.S.C. § 553(e).
[2] Endangered Species Act 16 U.S.C. § 1533(b)(7)("ESA"); Marine Mammal Protection Act, 16 U.S.C. §§ 1371(a)(5)(E)(iii), 1387(g)("MMPA"); Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1855(c)(1)("MSA").
[3] This Petition is submitted to Gina Raimondo in her official capacity as Secretary, the chief officer of the United States Department of Commerce ("Secretary"). The Department is charged with overseeing the proper administration and implementation of the MMPA, ESA, and MSA, including the provisions of these Acts at issue in this rulemaking petition requiring the protection and conservation of marine mammals, endangered species, and fisheries. The Secretary has delegated responsibility to ensure compliance with these Acts to the National Oceanic and Atmospheric Administration ("NOAA"), a Department of Commerce agency, which in turn has sub-delegated that responsibility to the National Marine Fisheries Service ("NMFS"), a Commerce agency over whom NOAA maintains supervisory responsibility.
[4] NOAA Fisheries. Species directory. North Atlantic right whale.
[5] NOAA Fisheries. 2020 Draft North Atlantic right whale (*Eubalaena glacialis*) Western Atlantic Stock Assessment (August 2020 Draft), pp. 46, 51-52, 63.
[6] NOAA Fisheries. 2017-2021 North Atlantic Right Whale Unusual Mortality Event (website last visited July 21, 2021). The MMPA defines an Unusual Mortality Event (UME) as "a stranding that is (A) unexpected; (B) involves

whale deaths and serious injuries.[7] Although there is an ongoing rulemaking and a recent biological opinion intended to address the impacts to right whales from the American lobster and Jonah crab fisheries, these efforts are insufficient to protect right whales and help them recover as required by law. Leading right whale scientists agree with this conclusion.[8] Further, the timeline for implementing even the inadequate measures contained in the rulemaking is likely to stretch to well over one year from now, while the biological opinion unlawfully lays out a ten-year plan to finally bring the fishery into compliance with the law.[9] There is no question that emergency action is mandated by law given these circumstances. The rulemaking measures requested below will provide significant interim protections to right whales until long-term regulatory solutions are developed. These measures will reduce entanglement risk to right whales and facilitate the transition to ropeless fishing, which, when fully implemented, will nearly eliminate the risk of large whale entanglements while still supporting an economically viable fishing industry.

I. INTRODUCTION

The Pew Charitable Trusts filed a substantially similar petition for emergency and permanent rulemaking more than one year ago on June 18, 2020 ("2020 Petition").[10] The 2020 Petition has not been considered and responded to as required by law. On February 17, 2021, Pew received a letter from the National Marine Fisheries Service's Acting Assistant Administrator for Fisheries recommending that we notify the Secretary if we still believe it necessary for the Secretary to consider our Petition after the current rulemaking ("Proposed Rule")[11] to modify the Atlantic Large Whale Take Reduction Plan ("ALWTRP") is complete ("Final Rule").[12] Since the 2020 Petition was filed on June 18, 2020, the U.S. government has not implemented any meaningful

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a significant die-off of any marine mammal population; and (C) demands immediate response." A serious injury designation indicates a whale is likely to die from those injuries (although it was alive at its last sighting). Id.

[7] NOAA Fisheries. 2017-2021 North Atlantic Right Whale Unusual Mortality Event; NOAA Fisheries. 2020 Draft North Atlantic right whale (*Eubalaena glacialis*) Western Atlantic Stock Assessment (August 2020 Draft), pp. 51-55.

[8] Letter from Scientists to Ben Freidman commenting on the Proposed Rule (Feb. 25, 2021). This letter is signed by 27 scientists with "extensive expertise in the biology of large whales, oceanography, and fisheries, and expresses "serious concern" for the Proposed Rule because it "represents a dramatic weakening" of the recommendations offered by the ALWTRT to reduce entanglement risk.

[9] National Marine Fisheries Service, Greater Atlantic Regional Fisheries Office, Protected Resources Division, Biological Opinion, Endangered Species Act Section 7 Consultation on the: (a) Authorization of the American Lobster, Atlantic Bluefish, Atlantic Deep-Sea Red Crab, Mackerel/Squid/Butterfish, Monkfish, Northeast Multispecies, Northeast Skate Complex, Spiny Dogfish, Summer Flounder/Scup/Black Sea Bass, and Jonah Crab Fisheries and (b) Implementation of the New England Fishery Management Council's Omnibus Essential Fish Habitat Amendment 2, Consultation No. GARFO-2017-00031 (May 27, 2021)("2021 BiOp"). This BiOp unlawfully relies upon proposed measures contained in the (still) pending rule and undefined future measures, to reach a "no jeopardy" conclusion.

[10] The Pew Charitable Trusts. Petition for Interim and Permanent Rulemaking Implementing Closures to Vertical Line Trap/Pot Gear Fishing Necessary to Protect North Atlantic Right Whales (June 18, 2020).

[11] National Marine Fisheries Service National Oceanic and Atmospheric Administration, Department of Commerce. 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. 86,878-86,900 (Dec. 31, 2020) ("Proposed Rule").

[12] Letter from Paul Doremus, Acting Assistant Administrator for Fisheries, NOAA Fisheries to Peter Baker, The Pew Charitable Trusts (Feb. 17, 2021).

actions to protect right whales, as it has not since the current "unusual mortality event" ("UME") began in 2017.[13] Further, taking into account the measures that NMFS has now indicated in its May 27, 2021 biological opinion for the American lobster and Jonah crab fisheries ("2021 BiOp")[14] will be included in the forthcoming Final Rule, and the analysis of those measures contained in the draft and final environmental impact statements for the Proposed Rule ("Proposed Rule DEIS" and "Proposed Rule FEIS"),[15] there is no question that the Final Rule and 2021 BiOp will be insufficient to protect right whales and help them recover as required by law. For these reasons, Pew is renewing its request for emergency and permanent rulemaking through this petition. This Petition includes revisions and updates from the 2020 Petition to: 1) include the most current scientific and commercial information available, 2) take into account the measures NMFS indicates will be included in the forthcoming Final Rule and their implementation timeline, and 3) include additional emergency and permanent regulation requests necessary to protect right whales.

The situation for the North Atlantic right whale remains dire and has worsened since we filed the 2020 Petition. In the past 13 months, there have been eight more right whales removed from the population, with four confirmed deaths and four serious injuries, all documented in U.S. waters.[16] Four of the eight causes of death or serious injuries were attributed to entanglement.[17] North Atlantic right whales have been declining in abundance since 2011.[18] Since then, NMFS estimates that approximately 218 North Atlantic right whales have died from entanglements and vessel strikes—"a rate of roughly 24 right whale deaths per year."[19] According to the most recent scientific population estimate, there were only 356 right whales alive at the end of 2019,[20] a staggering 26 percent decline in nearly a decade. Of these, it is estimated that only

[13] NOAA Fisheries. 2017-2021 North Atlantic Right Whale Unusual Mortality Event; 16 U.S.C. § 1421(h)(6).
[14] NMFS Biological Opinion on 10 Fishery Management Plans. Consultation No. GARFO-2017-00031 (May 27, 2021).
[15] National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Dept. of Commerce. Draft Environmental Impact Statement, Regulatory Impact Review, and Initial Regulatory Flexibility Analysis for Amending the Atlantic Large Whale Take Reduction Plan: Risk Reduction Rule. ("Proposed Rule DEIS"), November 2020; National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Dept. of Commerce. Final Environmental Impact Statement, Regulatory Impact Review, and Initial Regulatory Flexibility Analysis for Amending the Atlantic Large Whale Take Reduction Plan: Risk Reduction Rule. ("Final Rule DEIS"), June 2021.
[16] NOAA Fisheries. 2017-2021 North Atlantic Right Whale Unusual Mortality Event.
[17] Id.
[18] NOAA Fisheries. (October 26, 2020). Statement on the Preliminary North Atlantic Right Whale Annual Population Estimate. Communication from NOAA Fisheries to Atlantic Large Whale Take Reduction Team ("TRT").
[19] Id
[20] Pettis, et al. (2021). North Atlantic Right Whale Consortium 2020 Annual Report Card. ("2020 Annual Report Card") p. 4.

approximately 70 reproductively active females remain,[21] the most crucial demographic for reproduction.[22]

Since the current emergency began with start of the UME in 2017, entanglements and vessel strikes have removed a known 50 right whales from the population. This includes 34 confirmed dead whales and 15 seriously injured whales that are likely to die from those injuries.[23] As NMFS states "given there are less than 400 individual North Atlantic right whales remaining, these 50 individuals in the UME represent more than 10% of the population, which is a significant setback to the recovery of such a critically endangered species."[24]

All right whale deaths, where the cause of death is known, are the result of entanglement in fishing gear or vessel strikes,[25] and entanglement in commercial fixed fishing gear is the greatest threat to the species.[26] A 30-year study of right whale images from 1980 to 2009 show that nearly 83 percent of whales had been entangled at least once,[27] and nearly 60 percent had been entangled more than once.[28] Analysis of data from 2003 to 2018 show that nearly 58 percent of known right whale deaths are caused by entanglements,[29] and the data from 2019 through today confirms that entanglement continues to be the greatest threat to the species.[30]

In the U.S., the most critical threat of entanglement for right whales is from the vertical ropes connecting traps on the sea floor to surface buoys in the American lobster and Jonah crab fisheries.[31] (In these fisheries, a fishing vessel can operate under a single permit to catch either species. Some vessels and/or some trips target lobster, some target crab, and both use trap and

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[21] The Guardian (Oct. 30, 2020). Humans pushing North Atlantic right whale to extinction faster than believed.. ("New modeling says just 356 remain – down from 409 last year. The 70 breeding females could disappear in 10-20 years.); CBC News (Oct. 26, 2020). New population estimate suggests only 356 North Atlantic right whales left. (paraphrasing Phillip Hamilton Senior Scientist at the Anderson Cabot Center for Ocean Life at the New England Aquarium, "there are roughly 70 breeding females in the population. He said low birth rates coupled with whale deaths means there could be no females left in the next 10 to 20 years."); Hamilton, P., Senior Scientist, New England Aquarium, Personal Communication, (Dec 2020). "The number of "presumed alive" calving females photographed in the last six years is 82, however this number is problematic as it is showing a pattern of overestimating the number of calving females - as some are being lost each year to entanglement, ship strikes, etc. The number of NARW calving females photographed alive in the last three years is 68 and is a more firm and current number. There are also 52 adult females that have not calved yet of which some will calve and some won't."; *see also* Annual Report Card at p. 6 stating that in 2020 there were approximately 77 available cows.

[22] Sharp et al. (2019). Gross and histopathologic diagnosis from North Atlantic right whale *Eubalaena glacialis* mortalities between 2003 and 2018. *Dis Aquat Org,* Vol. 135: 1-31; at 2.

[23] NOAA Fisheries. 2017-2021 North Atlantic right whale unusual mortality event, (website last visited July 21, 2021).

[24] Id.

[25] Sharp, et al. (2019); NOAA Fisheries, 2017-2021 North Atlantic right whale unusual mortality event. A single perinatal mortality was noted in 2020).

[26] NOAA Fisheries, 2017-2021 North Atlantic right whale unusual mortality event.

[27] Knowlton, et al. (2012). Monitoring North Atlantic right whale *Eubalaena glacialis* entanglement rates: a 30 yr retrospective. Mar. Ecol. Prog. Vol. 466: 293-302, at 297.

[28] Id.

[29] Sharp, et al. (2019).

[30] NOAA Fisheries, 2017-2021 North Atlantic right whale unusual mortality event. Of the 16 deaths and serious injuries where the cause has been identified, 8 were due to entanglement, 7 to vessel strikes, and 1 was perinatal.

[31] NOAA. Right Whale Incident Data 2010-2018 (March 2019).

pot gear with persistent vertical buoy lines. Hereinafter, we refer to the fisheries collectively as the "American lobster fishery," and may also specify Jonah crab to account for times and places where crab is targeted.) It is estimated that 95 percent of the vertical lines in East Coast U.S. waters belong to this fishery,[32] which has operated for years in the same areas of the ocean where right whales are present with an out-of-date biological opinion and no incidental take statement, both of which are required by the ESA in order for fisheries that take (harm, injure, or kill) an endangered species.[33] Although NMFS recently issued a new biological opinion for the fishery that includes updated scientific information and a purportedly legal incidental take statement, this incidental take statement only authorizes a limited number of non-lethal takes of right whales.[34] No lethal takes of right whales are authorized despite the 2021 BiOp itself recognizing that the fishery will continue to kill and seriously injure right whales even after the management measures contained in the current (still pending) rulemaking are implemented, at levels many times above the maximum rate allowed for the fishery by the MMPA.[35]

According to NMFS' own analysis, over the past 20 years the level of mortality and serious injury from documented entanglements of right whales has exceeded what the agency estimates the population can sustain in every year except one (2013).[36] The Agency acknowledge that the estimated level of *known* mortality and serious injury from entanglement of right whales in U.S. fisheries in recent years is at least triple the agency threshold for the species.[37] Worse, these known deaths represent only a fraction of the true death toll.[38] A recent scientific paper co-authored by the Northeast Fisheries Sciences Center's leading right whale population biologist concluded that from 2010 to 2017, only 29 percent of right whale mortalities were detected, and that "cryptic [i.e., unobserved] deaths due to entanglements significantly outnumbers cryptic deaths from vessel collisions or other causes."[39] There is no question that adult right whales and young whales are dying from anthropogenic causes at an alarming rate.[40] Recent scientific papers have also verified that the species' decline is due to both deaths and the sub-lethal impacts of entanglement that have contributed to poor body condition and shorter and smaller whales, leading to lower birth rates and higher risk of lethal entanglements.[41] If mitigation efforts are not

[32] National Marine Fisheries Service National Oceanic and Atmospheric Administration, Department of Commerce. 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. 86,878-86,900 (Dec. 31, 2020) ("Proposed Rule").
[33] NMFS. Biological Opinion. Endangered Species Act Section 7 Consultation on the Continued Implementation of Management Measures for the American Lobster Fishery, Consultation No. NER-2014-11076 (July, 2014)("2014 BiOp"); *See also, CBD v. Ross*, No. 118-cv-112, slip op. at 19, (D.D.C., April 9, 2020).
[34] 2021 BiOp at 389-91.
[35] 2021 BiOp at 390-91 ("At this time, we are authorizing zero lethal take of [right] whales."); Id. at 477-79 ("Therefore, … we are committing to use our authorities to implement measures to further reduce entanglements and M/SI in federal fisheries, reducing M/SI from an annual average of 2.69 *after* the implementation of the proposed rule to no more than 0.136" over a 10-year period.")(emphasis added); *see infra* Section III.A.3.
[36] NOAA Fisheries. Team Reaches Nearly Unanimous Consensus on Right Whale Survival Measures (April 26, 2019).
[37] April 5, 2019, Letter from Colleen Coogan of NMFS to the Atlantic Large Whale Take Reduction Team.
[38] Pace, et al. (2021). Cryptic mortality of North Atlantic right whales. *Conservation Science and Practice*, 3: 1-8
[39] Id.
[40] Sharp, et al. (2019).
[41] Id.

implemented, human activities will cause an "inhumane and certain extinction of this species in the all-too near future."[42]

The MMPA states that the Secretary "shall use" emergency authority to protect an endangered species when the level of incidental mortality or serious injury ("MSI") from an authorized commercial fishery has resulted, or is likely to result, in an impact that is "more than negligible" on that species.[43] Despite efforts by the region's Atlantic Large Whale Take Reduction Team ("TRT") over the past 25 years, the annual average level of documented MSI since 2012 together with the extraordinary number of deaths occurring now as part of the UME declared in 2017, far exceeds the MMPA's legal threshold requiring the Secretary to take emergency action under the MMPA.[44] The ESA also gives the Secretary broad authority to protect endangered species[45] and specifically authorizes the Secretary to employ emergency action where there is "a significant risk to the well-being" of the listed species.[46] Finally, the MSA provides the Secretary with broad authority to address emergency situations in a U.S. fishery that are negatively impacting an endangered species or a protected marine mammal.[47] Given the steep downward trend in the right whale population resulting from human-caused mortality,[48] imminent threat of additional entanglements in the American lobster and Jonah crab fisheries,[49] and the insufficient current rulemaking that will take one year or longer before any changes at all are implemented on the water protecting right whales,[50] the Secretary must act immediately to implement interim regulations in order to dramatically reduce the risk of entanglement of right whales in vertical line trap/pot gear, and help prevent the extinction of this iconic species.

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[42] Id.
[43] 16 U.S.C. § 1371(a)(5)(E)(iii).
[44] Letter from Colleen Coogan of NMFS to the Atlantic Large Whale Take Reduction Team (April 5, 2019); 16 U.S.C. § 1371(a)(5)(E)(iii).
[45] 16 U.S.C §§ 1533(b)(7), 1538(a)(1)-(2).
[46] 16 U.S.C. § 1533(b)(7).
[47] 116 U.S.C. §§ 1854(a), (b), 1855(c), (d).
[48] Pettis, H.M., et al. (2021). North Atlantic Right Whale Consortium 2020 Annual Report Card. ("2020 Annual Report Card") p. 4.
[49] TRT Meeting Risk Reduction Tool PPT (April 20, 2019); January 31, 2020. Center for Coastal Studies. *Entangled right whale resighted; conditions complicate disentanglement response*; NOAA Fisheries (Feb. 28, 2020). *Emaciated North Atlantic Right Whale Spotted Entangled off Nantucket*.
[50] Immediately preceding this Petition, NMFS disclosed another intended delay in the estimated publication of a proposed rule for public comment from July 2020 until late summer or early fall of 2020. This disclosure contained in a court filing also indicated, they anticipated a final rule would be complete by May 31, 2021. As acknowledged by NMFS, with all rulemaking, additional time is required for NMFS to analyze the comments, develop a final rule, get all required government approvals, respond to all responsive comments on the proposed rule, and then promulgate a final rule. *See*; United States District Court of the District of Columbia. Case: 1:18-cv-00112-JEB., Doc 111, Federal Defendants' Remedy Response Brief at 10-11 and Id. Doc 111-1, Fourth Declaration of Jenifer Anderson at ¶¶ 8-13. In addition, in the past the Secretary has provided for a one-year implementation timeframe for industry to implement changes in the industry such as gear modifications. *See*: 79 Fed. Reg. 36585 (2014); and 72 Fed. Reg. 57103 (2007).

Specifically, petitioners request that the Secretary:

1. **Immediately promulgate interim regulations under the MMPA,[51] ESA,[52] and MSA[53] to establish closures for vertical line trap/pot gear fishing in the American lobster and Jonah crab fisheries,[54] necessary to prevent the continued unlawful take of North Atlantic right whales, as follows and described in detail in Section IV below:**

    (1) Immediately establish a Southern New England Year-Round Closure to all vertical line trap/pot gear fishing in the high right whale density area south of Martha's Vineyard and Nantucket, in the northern half of Statistical Areas 526 and 537;
    (2) Immediately establish five Gulf of Maine Right Whale Seasonal Closures in waters south and east of Maine that are closed to all vertical line trap/pot gear fishing;
    (3) Immediately establish Ropeless Only Fishing Areas allowing fishing inside areas closed to vertical line trap/pot gear fishing with ropeless gear, and;
    (4) Immediately require increased aerial surveys and acoustic monitoring in right whale critical habitat, including the areas inside and surrounding all existing and interim vertical line trap/pot gear closures.

2. **Exercise her authority under the APA, MMPA, ESA, and MSA[55] to initiate rulemaking to:**
    a. **Make the petitioned-for interim regulations described above permanent;**
    b. **Implement a dynamic closure system for vertical line trap/pot gear fishing to supplement year-round and seasonal closures or serve as an effective alternate to seasonal closures.**

II. STATUTORY AUTHORITY FOR THIS PETITION

[51] Marine Mammal Protection Act, 16 U.S.C. §§ 1361-1389.
[52] Endangered Species Act, 16 U.S.C. §§ 1531-1544.
[53] Magnuson Stevens Fisheries Management and Conservation Act ,16 U.S.C. §§ 1801-1884.
[54] It is intended that fishing for all species using vertical line trap/pot gear through American Lobster and Jonah crab permits are covered by this petition. Fishing with non-vertical line trap/pot gear, commonly referred to as "ropeless" gear, would not be covered under this petition, and could be permitted in the proposed closed areas. The American lobster and Jonah crab fisheries are managed under a dual state and federal regulatory combination of authorities, whereby the Atlantic States Marine Fisheries Commission ("ASMFC") manages these fisheries in state waters (0-3 nautical miles from shore) pursuant to separate American lobster and Jonah crab fishery management plans, and the National Marine Fisheries Service manages them in federal waters, from 3-200 miles from shore (the Exclusive Economic Zone), under the authority of the Atlantic Coastal Fisheries Cooperative Management Act. Fishermen are able to fish for both species under a single federal or state American lobster permit
[55] 5 U.S.C. § 553; 16 U.S.C. §§ 1533(b)(7), 1371(a)(5)(E)(iii), 1387(g), 1855(c)(1).

The petitioners submit this petition to the Secretary of Commerce pursuant to the Administrative Procedure Act, Marine Mammal Protection Act, Endangered Species Act, and the Magnuson-Stevens Act. [56]

A. Administrative Procedure Act

The APA provides that "[e]ach agency shall give an interested person the right to petition for the issuance, amendment, or repeal of a rule."[57] If such petitions are denied, the agency must provide "a brief statement of the grounds for denial."[58] This right "entitles the petitioning party to a response on the merits of the petition."[59] Agencies must respond to petitions within a reasonable time, to "proceed to conclude a matter presented to it."[60] Accordingly, the Secretary must "fully and promptly consider" all petitions presented to her.[61]

B. Marine Mammal Protection Act

The MMPA was enacted in response to concern that "certain species and population stocks of marine mammals are, or may be, in danger of extinction or depletion as a result of man's activities," and must be "protected and encouraged to develop to the greatest extent feasible."[62] It recognizes that marine mammals are in danger of depletion and that their populations "should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part."[63] To further these goals, the MMPA establishes a moratorium prohibiting the "take" of marine mammals.[64] Under the MMPA, take means "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal,"[65] and applies to both an intentional acts and any "non-intentional or accidental act that results from, but is not the purpose of, carrying out an otherwise lawful action."[66]

The MMPA requires that the Secretary conduct a stock assessment that evaluates the status of a marine mammal population, the fisheries that interact with the population, and assesses human-caused MSI each year.[67] As part of the stock assessment, the Secretary determines the "potential

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[56] The agency also continues to be bound by the requirements of the National Environmental Policy Act (NEPA). "Where emergency circumstances make it necessary to take an action with significant environmental impact without observing the provisions of these regulations, the Federal agency taking the action should consult with the Council [on Environmental Quality] about alternative arrangements. Agencies and the Council will limit such arrangements to actions necessary to control the immediate impacts of the emergency." 40 CFR § 1506.11. In this case, as shown below, emergency action is required to avoid significant environmental impacts affecting the quality of the environment, here the potential extinction of an endangered species, and the agency remains obligated to fulfill its NEPA obligations as part of the permanent rulemaking process.

[57] 5 U.S.C. § 553(e).

[58] 5 U.S.C. § 555(e).

[59] *Fund for Animals v. Babbitt*, 903 F. Supp. 96, 115-116 (D.D.C. 1995).

[60] 5 U.S.C. § 555(b).

[61] *WWHT, Inc. v. F.C.C.*, 656 F.2d 807, 813 (D.C. Cir. 1981).

[62] 16 U.S.C. § 1361(1)(6).

[63] 16 U.S.C. § 1361(2).

[64] 16 U.S.C. § 1371(a).

[65] 16 U.S.C. § 1362(13).

[66] 50 C.F.R. § 229.2.

[67] 16 U.S.C. § 1386(a).

biological removal" ("PBR") for the stock,[68] which is defined as the maximum number of animals (excluding natural mortalities) that may be removed from the population while still allowing the stock to maintain its "optimum sustainable population."[69] Any MSI over PBR is not permitted.[70]

The Secretary is also required to develop a take reduction plan ("TRP") for each "strategic stock" of marine mammals, including ESA-listed species, that interact with a commercial fishery causing "frequent" or "occasional" MSI to the stock.[71] The MMPA provides for only limited exceptions to its prohibition on the take of marine mammals. Among these exceptions is for the "incidental take" of marine mammals in commercial fishing operations, provided such incidental take is explicitly authorized by NMFS and consistent with statutory requirements.[72] To authorize commercial fisheries to take marine mammals that are also listed as endangered under the ESA, the Secretary must ensure that such any incidental MSI will have a "negligible impact" on the species or stock.[73] The MMPA's 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."[74]

Sections 101 and 118 of the MMPA establish conditions requiring the Secretary to take emergency action to reduce the MSI of marine mammals, including endangered marine mammals in commercial fisheries.[75] Under Section 118, if incidental MSI of a marine mammal in a commercial fishery is above PBR, incidental MSI must be reduced below PBR within 6 months.[76] This section also provides that "[i]f the Secretary finds that incidental mortality and serious injury of marine mammals is having, or is likely to have, an immediate and significant adverse impact on a stock or species, the Secretary shall…prescribe emergency regulations to reduce incidental mortality and serious injury in that fishery."[77]

Section 101 provides a more specific emergency action mandate applicable to *endangered or threatened* species. This section provides that if during the course of the commercial fishing season the Secretary determines that the level of incidental MSI from an authorized commercial fishery has resulted, or is likely to result, in an impact that is "more than negligible" on an endangered or threatened marine mammal species or stock, the Secretary "shall use the emergency authority granted under section [118] of [the MMPA] to protect such species or stock, and may modify any permit granted under this paragraph as necessary."[78] In the case of a species for which a take reduction plan is in effect, such emergency regulations shall, consistent

[68] 16 U.S.C. § 1386(6).
[69] 16 U.S.C. § 1362(20).
[70] 16 U.S.C. §§ 1371(f)(2).
[71] 16 U.S.C. §§ 1387(f)(1), 1387(c)(1)(A), 1362(19)(C).
[72] 16 U.S.C. §§ 1371(a)(2), (5)(E), § 1387.
[73] 16 U.S.C. § 1371(a)(5)(E)(di).
[74] 50 C.F.R. § 216.103.
[75] 16 U.S.C. §§ 1371(a)(5)(E)(si), 1387(g).
[76] 16 U.S.C. § 1387(f)(5)(A).
[77] 16 U.S.C. § 1387(g)(1).
[78] 16 U.S.C. §§ 1371(a)(5)(E)(iii); 1387(g).

with such plan to the maximum extent practicable, reduce incidental MSI in that fishery and may remain in effect for up to 270 days.[79]

C. Endangered Species Act

The Endangered Species Act was enacted to "halt and reverse the trend toward species extinction, whatever the cost,"[80] and 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 the purposes of this chapter."[81]

Section 7(a) of the ESA requires the Secretary to conduct inter-agency consultations to ensure that any agency action does not jeopardize the continued existence of any listed species.[82] Such consultation must consider whether authorization of an action "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."[83] Formal consultation must be completed in 90 days, and once consultation is completed, the Secretary is required to produce (within 45 days)[84] a biological opinion ("BiOp") and make a determination regarding whether the action will jeopardize the continued existence of a listed species.[85]

Section 9 of the ESA prohibits the "take" of all endangered species, including right whales, unless specifically authorized.[86] "Take" is defined under the ESA as "harming, harassing, trapping, capturing, wounding, or killing a protected species directly."[87] If a BiOp concludes that a federal agency action will not cause jeopardy but may result in the take of an endangered species, the agency must issue an incidental take statement that specifies an allowable level of take.[88] When the endangered or threatened species is a marine mammal, as is the case here, the Secretary may only authorize incidental take under the ESA if the take also complies with the MMPA.[89]

The ESA also provides the Secretary with explicit authority to take emergency action in situations where there exists an "emergency posing a significant risk to the well-being of any [endangered] species of fish or wildlife or plants."[90] When such an emergency exists, the Secretary may bypass standard ESA and APA rulemaking procedures and issue regulations to

[79] 16 U.S.C. § 1387(g)(1)(A), (3)(B), (4).
[80] *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978).
[81] 16 U.S.C. § 1531(c)(1).
[82] 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(g).
[83] 50 C.F.R. § 402.14(g); 50 C.F.R. § 402.02.
[84] 50 C.F.R. § 402.14(e).
[85] 50 C.F.R. § 402.14(g), (h)(1)-(3).
[86] 16 U.S.C. § 1538(a)(1)(B).
[87] 16 U.S.C. § 1532(19).
[88] 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(g)(7), (i)(1).
[89] 16 U.S.C. § 1536(b)(4)(C); 50 C.F.R. § 402.14(if).
[90] 16 U.S.C. § 1533(b)(7).

remedy the emergency that can remain in effect for up to 240 days while permanent regulations are in process.[91]

D. Magnuson-Stevens Fishery Conservation and Management Act

The MSA was passed to "balance the twin goals of conserving our nation's aquatic resources and allowing U.S. fisheries to thrive,"[92] and courts have established that priority must be given to conservation measures when implementing its provisions.[93] The Secretary of Commerce has a responsibility to "carry out any fishery management plan or amendment approved or prepared by him" in accordance with the MSA.[94] The MSA requires the Secretary to ensure that all fishery management plans comply with not only the requirements of the MSA, but also all other applicable laws.[95] The Secretary may promulgate such regulations, pursuant to APA rulemaking procedures, that may be necessary to carry out this responsibility or to carry out any other provisions of the Act.[96]

The Secretary is authorized to promulgate emergency regulations if an emergency exists within a given fishery.[97] An emergency rule or an interim measure is treated as a fishery management plan amendment for the period it is in effect.[98] Under the MSA, any emergency regulation may remain in effect for up to 366 days.[99] NMFS guidelines explain that an emergency situation in a given fishery:

> (1) Results from recent, unforeseen events or recently discovered circumstances; and
> (2) Presents serious conservation or management problems in the fishery; and
> (3) Can be addressed through emergency regulations for which the immediate benefits outweigh the value of advance notice, public comment, and deliberative consideration of the impacts on participants.[100]

Emergency rulemaking may be initiated if notice and comment rulemaking "would result in substantial damage or loss to a living marine resource" and immediate action is necessary to prevent overfishing or other serious damage to the fishery resource or habitat.[101] As set forth more completely below, the Secretary has a duty under the MSA to grant this petition in order to protect right whales from continued unlawful take in the American lobster fishery.

III. AN EMERGENCY EXISTS, AND THE SECRETARY IS REQUIRED TO USE EMERGENCY AUTHORITY TO PROMULGATE INTERIM REGULATIONS

[91] 16 U.S.C. § 1533(b)(7).
[92] *Oceana, Inc. v. Pritzker*, 26 F. Supp. 3d 33, 36 (D.D.C. 2014).
[93] Nat. Res. Def. Council v. Daley, 209 F.3d. 747, 753, (D.C. Cir. 2000).
[94] 16 U.S.C. § 1855(d).
[95] 16 U.S.C. § 1854(a), (b).
[96] 16 U.S.C. § 1855(d).
[97] 16 U.S.C. § 1855 (c)(1).
[98] 16 U.S.C. § 1855 (c)(3), (d).
[99] 16 U.S.C. § 1855 (c)(3), (c)(3)(B), (d).
[100] 62 Fed. Reg. 44421-42 (Aug. 21, 1997).
[101] Id.

The Secretary must take emergency action to protect North Atlantic right whales. NMFS itself has recognized the urgency of the situation, referring to it as an "urgent conservation crisis" in a web post entitled "Immediate Action Needed to Save North Atlantic Right Whales."[102] More recently, on March 1, 2021 the U.S. Marine Mammal Commission stated that, "[a]s thoroughly documented in the DEIS and Biological Opinion, North Atlantic right whales are declining and at an increasing risk of extinction."[103] Emergency action is required now because the right whale population is trending toward extinction due in significant part to the adverse effects on the species from the ongoing level of take, including excessive levels of mortalities and serious injuries, in the American lobster fishery, and NMFS's failure to develop the conservation measures necessary to protect right whales from the vertical line trap/pot gear used in this fishery. The required rulemaking to reduce MSI to sustainable levels has been repeatedly delayed and will not result in any measures being implemented on the water for a year or longer, and as NMFS acknowledges in the 2021 BiOp these measures will not meet MMPA legal requirements. These facts also constitute an emergency under the ESA and the MSA because they pose a significant risk to the well-being of right whales – indeed they jeopardize the continued existence of this critically endangered species. Thus, the impacts to right whales from the American lobster fishery is well beyond the threshold authorizing emergency action under both of these statutes, as well.

A. The Secretary Must Take Emergency Action Under the MMPA to Protect the North Atlantic Right Whale

The MMPA requires that the Secretary take emergency action to protect the North Atlantic right whale from ongoing take, including mortalities and serious injuries, in the American lobster fishery. Under the MMPA, if the Secretary determines that the level of incidental MSI of right whales – an endangered marine mammal – is having a "more than negligible" impact, the Secretary is obligated to exercise emergency authority to protect right whales and reduce MSI in the fishery.[104] An impact is considered "negligible" only if it "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."[105] The best scientific information available and NMFS's own

[102] NOAA Fisheries, Leadership Message (July 3, 2019). *Immediate Action Needed to Save North Atlantic Right Whales*.
[103] Letter from Marine Mammal Commission to Michael Pen tony (Mar. 1, 2021),. Regional Administrator, NMFS providing "Comments on Proposed Amendments to the Atlantic Large Whale Take Reduction Plan," at p. 2.
[104] 16 U.S.C. §§ 1371(a)(5)(E)(iii), 1387(g). The 2021 BiOp purports to authorize a certain amount of non-lethal right whale takes, but authorizes no lethal takes. 2021 BiOp at 390-91. The BiOp indicates NMFS may authorize lethal takes in the future, but even if such authorization were provided it would not remove the requirement that emergency action be taken in this case because, as this petition demonstrates, the incidental MSI occurring in the fishery is having a more than negligible impact on right whales. 16 U.S.C. §§ 1371(a)(5)(E)(iii), 1387(g).
[105] 50 C.F.R. § 216.103.

analysis and statements leave no question that the impacts of the American lobster fishery on right whales are more than negligible. Therefore, the Secretary must take emergency action.[106]

1. Scientific Data Show the American Lobster Fishery's Impact on Right Whales Is More Than Negligible, and That an Emergency Exists

The North Atlantic Right Whale Consortium determined that after a peak of 481 right whales in 2011, only 356 right whales remained at the end of 2019.[107] Among those, there are approximately 70 surviving reproductively active females.[108] This represents a 26 percent population decline since 2011.[109] Based on this population estimate, NMFS determined that the loss of even one whale is biologically unsustainable, and concluded that the PBR for the North Atlantic right whale – *for the U.S. and Canada combined* – is 0.7.[110] However, The Draft 2020 right whale stock assessment found that the loss is much larger: an estimated 18.6 animals per year.[111] NMFS also stated in October of 2020 that "deaths from vessel strikes and entanglement in fishing gear in both U.S. and Canadian waters remain the two known factors in the ongoing decline of this species. Since the population peaked at 481 in 2011, after accounting for 103 births, roughly 218 North Atlantic right whales have died of presumed anthropogenic causes—this is a rate of roughly 24 right whale deaths per year."[112]

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[106] As described above, Section 118 of the MMPA establishes a separate threshold requiring emergency action to reduce serious injury and incidental mortality of non-endangered marine mammals resulting from commercial fishing. 16 U.S.C. § 1387(g)(1). As shown in this section of the Petition, there is no question that the American lobster fishery currently is also having an "immediate and significant adverse impact" on right whales, thus under this more broadly applicable threshold, the requested emergency regulations would also be required.

[107] Pettis, at al. (2021). 2020 Annual Report Card at p. 4

[108] The Guardian (Oct. 30, 2020). Humans pushing North Atlantic right whale to extinction faster than believed. "New modeling says just 356 remain – down from 409 last year. The 70 breeding females could disappear in 10-20 years.; CBC News. (Oct. 26, 2020). New population estimate suggests only 356 North Atlantic right whales left. Quoting Phillip Hamilton Senior Scientist at the Anderson Cabot Center for Ocean Life at the New England Aquarium, stating "there are roughly 70 breeding females in the population. He said low birth rates coupled with whale deaths means there could be no females left in the next 10 to 20 years."; Hamilton, P., Senior Scientist, New England Aquarium, Personal Communication, (Dec 2020). "The number of "presumed alive" calving females photographed in the last six years is 82, however this number is problematic as it is showing a pattern of overestimating the number of calving females - as some are being lost each year to entanglement, ship strikes, etc. The number of NARW calving females photographed alive in the last three years is 68 and is a more firm and current number. There are also 52 adult females that have not calved yet of which some will calve and some won't."; .*see also* Pettis, et. al. (2021) Annual Report Card at p. 6 stating that in 2020 there were approximately 77 available cows.

[109] NOAA Fisheries. (August 2020) 2020 Draft North Atlantic right whale (*Eubalaena glacialis*) Western Atlantic Stock Assessment. p. 46, 63.

[110] Statement by Colleen Coogan. Proposed Rule information session for the Large Whale Take Reduction Team (Jan. 7, 2021). NOAA Fisheries most recent published draft of the 2020 right whale stock assessment calculates a PBR of 0.8, however this is based on outdated data including a population estimate of 408 whales. NOAA Fisheries. 2020 Draft North Atlantic right whale (*Eubalaena glacialis*) Western Atlantic Stock Assessment (August 2020 Draft) p. 51.

[111] NOAA Fisheries. 2020 Draft North Atlantic right whale (*Eubalaena glacialis*) Western Atlantic Stock Assessment (August 2020 Draft), pp. 52-53.

[112] NOAA Fisheries Statement on the Preliminary North Atlantic Right Whale Annual Population Estimate. Email from Colleen Coogan at NOAA Fisheries to NOAA Fisheries to Atlantic Large Whale Take Reduction Team ("TRT") (Oct. 26, 2020).

NMFS' own scientific data and analysis show that the American lobster fishery is responsible for entanglements of right whales in U.S. waters, including those that cause MSI. NMFS estimates that incidental MSI of right whales in U.S. fisheries alone is 2.2 whales per year, more than three times the biological allowable limit (PBR) for the species.[113] But this is base only on the *known* deaths (those that are documented). NMFS previously estimated that *actual* deaths of right whales in U.S. fisheries is in fact closer to 4.3 per year, over six times the legal and biological threshold.[114] However, the scientific paper co-authored by the Northeast Fisheries Sciences Center's leading right whale population biologist offers a more accurate estimate of *total* mortality, concluding that from 2010 to 2017, only 29 percent of right whale mortalities were detected.[115] This indicates there are more than 7.6 whale mortalities per year in U.S. fisheries – 10 times the biological limit for *all* anthropogenic causes of MSI from *all* jurisdictions of the United States and Canada combined.[116] Given that NMFS has determined that the PBR for right whales is 0.7 and that the MSI of a single whale *by the U.S. and Canadian fisheries combined* is unsustainable, NMFS estimated annual 4.3 MSI (which may be as high as 7.6 MSI based on the most recent science) is clear proof that the American lobster fishery is having a more than negligible impact on the species.[117] NMFS confirmed their conviction that the U.S. lobster fishery is responsible for significant MSI of right whales in an addendum to an October 2019 letter to the Maine Lobstermen's Association ("MLA").[118] In response to MLA's objection to the 60 percent risk reduction requirement being "solely allocated to the lobster fishery," NMFS replied:

> Because of the urgency of responding to the rapid decline in the right whale population and because the fishery source of serious injury and mortality to right whales cannot be determined in 69% of documented cases, NMFS is focusing its scope on the area and fishery that fishes the greatest number of endlines in the U.S. Atlantic: trap pot fisheries in New England. The 2017 endline estimates derived through a model created by Industrial Economics to support the Team efforts indicate that about 98% of fixed gear endlines within right whale habitats along the Atlantic coast are fished by the U.S. lobster fishery.[119]

In the past three years there have been 34 known mortalities and 16 serious injuries in the U.S. and Canada.[120] Of those 34 deaths, the cause of 15 could be determined. All determinable

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[113] Proposed Rule at 86,880.
[114] April 5, 2019 Letter from Colleen Coogan of NMFS to the Atlantic Large Whale Take Reduction Team.
[115] Pace, et al. (2021). Cryptic mortality of North Atlantic right whales. *Conservation Science and Practice*, 3: 1-8
[116] This is consistent with the 2021 BiOp, which concludes that the lobster fishery in both state and federal waters currently kills or seriously injures an annual average of 7.57 right whales (3 in state fisheries and 4.57 in federal fisheries). 2021 BiOp at 226, Tbl. 62. Even after the implementation of the Final Rule, the 2021 BiOp concludes that the federal trap/pot fishery alone will continue to kill or seriously injure 2.56 right whales each year, while the state trap/pot fisheries will continue to kill or seriously injure 0.61 right whales a year, for a total of 3.17 lethal takes annually, which is over four times the species' potential biological removal ("PBR") level. *Id.*
[117] Id.; 16 U.S.C. § 1371(a)(5)(E)(iii).
[118] Letter and Attachment to Letter from Chris Oliver to Patrice McCarron of the Maine Lobsterman's Association (Oct. 2, 2019).
[119] Id.
[120] NOAA Fisheries. 2017-2021 North Atlantic right whale unusual mortality event. (website last visited July 21, 2021).

causes were anthropogenic, with 11 due to ship strikes and 9 due to entanglements in fishing gear.[121] This level of human-caused mortality is biologically unsustainable. Two recent examples show the tragic impacts of the entanglements that continue in U.S. waters. In the 2019-2020 winter, two new right whale entanglements were observed south of Nantucket, Massachusetts.[122] The first was a 19-year-old reproductively active female that scientists catalogued as ID Number 3180 and named "Dragon." When she was last seen alive in February of 2020, NMFS described Dragon as "emaciated," and stated that she was likely to starve to death because of rope and a buoy lodged in her mouth preventing her from feeding.[123] In October of 2020, another entangled right whale was observed off New Jersey "in extremely poor condition, with large lesions on its body" and two visible lines partially embedded around its head.[124] This whale was identified as ID Number 4680, the 4-year-old male calf of Dragon, who was observed on July 7, 2020 in the Gulf of St. Lawrence gear-free.[125] Dragon and her calf are both assumed dead.[126]

On October 19, 2020, an 11-year old whale, Catalog ID Number 3920, known as "Cottontail", was first observed entangled in fishing gear off the coast of Nantucket, Massachusetts.[127] The fishing gear was wrapped tightly around his head, protruding from both sides of his mouth, and dragging beyond his tail.[128] A response team removed some of the gear, but poor weather prevented full rescue efforts from being attempted. Four months later, Cottontail was seen off the Florida coast. NMFS then described his condition as "severe," characterized by extreme weight loss, poor skin, and entanglement-induced trauma on various part of his body.[129] Nine days later, he was discovered dead off the coast of South Carolina, with fishing line exiting his mouth and wrapped around his head. NMFS stated the gear was consistent with that used in 2018 and 2019 Canadian snow crab fisheries.[130] However, Fisheries and Oceans Canada issued their own gear analysis report concluding that the gear collected from Cottontail is "indeterminate of fishery or country,"[131] and stated to the media that Cottontail was not spotted in Canadian waters in 2020 and that the gear likely came from the "U.S. Southern Nearshore Trap/Pot fishery, where whale surveillance activities are limited."[132]

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[121] Id.
[122] Center for Coastal Studies. (Jan. 31, 2020). *Entangled right whale resighted; conditions complicate disentanglement response*; NOAA Fisheries. (Feb. 28, 2020). *Emaciated North Atlantic Right Whale Spotted Entangled off Nantucket*.
[123] Id.
[124] NOAA Fisheries. (Oct. 15, 2020). Entangled North Atlantic Right Whale Spotted Off New Jersey. (website last visited June 21, 2021).
[125] Id.
[126] NOAA Fisheries, 2017-2021 North Atlantic right whale unusual mortality event.
[127] Email from Marisa Trego of NMFS to ALWTRT members and alternates (March 29, 2020). Analysis of gear retrieved from entangled right whale #3920, Cottontail. Doc. No. E22-20.
[128] Id.
[129] Id.
[130] Id.
[131] Fisheries and Oceans Canada. (March 30, 2021). Recovered gear analysis of North Atlantic Right Whale Eg #3920 "Cottontail." (website last visited July 20, 2021).
[132] CBC News. (March 31, 2021). U.S., Canada agencies blame each other's fishing industries for right whale death.

In addition to deaths, sub-lethal impacts to right whales caused by entanglement in fishing gear are adversely affecting the species through effects on annual rates of recruitment and survival. Chronic entanglement, when large whales carry some or all the gear away with them, not only result in death within 6-12 months,[133] but also have a variety of sub-lethal impacts including serious and painful injury,[134] loss of body condition from increased energetic demands due to the additional drag of gear and/or impaired feeding,[135] compromised health and reduced fecundity,[136] and decreased annual rates of recruitment and survival.[137] Between 2011 and 2018, the average known number of North Atlantic right whale entanglements per year is 60.38 and approximately eight percent of these whales are seriously injured (*See* Figure 1).[138] A scientific paper published in 2020 compared the body condition of North Atlantic right whales to three populations of Southern right whales in Australia, South Africa, and Argentina and found that juvenile and adult North Atlantic right whales exhibited signs of significantly poorer health than their Southern cousins.[139] Another study published last month showed that North Atlantic right whales are now shorter at all life stages than they were just a few decades ago.[140] The stress of repeated entanglements coupled with additional stressors threatens the survival of the species, and contribute to lower survival rates and calving rates of the North Atlantic right whale.

[133] Moore, et al., (2006). Fatally entangled right whales can die extremely slowly. Woods Hole Oceanographic Institute; Cassoff et al., (2011). Lethal entanglements in baleen whales. Dis. Aquat. Org. Vol. 96: 175-185.
[134] Knowlton and Kraus (2001). Mortality and serious injury of northern right whales (Eubalaena glacialis) in the western North Atlantic Ocean. J. Cetacean Res. Manage (Special Issue) 2, 193–208, 2001; Moore and van der Hoop (2012). The Painful Side of Trap and Fixed Net Fisheries: Chronic Entanglement of Large Whales. Woods Hole Oceanographic Inst.; Moore, (2014). How we all kill whales. *ICES Journal of Marine Science*, Volume 71, Issue 4, May/June 2014, Pages 760–763.
[135] van der Hoop, et al., (2015). Drag from fishing gear entangling North Atlantic right whales. DOC.; van der Hoop et. al. (2016). Predicting lethal entanglements as a consequence of drag from fishing gear. Marine Pollution Bulletin · December 2016.; Van der Hoop et. al. (2017). Entanglement is a costly life-history stage in large whales. Ecol. Evol. Jan; 7(1): 92-106.
[136] Schick, et al., (2013) Using Hierarchical Bayes to Understand Movement, Health, and Survival in the Endangered North Atlantic Right Whale**.** DOI. (2016). Health of North Atlantic right whales Eubalaena glacialis over three decades: from individual health to demographic and population health trends. Mar. Ecol. Prog. Ser. Vol. 542: 265–282, 2016.; Pettis et al., (2017) Body condition changes arising from natural factors and fishing gear entanglements in North Atlantic right whales (*Eubalaena glacialis*); Lysiak et al., (2018) Characterizing the Duration and Severity of Fishing Gear Entanglement on a North Atlantic Right Whale (*Eubalaena glacialis*) Using Stable Isotopes, Steroid and Thyroid Hormones in Baleen. Front. Mar. Sci., 15 May 2018.
[137] 50 C.F.R. § 216.103.
[138] Lysiak, et al (2018). Characterizing the Duration and Severity of Fishing Gear Entanglement on North Atlantic Right Whale (*Eubalaena glacialis*) Using Stable Isotopes, Steroid and Thyroid Hormones in Baleen. Front. Mar. Sci. (15 May 2018).
[139] Christiansen, et al. (2020). Population comparison of right whale body condition reveals poor state of the North Atlantic right whale. Mar. Ecol. Prog. Ser. Vol. 640: 1–16
[140] Stewart, et al. (2021). Decreasing body lengths in North Atlantic Right Whales. Current Biology (2021).

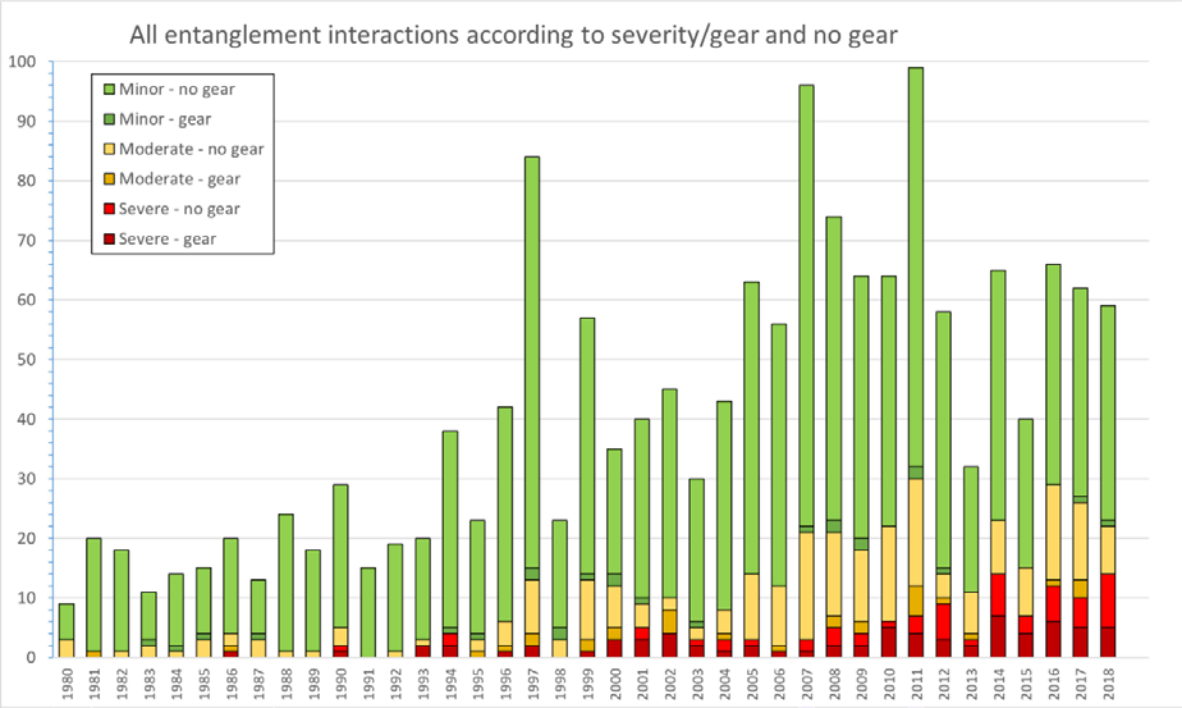

Figure 1. Number of North Atlantic right whales with minor, moderate, or severe entanglements (Knowlton et al, 2018).

These health impacts are likely considerably more serious for breeding females than for all other population demographics. Pregnancy, calving and nursing are the most energetically taxing functions for right whales. Therefore sub-lethal impacts due to entanglement will inevitably reduce reproductive productivity for individual females and thus the population.[141] Since 2010, calving rates have dropped by nearly 40 percent,[142] and between 2009 and 2017 female right whales expanded their average breeding interval from 4 years to 10 years between calves, suggesting increased stress and reduced fitness in the population.[143] While there have been 50 right whales removed from the population due to MSI since 2017, there have only been 40 births: five in 2017, none in 2018 (for the first time since births have been documented), seven in 2019, 10 in 2020, and 18 in the most recent 2021 calving season.[144] While the 2020-2021 breeding season was cause for optimism, scientists estimate that 17 calves per year need to be born consistently to rebuild the population, and the birth interval and age for new moms continued to show an upward trend.[145]

2. The Long and Continuing Delay in Rulemaking Intended to Implement Measures to Protect Right Whales from the American Lobster Fishery Is Having More Than a Negligible Impact on Right Whales and Contributing to the Emergency

[141] Rolland, et al. (2016). Health of North Atlantic right whales *Eubalaena glacialis* over three decades: from individual health to demographic and population health trends. MEPS. Vol 524.
[142] Kraus, et al. (2016). Recent Scientific Publications cast doubt on North Atlantic right whale future. *Front. Mar. Sci.* 3:137.
[143] Pettis., et al. (2021). NARWC 2020 Report Card.
[144] NOAA Fisheries. North Atlantic right whale calving season 2021; 2021 Pettis, et. al. (2021) 2020 report card.
[145] Yeager, A. (2019). Seven North Atlantic Right Whale Calves Spotted So Far This Year. *The Scientist.*

Current rulemaking efforts intended to develop measures to reduce the risk of entanglement of right whales have taken far too long to protect them from further decline and extinction, and when finally implemented, the measures will fail to meet statutory mandates to protect right whales. Emergency action is needed now to prevent further unlawful takes, mortalities, and serious injuries of right whales while rules that bring the fishery into full compliance with the law are developed and implemented. The current emergency began in 2017 with the confirmed death of 17 whales that year and the emergence of the new population science showing the population decline beginning in 2010.[146] An UME was declared, which under the MMPA requires an immediate response, yet it took NMFS until August of 2019 to announce scoping for a potential rulemaking to address the crisis by developing measures to amend the ALWTRP to reduce MSI in the fishery.[147]

At the time scoping was initiated, the Secretary proposed a timeline for publication of a proposed rule in late January or early February 2020, and a final rule in July of 2020.[148] However, on January 28, 2020, the Secretary announced a delay to this timeline and disclosed to the federal court overseeing the litigation initiated in 2017 seeking to address this crisis that the proposed rule was anticipated in July 2020.[149] As indicated in subsequent court filings, this date was further delayed throughout 2020[150] and NMFS received an additional request for Emergency Action in December 2020, seeking closures in Southern New England, due to the length of time that the agency was taking to finalize rulemaking.[151] The Proposed Rule was not published until December 31, 2020, and included a public comment period ending on March 1, 2021.[152] In the most recent update to the court, NMFS estimates that a final rule is now not expected until "early September, 2021" but it could be delayed further due to a required "review of the final rule by the Office of Management and Budget's Office of Information and Regulatory Affairs (OIRA)" which "NMFS does not control."[153]

Even if NMFS succeeds in publishing a final rule in the fall of 2021, it is likely that the implementation timeline will mean that the measures intended to reduce deaths and serious injuries of right whale from entanglements will not be required on the water for another year or

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[146] Pace, et al. (2017). State–space mark–recapture estimates reveal a recent decline in abundance of North Atlantic right whales. Ecol. Evol. Vol 7. Issue 21.
[147] 84 Fed. Reg. 37822-24. Atlantic Large Whale Take Reduction Plan Modifications to Reduce Serious Injury and Mortality of Large Whales in Commercial Trap/Pot Fisheries Along the U.S. East Coast (Scoping to begin rulemaking)(August 2, 2019); United States District Court of the District of Columbia. Case: 1:18-cv-00112-JEB., Doc. 68-2. Defendants' Motion to Stay, Declaration of Jennifer Anderson.
[148] Id.
[149] United States District Court of the District of Columbia. Case: 1:18-cv-00112-JEB., Doc 87. Notice of Filing Third Anderson Declaration.
[150] United States District Court of the District of Columbia. Case: 1:18-cv-00112-JEB., Doc 111. Federal Defendants' Remedy Response Brief.
[151] Center for Biological Diversity, et al. (2021) Emergency Petition to the National Marine Fisheries Service to take emergency action under the Marine Mammal Protection Act to protect critically endangered North Atlantic right whales from death and serious injury in commercial fishing gear.
[152] Proposed Rule at 86,878.
[153] United States District Court of the District of Columbia. Case: 1:18-cv-00112-JEB., Doc 143. Federal Defendants' Unopposed Motion for Extension of Time.

longer.[154] NMFS has a concerning history of delaying regulatory action to protect right whales from entanglement in gear used by the lobster fishery.[155] As anticipated, the Proposed Rule was heavily dependent upon modifications to the gear used in the fishery,[156] involving unproven and difficult to verify changes in gear configurations and modifications to weaken lines that are still in the testing phase. It could take months for manufacturing to ramp up to meet demand for lower breaking strength rope.[157] In a prior rulemaking involving gear modifications in this fishery, the Secretary provided for a one-year delay for industry implementation of the final rule changes.[158] Consequently, under the ongoing MMPA rulemaking it is likely that it could be at least summer or fall of 2022 before any of the measures intended to prevent entanglement and reduce MSI of right whales are in place. This would be five years since the recent rash of right whale deaths and the subsequent UME began in 2017, and more than a decade past the scientifically documented downturn in the population.[159]

3. The Measures NMFS Indicates Will Be Included in the Final Rule Will Not Meet Legal Requirements or Reduce the Mortality and Serious Injury of Right Whales from the American Lobster Fishery to Negligible Levels

The relevant analysis and conclusions of the BiOp pertaining to right whale entanglements in the American lobster fishery are primarily based on the fishery management measures NMFS intends to implement beginning in 2021 through the Final Rule.[160] Under the MMPA, the PBR for the American lobster fishery must be achieved immediately and each year after implementation of the Final Rule.[161] The intended measures, analyzed as part of the Proposed Rule, will not reduce incidental MSI below PBR, meet the ESA legal requirement to avoid jeopardizing the continued existence of right whales, nor otherwise prevent the fishery from having more than a negligible impact on right whales. The stated purpose and need for the Final Rule was to reduce MSI of right whales by entanglements in the American lobster and Jonah crab trap/pot gear fishery below PBR, in compliance with the requirements of the MMPA, ESA, and other applicable law.[162] The Final Rule will not achieve this because the measures were developed based on achieving the incorrect PBR for the fishery and insufficient risk reduction targets, thus they are incapable of reducing incidental MSI below the PBR for the fishery. The forthcoming Final Rule does not alleviate the emergency for right whales, and NMFS cannot rely on promises of future actions to reduce mortalities and serious injuries required now to meet

[154] 2021 BiOp at 8-10, 478.
[155] United States District Court of the District of Columbia. Case: 1:18-cv-00112-JEB., Doc. 71. Plaintiffs' Opposition to Federal Defendants' Motion to Stay.
[156] 84 Fed. Reg. 37822, 37823. Atlantic Large Whale Take Reduction Plan Modifications To Reduce Serious Injury and Mortality of Large Whales in Commercial Trap/Pot Fisheries Along the U.S. East Coast (August 2, 2019).
[157] Summer, et al. (2019). Functional Breaking Strength of Vertical Lines in the Gulf of Maine. Maine DMR.; 2021 BiOp 8, 478.
[158] 79 Fed. Reg. 36585 (2014); 72 Fed. Reg. 57103 (2007).
[159] Pace, et al. (2017). State–space mark–recapture estimates reveal a recent decline in abundance of North Atlantic right whales. Ecol. Evol. Vol. 7 Issue 21.
[160] 2021 BiOp at e.g., 8-10, 224-30, 323-41.
[161] 16 U.S.C. §1387(f)(2), (f)(5)(A), (f)(7)(F). The MMPA requires NMFS to amend take reduction plans as necessary to meet these goals. Id.
[162] Proposed Rule DEIS at 1-4, 1-6, 1-26, 2-41; Proposed Rule FEIS at 4, 6, 43, 62.

PBR.[163] The Secretary must implement interim measures that will protect right whales and reduce MSI while another rule is developed and implemented that will meet all legal requirements and ensure that the fishery-specific PBR is achieved immediately and on an ongoing basis.[164]

a. NMFS relied on outdated data and set incorrect targets for PBR and risk reduction, which contributed to proposed measures and a Final Rule that will not reduce MSI below PBR for the American lobster fishery

Any rule implementing management measures designed to bring the American lobster fishery into compliance with the MMPA, ESA, and other applicable law must reduce annual MSI of right whales to effectively 0, when based on a properly apportioned PBR for the fishery. This requires that the fishery achieve an entanglement risk reduction target of greater than 95 percent, instead of the 60 percent target used to develop the Proposed Rule.[165]

The PBR for any marine mammal is defined as the maximum number of animals that may be removed from the population due to all human-caused mortality and serious injury while still allowing the stock to maintain its optimum sustainable population.[166] Any incidental MSI to right whales in the American lobster fishery that exceeds the appropriately apportioned PBR for the fishery is unauthorized and violates the MMPA.[167] As explained above, based on the most recent scientific information, the updated PBR for the North Atlantic right whale is now 0.7 – not the 0.9 used by NMFS to develop the Proposed Rule. This represents the total number of MSI to right whales that can be exempted from the MMPA's take prohibition due to *all* human activities.[168] For right whales, these mortalities and serious injuries are primarily caused by entanglements and vessel strikes occurring in both the U.S. and Canada.[169]

The preamble to the Proposed Rule states that the total PBR (from all human activity) for the species was viewed as a "goal" for take reduction in the American lobster fishery.[170] However, the MMPA requires NMFS to reduce the incidental MSI of right whales below that fraction of

[163] *See* 2021 BiOp at 8, (proposing a 10-year conservation plan with multiple future rulemakings to bring right whale mortalities and serious injuries below PBR). *Ctr. for Biological Diversity v. Bernhardt*, 982 F.3d at 747 (citing *Nat'l Wildlife Fed. v. Nat'l Marine Fisheries Serv.*, 524 F.3d 917, 935–36 (9th Cir. 2008))(holding that general commitments to future improvements are insufficient to meet ESA Section 7 requirements).
[164] 16 U.S.C. §1387(f)(2), (f)(5)(A), (f)(7)(F).
[165] *See e.g.*, 2021 BiOp at 230, 476, 479.
[166] 16 U.S.C. §§ 1362(20), 1387(f)(7).
[167] Id.; 16 U.S.C. § 1371(a)(5)(E).
[168] Proposed Rule at 86,880.
[169] NOAA Fisheries. (October 26, 2020). Statement on the Preliminary North Atlantic Right Whale Annual Population Estimate. Communication from NOAA Fisheries to Atlantic Large Whale Take Reduction Team ("TRT"); *See also* Letter from Marine Mammal Commission to Michael Pentony (Mar. 1, 2021), Regional Administrator, NMFS providing "Comments on Proposed Amendments to the Atlantic Large Whale Take Reduction Plan," at p. 2.
[170] Proposed Rule at 86,879. Note that as shown below, even if the full amount of the PBR for the species were apportioned to the American lobster fishery, the proposed measures would still fail to ensure the mortality and serious injury would be reduced below PBR.

the overall PBR that can be reasonably apportioned to the fishery.[171] Although the Proposed Rule analysis recognized that PBR apportionment is required, and demonstrated there are methods for doing so, instead of determining the fraction of the PBR that reasonably can be apportioned to the American lobster fishery NMFS set the target reduction in mortality and serious injury as the full, overall PBR of 0.9.[172] Under the MMPA this is incorrect, and resulted in a PBR for the fishery that is several times higher than would be calculated under any reasonable apportionment method and risk reduction targets that were too low.

The Proposed Rule states that NMFS "did consider the relative threat" of entanglement including the time whales spend in U.S. and Canadian waters when apportioning the unattributed entanglement incidents as part of developing their risk reduction target, but this serves a different purpose and was an assumption that had to be made. It cannot justify assigning the overall right whale PBR target to the U.S. lobster fishery. This mistake is compounded by the fact that NMFS also did not account for the level of PBR that must be apportioned for vessel strikes (or any other potential cause of MSI of right whales). The failure to clearly establish the portion of the overall PBR that can be attributed to the U.S. American lobster fishery is inconsistent with the MMPA and contributed to a Proposed and likely Final Rule that does not adequately reduce entanglement risk to levels required and will be inadequate to protect the species.

Because the overall PBR for right whales is so low to begin with, nearly any reasonable apportionment method results in a PBR for the American lobster fishery that is extremely low – effectively zero (0). In this case, NMFS should have applied apportionment assumptions similar to those demonstrated in the Proposed Rule, its DEIS, and 2021 BiOp.[173] For example, if it is assumed that approximately 50 percent of right whale deaths in recent years have been the result of vessel strikes and 50 percent due to entanglement,[174] it is reasonable that only 50 percent of the overall PBR, or 0.35, can be apportioned to account for right whale mortality and serious injury due to entanglement. Further, taking into account that right whales are a transboundary species that may spend roughly 50 percent of their time in Canadian waters,[175] or other factors suggesting that mortality and serious injury due to entanglement should be split 50/50 between the U.S. and Canada,[176] about 50 percent of the PBR due to entanglement can be apportioned to account for vertical line entanglements occurring in U.S. waters. Thus, based on common sense assumptions like these, derived from NMFS data and expert scientific opinion, in rough terms

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[171] 16 U.S.C. § 1386(6); see also; Proposed Rule at 86,880.
[172] Proposed rule at 86,880 (referring to Guidelines for Assessing Marine Mammal Stocks).
[173] Id.; FEIS at 5, 69; 2021 BiOp at 212-224, 477.
[174] Sharp, et al. (2019). Gross and histopathologic diagnosis from North Atlantic right whale *Eubalaena glacialis* mortalities between 2003 and 2018 (2018), pp. 6-10; NOAA Fisheries, 2017-2021 North Atlantic right whale unusual mortality event; see also 2021 BiOp at 219-20 (addressing cryptic mortality estimates).
[175] *See* Proposed Rule at 86,880 (assigning half of unknown right whale entanglement incidents to U.S. fisheries.); 2021 BiOp at 216-217.
[176] *See* Proposed Rule at 86,880; 2021 BiOp at 216-219, 477 (supporting an approximate 50/50 split by estimating that the recent total mortality and serious injury of right whales due to entanglement in Canadian versus US waters is about 55% (11 of 20)); see also April 5, 2019. Take Reduction Target Letter from Colleen Coogan, NMFS, to the Atlantic Large Whale Take Reduction Team. (Although right whales spend more time exposed to fisheries in U.S. waters than in Canadian waters, for the purposes of guiding the development of take reduction measures, we are making an assumption that 50% of right whale mortalities and serious injuries occur in each country.).

the apportioned PBR for the U.S. American lobster fishery reasonably could be expected to be about 0.175.[177]

In calculating the target levels of risk reduction, the Proposed Rule analysis started with the incorrect PBR of 0.9[178] and used an estimated 2.2 right whale deaths annually in the American lobster fishery to generate an estimated 60 percent reduction in mortality and serious injury target.[179] Based on this approach, the calculated *lower* bound risk reduction when a 0.175 PBR for the fishery is used is actually an 80 percent reduction in MSI. This, however, takes into account only the observed mortalities (2.2), and vastly underestimates true anthropogenic caused MSI -- observed carcasses are a poor indicator of annual right whale mortality.[180] The Proposed Rule analysis concluded that when the estimated but unseen mortality is included, 80 percent was the *upper* bound for reduction in MSI (though NMFS still chose to base the measures in the Proposed Rule on its incorrect lower bound target of 60 percent).[181] The most recent scientific information indicates, however, that the estimated annual MSI of right whales, including the estimated but unseen mortalities, is 18.6 to 24 per year.[182] Thus, after following NMFS's method and attributing 4.65 to 6 estimated MSI to the American lobster fishery is considered with a more appropriately apportioned 0.175 PBR for the fishery, it results in a required reduction in MSI of right whales in the fishery of 96 to 97 percent.

Although NMFS avoided making an explicit apportionment calculation in the Proposed Rule, DEIS, or FEIS, the one provided here resulting in a PBR of approximately 0.175, and the resulting reductions in MSI required, is supported by NMFS's analysis contained in the recently released 2021 BiOp. This analysis concludes that MSI needs to be reduced to 0.136 per year in order to ensure the survival of the species.[183] It also concludes that a greater than 95 percent

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[177] NMFS has the ability to make more precise apportionment assumptions based on the same data and analysis, including that over time total mortality from entanglement is higher than from vessel strikes, which would result in the PBR apportioned to the U.S. American lobster fishery being somewhat higher. But doing so would only minimally increase the assigned PBR and the result would still be that the PBR for the fishery is effectively zero (0). For example, a PBR of 0.25 would still mean that far less than a single right whale per year, or zero (0) can be removed from the population.

[178] *See* Proposed Rule at 86,879-80.

[16] Id.

[180] Pace, et al. (2021). Cryptic mortality of North Atlantic right whales. *Conservation Science and Practice*, 3: 1-8. Entanglement accounted for the vast majority (54 of 62, or 87%) of serious injuries, but only 20 of 41 (49%) of mortality in examined carcasses. The authors state that the "evidence surrounding whales not recovered following their likely deaths, suggests that cryptic deaths are almost twice as likely to be due to entanglements than the records from examined carcasses whales indicate."

[181] Id.; *See also* Take Reduction Target Letter from Colleen Coogan, NMFS, to the Atlantic Large Whale Take Reduction Team (April 5, 2019). "Population models provide an estimate of mortalities that suggest that 60% of right whale mortalities and serious injuries are unobserved (Pace, personal communication applying the methods from Pace et al. (2017). If the average observed mortalities and serious injuries caused by entanglements for 2012 through 2016 is 5.15, given the 60% detection rate, the estimated annual mortality and serious injury by entanglements is 8.6 per year. If we assume half of the estimated mortalities and serious injuries occur incidental to U.S. fisheries (4.3), mortality and serious injury would have to be reduced by about 80% in U.S. fisheries to get below the stock's PBR of 0.9."

[182] NOAA Fisheries. 2020 Draft North Atlantic right whale (*Eubalaena glacialis*) Western Atlantic Stock Assessment (Aug. 2020), 52-53.

[183] 2021 BiOp at 230, 476, 479.

reduction in MSI from current levels is required.[184] The results of NMFS own analysis are consistent and show that NMFS must implement measures reducing MSI to effectively zero, or a greater than 95 percent risk reduction for the fishery.

Finally, the PBR for the American lobster fishery must be achieved immediately and each year after implementation of the rule.[185] While NMFS should continuously review the scientific data and fisheries information in order to adapt the take reduction plan and the related regulatory measures to ensure MSI remains below PBR for the fishery, NMFS cannot rely on promises of future actions to reduce mortalities and serious injuries required now to meet PBR.[186] NMFS must develop and implement a final rule that ensures that the fishery-specific PBR is achieved immediately and on an ongoing basis.[187] Although PBR is sometimes interpreted as an indicator of the number of marine mammals that may be killed or seriously injured over a period of years, it is incorrect to assume that this opens the door to phasing in the reductions necessary to achieve PBR. The need to reach PBR for the fishery immediately and then annually thereafter is amplified in this case by the most recent scientific data showing mortalities and serious injuries of right whales have grossly exceeded the PBR for years, averaging 18.6 since from 2013-17, and perhaps as many as 24 per year since 2011.[188] These years of unlawful and excessive mortalities render any phase-in of measures to reduce mortality and serious injury, premised on averaging concepts, a legal and biological non-starter.

b. The measures NMFS indicates will be contained in the Final Rule will not reduce mortalities and serious injuries of right whales in the fishery to the required level

The measures in the Final Rule will meet neither the required level of risk reduction discussed above, nor even the intended, inadequate risk reduction target established by NMFS. Several factors contribute to this failure, including that: (1) they are poorly designed and cannot adequately reduce risk to right whales; (2) many of the assumptions upon which they allegedly reduce risk are unsupported and speculative; and (3) they require data that does not currently exist and there is an admitted lack of enforcement, especially beyond 12 nautical miles where entanglement risk and severity is often highest. Recognizing this, NMFS has included in the

[184] Id.

[185] 16 U.S.C. §1387(f)(2), (f)(5)(A), (f)(7)(F). The MMPA requires NMFS to amend take reduction plans as necessary to meet these goals. Id. In 2010, when the PBR for right whales was similarly low (0.4) NMFS followed the advice of the Atlantic Scientific Review Group and reduced the PBR for right whales zero, meaning that commercial fishing operations would no longer be allowed to kill or seriously injure any right whales under the terms of the Marine Mammal Protection Act. Newsletter of the Southeastern United States Implementation Team for the Recovery of the Northern Right Whale and the Northeast Implementation Team, Vol 7, No. 1 (February 2000).

[186] *See* 2021 BiOp at p. 8 (proposing a 10-year conservation plan with multiple future rulemakings to bring right whale mortalities and serious injuries below PBR). *Ctr. for Biological Diversity v. Bernhardt*, 982 F.3d at 747 (citing *Nat'l Wildlife Fed. v. Nat'l Marine Fisheries Serv.*, 524 F.3d 917, 935–36 (9th Cir. 2008))(holding that general commitments to future improvements are insufficient to meet ESA Section 7 requirements).

[187] 16 U.S.C. §1387(f)(2), (f)(5)(A), (f)(7)(F).

[188] NOAA Fisheries. 2020 Draft North Atlantic right whale (*Eubalaena glacialis*) Western Atlantic Stock Assessment (Aug. 2020), 52-53; NOAA Fisheries. (Oct. 26, 2020). Statement on the Preliminary North Atlantic Right Whale Annual Population Estimate. Communication from NOAA Fisheries to Atlantic Large Whale Take Reduction Team.

BiOp what it is calling a "Conservation Framework," which promises future rulemakings to implementing a series of undefined risk reduction measures to bring MSI below PBR phased in over the next decade.[189] This approach is unsupported in law and neither the measures contained in the Final Rule nor these promises of future will reduce current impacts from MSI to right whales to negligible levels.

According to the Proposed Rule, the Preferred Alternative would "achieve a greater than 60-percent reduction" in risk by ultimately implementing measures falling into four main categories: (1) gear modifications intended to reduce the number of vertical lines; (2) seasonal restricted areas that would allow ropeless fishing; (3) the replacement of buoy lines with weak rope or weak insertions; and (4) additional gear marking requirements.[190] NMFS estimated that the Preferred Alternative could reduce risk by up to 69-73 percent (including credit for the Massachusetts Restricted Area).[191] Alternative 3 analyzed similar measures including: (1) larger, longer, and additional seasonal restricted areas; (2) a line cap allocation capped at 50 percent of the lines fished in 2017 in federal and non-exempt waters throughout the Northeast except in offshore LMA3; and (3) more robust gear markings. NMFS estimated that Alternative 3 could reduce risk by up to 72 percent.[192]

As the Proposed Rule analysis showed, the measures contained in what NMFS has indicated will be the Final Rule will not achieve even the inadequate risk reduction targets. The Preferred Alternative will not be as effective as anticipated because it relies on measures that are to varying degrees untested or potentially unreliable. For example, rather than directly regulating the number of vertical lines that can be fished at any given time, the Preferred Alternative relies on an indirect method, trawling-up, to reduce the number of vertical lines, without any assurance that it will achieve the expected magnitude of line reduction. Moreover, scientific review of prior rules requiring trawling up as a means to reduce MSI are inconclusive, at best, and suggest that the potential benefits of reduced entanglements may be offset because the severity of the injuries to large whales is increased due to the use of thicker line and heavier gear configurations.[193]

The Preferred Alternative also relies on weak-rope configurations that have not been proven to reduce risk to right whales. While there is some scientific support for requiring ropes to break at

[189] 2021 BiOp at 8, 472-82.
[190] 85 Fed. Reg. at 86,881, 86,885.
[191] Proposed Rule FEIS at 15; The Preferred Alternative in the DEIS was estimated to reduce risk by 64.3%. Proposed Rule DEIS at 3-68.
[192] Proposed Rule FEIS at 15; Alternative 3 in the DEIS was estimated to reduce risk by 72.6%. Proposed Rule DEIS at 3-69.
[193] See, Knowlton, A.R., et. al. (2016). Effects of Fishing Rope Strength on the Severity of Large Whale Entanglements, Conservation Biology 30:318-328.; Hayes, S.A., (2018). North Atlantic Right Whales – Evaluating Their Recovery Challenges in 2018, NMFS Technical Memorandum NMFS-NE-247 at 8 ("While trawling up] reduced the number of lines, it also meant that lines had to be stronger to accommodate the increased load of multiple traps. This natural adaptation, and the fact that stronger rope was available, contributed to an increase in the severity of entanglements as found by Knowlton et al. (2016), who observed very little evidence of entanglement with ropes weaker than 7.56 kN (1700 lbsf)."); *See also* Proposed Rule FEIS at 189; 2021 BiOp at 217.

1,700 pounds or less in order to reduce the severity of entanglement injuries,[194] it is unknown whether right whales will be able to break lines that have just one or two weak insertions, rather than lines with insertions every 40 feet or that are weak throughout, as recommended by scientists. Thus, whether the preferred weak rope configurations will be effective is almost purely speculative and was not supported as proposed by scientists who did initial studies into weak rope as a risk reduction measure.[195] Further, the Preferred Alternative relies on the addition of seasonal closures to vertical line trap/pot gear to provide additional protection for right whales in the Gulf of Maine and south of Nantucket.[196] As shown further below, however, the identified areas are too small and too short in duration to protect right whales throughout the region. Several additional areas were proposed but not analyzed or preferred, and the Preferred Alternative entirely ignores other "hot spots" where right whales co-occur in heavily fished New England waters throughout the year, especially given that ocean conditions in the Northwest Atlantic environment are changing in response to climate change. For these reasons, there is little support for NMFS's conclusion that the Preferred Alternative will achieve the estimated risk reduction contained in its analysis, or even the lower, inadequate risk reduction target NMFS set when developing measures as part of the Proposed Rule.

Although the measures analyzed as part of the Non-Preferred Alternative would likely be more effective, they are also inadequate to achieve the required level of risk reduction. Directly controlling the number of vertical lines would be an improvement over the uncertainty in line reductions inherent in trawling-up, however only Massachusetts currently counts or regulates endlines. In theory, endline caps could be achieved by permitting lines (in addition to traps), however Maine, where over 85 percent of all endlines are currently used, lacks the data and regulatory mechanisms for implementing this approach in a timely manner. Thus, implementing line caps would require a lengthy phase-in period during which state and federal agencies collect baseline data on the number of current endlines and develop the necessary policies to regulate and monitor vertical line numbers.

The Non-Preferred Alternative also offers an improved approach to the Preferred Alternative because it would establish an additional seasonal closure in Georges Basin identified as a right whale foraging hotspot. In addition, the Non-Preferred Alternative would require wider and improved use of weak rope, requiring more weak insertions, likely resulting in a lower breaking strength across the endlines in the fishery. However, the Non-Preferred Alternative still would not offer significant improvement in the risk reduction from offshore lobster and crab fishing in LMA3 where much of the heaviest and most lethal gear is used, or otherwise achieve what should be the risk reduction target. NMFS and independent experts believe that a disproportionate number of entanglements occur in LMA3, especially severe entanglements, that

[194] Knowlton, A.R., et al. (2016). Effects of Fishing Rope Strength on the Severity of Large Whale Entanglements, Conservation Biology 30:318-328.
[195] Letter from Scientists to Ben Freidman commenting on the Proposed Rule (Feb. 25, 2021). This letter is signed by 27 scientists with "extensive expertise in the biology of large whales, oceanography, and fisheries, and expresses "serious concern" for the Proposed Rule because it "represents a dramatic weakening" of the recommendations offered by the ALWTRT to reduce entanglement risk.
[196] In contrast, Canada is successfully implementing a dynamic closure system that closes areas to vertical line trap/pot gear when right whales are present. Fisheries and Oceans Canada, 2021 Fishery Management Measures, North Atlantic Right Whale. (website last visited July 16, 2021).

lead to MSI.[197] Because of the depths at which the gear is fished, the strong currents, and the large number of traps per trawl, the offshore fishery uses very heavy (strong) lines that almost certainly cannot be broken by adult right whales, let alone younger animals. Because of these factors, it is difficult for fishermen to incorporate weak insertions without compromising the ability to successfully retrieve the gear. As a result, under either alternative proposed by NMFS it is not likely that the offshore fishery will be able to achieve a risk reduction of more than 17 percent.[198]

Finally, NMFS acknowledges that the measures included in the Final Rule will not reduce MSI sufficiently to meet the applicable ESA and MMPA standards and created a Conservation Framework in the BiOp in order to try to finesse its way around the MMPA's legal requirements.[199] Instead of meeting legal requirements now, the Conservation Framework promises future rulemakings to implement a series of undefined risk reduction measures implemented in phases over the next decade. The BiOp sets the current level of right whale MSI at 4.57 whales per year for federal trap/pot fisheries, with an additional 3.0 MSI occurring annually in state waters. Under its entirely speculative plan, MSI in federal waters would be reduced in phase one from its current level of 4.57 to 2.69, in phase three to 1.04, and finally in 2030, phase four to approximately 0.136 (finally bringing MSI below the required PBR threshold, meeting essentially the same fishery-specific PBR (0.175) required under the rough apportionment method described above).[200] NMFS explains that the "Conservation Framework specifies targets rather than particular measures to be implemented" over the next 10 years, and that NMFS is "committed to working with [its] partners on the implementation of measures to meet the goals of the Conservation Framework."[201] There is no legal support for this approach: relying on undefined future rulemakings to eventually meet the MMPA requirement to reduce incidental MSI below PBR over a 10-year period. NMFS' approach admits the Final Rule will not bring the fishery into compliance with the MMPA and does nothing to help bring the current impacts from MSI to right whales in the fishery below the negligible impact threshold that would alleviate the need for emergency action under the MMPA.

4. The Potential Economic Impact to the American Lobster Fishery from Implementing Measures Required to Protect Right Whales Are Exaggerated and Cannot Justify Inaction

In its analysis of the Proposed Rule, NMFS declined to consider many measures recommended during scoping with the potential to significantly reduce MSI to right whales because they were "unpopular with stakeholders" based on their perceived, but mostly unsubstantiated, concern that the economic impacts of the measures to the lobster industry to be too substantial.[202] This is not only inconsistent with laws requiring that the federal government ensure the survival of

[197] *See e.g.,* Sharp, et. al. (2019) at 22-23; Hayes, S.A., (2018) at 8.
[198] Proposed Rule DEIS at 3-68, Table 3.4; Proposed Rule FEIS at 15.
[199] 2021 BiOp at 8, 472-82.
[200] Id. at 230, 476, 479.
[201] 2021 BiOp at 223-24, 478-80.
[202] Proposed Rule DEIS at 1-20, 3-78-82, 5-151-152, 6-223-224; Proposed Rule FEIS at 5, 117-122 204-205, 284-285.

endangered species,[203] but it is inconsistent with available economic data and analysis showing that the impacts of measures to reduce the risk of entanglements are reasonable for an industry the size of the American lobster industry. A $10 million to $20 million cost to adapt a $628.5 million industry in order to implement required endangered species protections is not unreasonable for any U.S. regulated industry.

In 2020, during the COVID-19 pandemic, Maine fishermen earned over half a billion dollars for their catch, with the lobster fishery representing 79 percent of the landed value.[204] At 96 million pounds, the lobster catch declined by only 5 percent from 2019 landings, and historically it was the ninth highest volume and seventh time the value exceeded $400 million in the history of the fishery.[205] Despite an unpredictable year due to the pandemic, lobster sold for an average boat price of $4.20 per pound, better than the average price of $3.76 over the past ten years.[206] Since the release of the Proposed Rule, fishermen and Maine's governor have claimed that the proposed measures will threaten the survival of the Maine lobster industry.[207] However, NMFS' analysis in the Proposed Rule DEIS shows that the preferred alternative is projected to cost the entire New England lobster fishery (shared among all states) approximately $15 million per year.[208] This represents only about a 2.4 percent cost to the lobster industry.[209] It is not reasonable for an industry of this size to claim that a potential 2.4 percent compliance cost threatens its survival – it is questionable whether it would even measurably impact profitability, especially given this industry's historic ability to adapt to change.

Based on the estimated compliance costs of the Proposed Rule measures provided by NMFS, the vertical line trap/pot closures proposed here may result in a slightly higher reduction in revenues for the industry. But even if the cost of implementing the requested emergency vertical line trap/pot closures is slightly higher, it would still represent a reasonable cost necessary to ensure the survival of a critically endangered species. Also, it is important to take into account that the analyzed measures with the highest potential costs are gear marking, line caps, and weak rope, none of which are included as part of this request.[210] Further, the requested emergency and permanent regulations do not require any reduction in traps, modifications of fishing gear, or for

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[203] *Kokechik Fishermen's Ass'n v. Sec'y of Comm.*, 839 F.2d 795, 800, 802 (D.C. Cir. 1988) (citing 16 U.S.C. § 1371(a)(2)).

[204] Valued at $516,796,614, the ex-value of Maine's commercially harvested marine resources was the ninth highest on record with the lobster fishery being the majority of the landed value at $405,983,832. Maine Dept. of Marine Res. 2020 landings report (website last visited July 16, 2021).

[205] Maine DMR 2016-2020 Landings (website last visited July 16, 2021).

[206] Id.

[207] Gov. Mills' Letter to Mike Pentony (Feb. 19, 2021). Expressing "grave concern" about the potential impact of the assessment, which Governor Mills said could threaten the "survival of Maine's iconic lobster industry, and in fact, our heritage."

[208] Proposed Rule DEIS at 6-223-224, Table 6.22; Proposed Rule FEIS at 284-285, Table 6.22 (showing an estimated compliance cost associated with the first year ranging from $9.8 to 19.2 million, and an estimated annualized cost of $9.2 to 19.1 million).

[209] Based on $628.5 million in landings revenue in 2019. NOAA Fisheries Species Directory: American Lobster *citing* Annual Commercial Landings Statistics (website last visited July 20, 2021).

[210] NMFS summary of estimated compliance costs shows that the most expensive changes are associated with gear marking, line caps, and weak rope, none of which are included as part of this request. Proposed Rule FEIS at 284-285, Table 6.22.

any fishermen to stop fishing, and are targeted at areas of the ocean that are mostly offshore, away from inshore areas where the majority of lobster landings occur.[211] Time and area closures could provide an opportunity for New England lobster fishermen to increase efficiency and achieve similar or higher profits. A recent study by the Woods Hole Oceanographic Institute comparing lobster fishing in Canada and the U.S. concluded that fishing with less gear and for a shorter season could improve profitability.[212] Measures such as limited seasons, catch quotas, and gear restrictions often reduce associated fishing costs (fuel, bait, gear, vessel maintenance) while ensuring target species are bigger and more abundant.[213] Massachusetts fishermen have achieved record high landings since the implementation of trap/pot seasonal closures to protect right whales, especially within the statistical reporting areas most affected by the closures.[214] Similarly, a study showed that the Maine lobster fishery could reduce traps with little impact on total catch.[215] Thus, available evidence does not support industry claims that U.S. lobster landings will fall if fishing effort is reduced. In contrast, in both Maine and Massachusetts, an actual or presumed drop in effort has correlated with record high landings.[216] It is likely that some individual fishing businesses would be impacted by vertical line closures, since not all fishermen have equal ability to move their gear to other locations. However, the fishing industry has proven to be innovative and adaptable, and the advance of ropeless fishing gear technology would allow fishing to continue fishing inside areas closed to vertical line trap/pot fishing gear.

5. U.S. Government Officials Recognize That the Status of Right Whales Is Dire, Immediate Action Is Necessary to Save Them, and That the Forthcoming Final Rule Will Neither Meet Legal Requirements Nor Reduce the Impacts From Mortalities and Serious Injuries Caused by Entanglements to Negligible Amounts

The right whale crisis and the need for immediate action to reduce the incidental MSI of right whales has been repeatedly recognized by U.S. government officials beginning with NMFS' declaration of the current UME (which by definition demands an "immediate response") in 2017.[217] On July 3, 2019, Chris Oliver, Assistant Administrator for NMFS, stated "[w]ith fewer than 95 breeding females left, protecting every individual is a top priority. Right whales cannot withstand continued losses of mature females—we have reached a critical point."[218] On August 12, 2019 Mr. Oliver stated, "increased efforts are needed by both countries [U.S. and Canada] in

[211] NOAA Fisheries, Fisheries of the United States reports, 2000-2017.
[212] Myers, H. J. and Moore, M.J. (2019). Reducing effort in the U.S. American lobster (*Homarus amreicanus)* fishery to prevent North Atlantic right whale (*Eubalaena glacialis*) entanglements may support higher profits and long-term sustainability. Woods Hole Oceanographic Institution.
[213] Id.
[214] Myers, H. J. and Moore, M.J. (2019) (Figures). Reducing effort in the U.S. American lobster (*Homarus amreicanus)* fishery to prevent North Atlantic right whale (*Eubalaena glacialis*) entanglements may support higher profits and long-term sustainability. Woods Hole Oceanographic Institution.
[215] Wilson, C. (2010). Manipulative Trapping Experiments in The Monhegan Island Lobster Conservation Area. Maine DMR.
[216] Myers, H. J. and Moore, M.J. (2019) (Figures). Reducing effort in the U.S. American lobster (*Homarus amreicanus)* fishery to prevent North Atlantic right whale (*Eubalaena glacialis*) entanglements may support higher profits and long-term sustainability. Woods Hole Oceanographic Institution.
[217] NOAA Fisheries. 2017-2021 North Atlantic Right Whale Unusual Mortality Event; 16 U.S.C. § 1421(h)(6).
[218] NOAA Fisheries, Leadership Message: Immediate action needed to save North Atlantic right whales, (July 3, 2019).

order to provide comprehensive protection for this transboundary species."[219] On October 2, 2019 Mr. Oliver stated, "protecting every individual is a priority in order to avoid extinction."[220] On October 17, 2019 NMFS published a document stating that "North Atlantic right whales don't live long enough to die of old age because they are often killed by collisions with vessels and entanglement in fishing gear" and that "entanglement reduction efforts continue to be critical for reducing right whale deaths."[221] Despite repeatedly recognizing the existing crisis for right whales, NMFS has taken no significant actions to alleviate the emergency.

On November 13, 2019 U.S. Massachusetts Senators Markey and Warren sent a letter to NOAA requesting that the U.S. hold Canada accountable when importing seafood from Canada, and stressed that "[t]he urgency of the right whale situation demands expedited action, not delay."[222] On December 2, 2019 NMFS right whale biologist Barbara Zoodsma concluded that "North Atlantic right whales are in serious trouble."[223] On March 1, 2021, The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, analyzed the Proposed Rule and found "NMFS's proposed amendment to be substantially inadequate to meet the requirements of the MMPA, and therefore in need of extensive revision."[224] Because right whales are highly endangered, immediate action must be taken to prevent further unlawful take of right whales.

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It is beyond doubt that the continuing incidental MSI of North Atlantic right whales in the American lobster and Jonah crab fisheries and the repeated and continuing delay in rulemaking for measures to protect them is having a "more than negligible" impact on the species and constitutes an emergency under the MMPA. Human-caused deaths, serious injuries, and sub-lethal takes of right whales are occurring at an alarming rate, and reproduction has plummeted. The most recent delays in rulemaking efforts mean that there will not be any changes on the water that protect right whales from entanglement for at least a year, at minimum. Worse, the measures NMFS has indicated will be contained in the Final Rule will be insufficient to reduce MSI below the legally required biological threshold (PBR) that can spur recovery, and NMFS has made clear through its "Conservation Framework" that it does not intend to achieve this level of reduction for another 10 years, after several more phases of rulemaking.[225] This is too long to wait for measures that will prevent the continued decline of this critically endangered species. Therefore, the Secretary must determine that the level of incidental MSI occurring in the American lobster fishery is resulting in, or is likely to result in, an impact that is more than negligible on right whales and fulfill her mandatory duty under the MMPA to issue emergency

[219] NOAA Fisheries. Leadership Message (Aug 12, 2019). U.S. and Canada Officials Discuss Next Steps in Right Whale Protections.
[220] NOAA Fisheries. Leadership Message (Oct. 2, 2019). Maine Association's Decision Disappoints, but Work with Fishermen to Lower Risk to Whales Will Proceed.
[221] NOAA Fisheries. (Oct. 17, 2019). 10 things you should know about North Atlantic right whales,
[222] Nov. 13, 2019. Letter from Senators Markey and Warren to Neil Jacobson of NOAA.
[223] NOAA Fisheries. (Dec. 2, 2019). North Atlantic right whales spotted off East Coast.
[224] March 1, 2021. Letter from Marine Mammal Commission to Michael Pentony, Regional Administrator, NMFS providing "Comments on Proposed Amendments to the Atlantic Large Whale Take Reduction Plan," at p. 2.
[225] 2021 BiOp at 224, 478-79.

regulations significantly reducing the risk of entanglement of right whales by the American lobster fishery.[226]

B. The Secretary Should Exercise Her Authority to Issue Emergency Regulations Under the ESA

The ESA grants the Secretary broad authority to protect endangered species to meet the ESA's legal requirements, and explicitly authorizes the Secretary to use emergency action to prevent take that poses a "significant risk to the well-being" of an endangered species such as the right whale.[227] As detailed above, the current level of take of right whales, including mortalities and serious injuries and the sub-lethal effects of entanglement in the American lobster fishery, is significantly above what NMFS currently estimates the species can biologically sustain.[228] This level of take is causing significant risk to the well-being of the right whale and jeopardizing the right whale's continued existence. There was no incidental take statement for this fishery for many years,[229] thus every entanglement resulting in harm to a right whale by the American lobster fishery (which was, in effect, every entanglement) violated Section 9 of the ESA.[230] Although the 2021 BiOp purports to legally authorize a certain level of non-lethal right whale takes, it does not authorize any lethal takes of rights whales.[231] This is despite the BiOp recognizing that such lethal takes (and serious injuries) will continue to occur, and at a rate up to several times above PBR.[232] Therefore, the Secretary should exercise her emergency authority immediately to significantly reduce the risk of entanglement and prevent right whale takes, including the unlawful mortalities and serious injuries of right whales, occurring in the fishery.

Intertwined with the MMPA rulemaking delay, the ESA Section 7 consultation for the American lobster and Jonah crab fisheries was re-initiated in October 2017, but the statutory deadlines for completing this consultation were routinely missed.[233] Based on statements of NMFS staff, despite there being no apparent legal authority for doing so, the Secretary delayed completing the consultation and BiOp until the ALWTRP rulemaking process was nearly completed.[234] In the meantime, the American lobster fishery operated for more than six years under a 2014 BiOp that, like all right whale BiOps that proceeded it, determined that the fishery could entangle, seriously

[226] 16 U.S.C. §§ 1371(a)(5)(E)(iii), 1387(g).
[227] 16 U.S.C. § 1533(b)(7).
[228] *Supra* at petition section III.A.
[229] *CBD v. Ross*, No. 118-cv-112, slip op. at 19.
[230] 16 U.S.C §§ 1536(b)(4), 1538(a)(2); 50 C.F.R. § 402.14(g)(7), (i)(1).
[231] 2021 BiOp at 390-91. As described further below, because of the BiOp's reliance on future actions to reduce MSI below PBR for the fishery, among other reasons, it does not meet ESA, MMPA, or MSA legal requirements.
[232] *Id.* at 224, 478-79 (The BiOp states that the required level of MSI reduction will not occur until after several more undefined rulemakings occur 10 years from now. "In 2030, further reduction will be implemented. These reductions will achieve the additional level of risk reduction (expected to be up to an 87% additional reduction) in M/SI of right whales as a result of entanglement with gear used in the federal fisheries that is needed at the time to ensure the likelihood of survival and recovery of the species.").
[233] United States District Court of the District of Columbia. Case: 1:18-cv-00112-JEB., Doc. 71. Defendants' Memorandum in support of Motion to Stay.
[234] United States District Court of the District of Columbia. Case: 1:18-cv-00112-JEB., Doc 111, Federal Defendants' Remedy Response Brief, Doc 111-1 Fourth Declaration of Jenifer Anderson at ¶ 15.

injure, and kill right whales.[235] The 2014 BiOp violated the ESA because it did not include a statutorily required incidental take statement, and was declared invalid by a federal court.[236] As noted in Section II. C. above, when a BiOp concludes that an agency action will cause take of an endangered species, the agency must issue an incidental take statement specifying any allowable level of take. Thus, all prior takes of right whales in the lobster fishery have been unlawful,[237] and all lethal takes will continue to be illegal under the 2021 BiOp.[238] In sum, despite the fact that the lobster fishery operated under an unlawful BiOp for over 6 years, that a Section 7 consultation was reinitiated over three years ago, and that the Secretary was required to conclude that consultation in 90 days and produce a BiOp 45 days thereafter,[239] the Secretary failed to produce an updated BiOp for years. A new BiOp has now been issued, but its own terms recognize it is inadequate and does not meet ESA legal requirements.[240]

Under the ESA, the Secretary has an ongoing responsibility to prevent unauthorized takes of the endangered right whale and ensure that her continued authorization of the American lobster fishery does not jeopardize the continued existence of the species.[241] The ESA specifically authorizes emergency action to prevent harm to an endangered species if the harm poses a "significant risk to the well-being" of that species.[242] NMFS concedes that the American lobster fishery causes an estimated 2.2 observed MSI to right whales per year, and at least 4.3 total MSI, which represent more than three to seven times the overall PBR for the species.[243] NMFS also knows that the sub-lethal effects of entanglements are a significant risk to the right whales, and concedes that "protecting every individual is a priority in order to avoid extinction."[244] Each take of a right whale resulting in mortality or serious injury is unlawful under the ESA and jeopardizes the right whale's likelihood of survival and recovery. The only rational conclusion for the Secretary is that the current level of right whale take in the American lobster fishery poses a significant risk to the well-being of the right whale. Emergency action under the ESA is required and necessary to prevent unauthorized, unlawful incidental take of the right whale, to protect right whales from a significant risk to their well-being and ensure the American lobster and Jonah crab fisheries do not jeopardize the continued existence of the right whale. NMFS must act immediately to significantly reduce the risk of entanglement and prevent unlawful take under the ESA by implementing an emergency rule to protect right whales.

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[235] NMFS. Biological Opinion. Endangered Species Act Section 7 Consultation on the Continued Implementation of Management Measures for the American Lobster Fishery [Consultation No. NER-2014-11076], (July 2014).
[236] *CBD v. Ross*, No. 118-cv-112, slip op. at 19, ("In short, the Service's failure to include an [incidental take statement] in its 2014 BiOp after finding that the American lobster fishery had the potential to harm the North Atlantic right whale at more than three times the sustainable rate is about as straightforward a violation of the ESA as they come. The Court therefore declares the 2014 BiOp to be invalid under the Endangered Species Act.").
[237] 16 U.S.C §§ 1536(b)(4), 1538(a)(2); 50 C.F.R. § 402.14(g)(7), (i)(1).
[238] Id.
[239] 50 C.F.R. § 402.14(e).
[240] United States District Court of the District of Columbia. Case: 1:18-cv-00112-JEB., Doc 111, Federal Defendants' Remedy Response Brief, Doc 111-1 Fourth Declaration of Jenifer Anderson at ¶ 15.
[241] 16 U.S.C §§ 1536(a)(2), (b)(4), 1538(a)(1)-(2), 1539(a)(1)(B); 50 C.F.R. § 402.14(i)(5).
[242] 16 U.S.C. § 1533(b)(7).
[243] Letter from Colleen Coogan of NMFS to the Atlantic Large Whale Take Reduction Team (April 5, 2019).
[244] NOAA Fisheries. Leadership Message. (Oct. 2, 2019). Maine Association's Decision Disappoints, but Work with Fishermen to Lower Risk to Whales Will Proceed.

C. The Secretary Should Exercise Her Authority to Issue Emergency Regulations Under the MSA

The Secretary should also use her authority under the MSA to issue emergency regulations to protect right whales. The MSA requires the Secretary to ensure that all fishery management plans ("FMPs"), plan amendments, and regulations implementing FMPs comply with the requirements of the MSA and all other applicable laws and requirements prior to approval.[245] The American lobster and Jonah crab FMPs and accompanying regulations do not comply with the MMPA and the ESA. They allow for unlawful take, including mortalities and serious injuries of right whales, that are causing more than negligible impacts to the species and posing a significant risk to its well-being.[246]

There is no question that the recent events and recently discovered circumstances described above present serious management and conservation problems in the American lobster fishery.[247] The unlawful levels of mortality and serious injuries suffered by right whales due to entanglements in vertical line trap/pot fishing gear used in this fishery are having a long-term adverse effect on right whales and the marine environment by preventing the stock of right whales from reaching their optimum sustainable population level and threatening their existence as a significant functioning element of the ecosystem.[248] In addition, the ongoing delay in the development and implementation of the required conservation measures to reduce mortalities and serious injuries below sustainable levels (PBR) through rulemaking is allowing, and will continue to allow for up to 10 years under the unlawful Conservation Framework described above, for the continued take, mortality and serious injury of right whales. These failures must be addressed through emergency regulations requiring immediate implementation of the requested area closures and related measures requested in this petition.[249] The Pew Charitable Trusts filed a substantially similar petition for emergency and permanent rulemaking more than one year ago and the 2020 Petition has not been considered and responded to as required by law. Since that time, more right whales have suffered deaths or serious injuries due to entanglement, yet no measures have been implemented in U.S. waters to address this crisis. The Secretary must exercise her authority provided by Section 305(c) of the MSA to implement emergency regulations in the American lobster and Jonah crab fisheries to reduce the risk of entanglement and prevent the unauthorized take of right whales.[250]

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The situation for the North Atlantic right whale demands immediate action. No rules or measures to protect them have been implemented in U.S. waters since the current emergency started in 2017, and the species cannot wait another year for a Final Rule to be implemented, especially one that contains new management measures that NMFS itself recognizes are

[245] 16 U.S.C. § 1854(a), (b).
[246] *Supra* at petition sections III. A and B.
[247] 62 Fed. Reg. 44421-42 (Aug. 21, 1997).
[248] *See* Final Rule Issuing Emergency Temporary Regulations Creating an Immediate Closure in the Drift Gillnet Fishery to Protect Sperm Whales. 78 Fed. Reg. 54547 (2013).
[249] 62 Fed. Reg. 44421-42 (Aug. 21, 1997).
[250] 16 U.S.C. § 1855(c)(1).

inadequate to protect the species. Right whales also cannot wait ten years for the speculative multi-phase rulemaking that NMFS promises will finally reduce MSI below biologically sustainable levels (PBR) and bring the American lobster fishery into compliance with applicable law. The Secretary's ongoing authorization of the American lobster fishery fails to comply with statutory requirements of the MMPA, the ESA, and the MSA and is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law, in violation of the APA.[251] Right whales continue to congregate and migrate through areas of the ocean that are heavily fished with the vertical line trap/pot gear authorized in the lobster fishery.[252] Swift and clear emergency protections for the species are necessary. Closures to vertical line trap/pot gear fishing in the American lobster and Jonah crab fisheries, where the co-occurrence in time and by location of heavy, lethal fishing gear with right whales is highest, can be implemented quickly through emergency regulations and will provide significant reduction in the risk of further entanglements in these fisheries. These closures will provide important, legally-required protections for right whales until adequate permanent rulemaking can be completed and long-term protections are finalized and implemented. Because the closures will only apply to fishing with gear using vertical lines, instead of the entire American lobster fishery, there will be incentives for the accelerated development of non-vertical line trap/pot gear, (commonly called "ropeless" gear), that can be permitted for use in the closure areas.[253] The Secretary must exercise her authority to promulgate emergency regulations to prevent the further, unlawful take of right whales.[254]

IV. PETITIONERS REQUEST INTERIM REGULATIONS ESTABLISHING TARGETED SEASONAL AND YEAR-ROUND CLOSURES TO VERTICAL LINE TRAP/POT GEAR FISHING IN THE AMERICAN LOBSTER AND JONAH CRAB FISHERIES TO PREVENT THE CONTINUED UNLAWFUL INCIDENTAL TAKE OF NORTH ATLANTIC RIGHT WHALES

Petitioners request emergency regulations to protect right whales by establishing targeted seasonal and year-round closures to vertical line trap/pot gear fishing in the American lobster fishery where the greatest risk to right whales exists due to the temporal and spatial co-occurrence of right whales and lethal fishing gear. As established above, emergency regulations are required because the level of incidental MSI from the American lobster fishery, along with the sub-lethal effects of entanglement, is having a "more than negligible" impact on right whales.[255] The requested seasonal and year-round closures and related measures necessary to effectively implement them are consistent with the existing take reduction plan, which currently includes seasonal closures to trap/pot gear in certain areas of high co-occurrence of right whales and fishing gear. To the extent the Secretary declines the Petition for the requested vertical line trap/pot gear closures because they are viewed as not consistent with the existing take reduction plan "to the maximum extent practicable," or for any other reason, the Secretary is still required by the MMPA to implement other emergency regulations that immediately protect right whales and reduce incidental MSI in the fishery. Petitioners have identified six areas in U.S. waters

[251] 5 U.S.C. § 553.
[252] NMFS (2015). Jonah Crab Interstate Fishery Management Plan, p. 59-66 (Figures 4 - 6).
[253] See *supra*, at fn. 34.
[254] 16 U.S.C. §§ 1371(a)(5)(E)(iii), 1387(g), 1533(b)(7), 1855(c)(1).
[255] 16 U.S.C. §§ 1371(a)(5)(E)(iii), 1387(g).

where right whales co-occur with significant amounts of trap/pot gear using vertical lines, including some of the heaviest and most lethal gear – one area in Southern New England south of Martha's Vineyard and Nantucket, and five areas in the Gulf of Maine where whales aggregate to feed and migrate. A similar Southern New England closure area and two of the Gulf of Maine closure areas were identified and analyzed by NMFS in its recent Proposed Rule, Draft Environmental Impact Statement, and Final Environmental Impact Statement. We recognize that in considering our requested rule, the Secretary retains discretion to make reasonable adjustments to the proposed boundaries or timing of the closures based on the best scientific information available. We request that the Secretary immediately implement closures to vertical line trap/pot gear in these areas of right whale of co-occurrence to reduce the risk of entanglement and prevent unlawful takes of this species.

Targeted, seasonal closures to vertical lines in trap/pot fisheries represent the most effective and fastest way to reduce the most serious risk of right whale entanglement and protect the species from the threat of extinction while standard APA ("permanent") rulemaking proceeds. In prior circumstances when there was a spike in the number of right whale entanglements that were adversely affecting their annual rates of recruitment and survival, NMFS used its MMPA emergency authority to issue emergency regulations to protect right whales through closures to lobster pot gear in areas of the ocean where right whales and fishing gear co-occurred, specifically in Cape Cod Bay and the Great South Channel.[256] These emergency regulations were put in place to protect right whales while permanent regulations, including potential gear modifications, were developed and considered.[257] NMFS has also previously issued emergency regulations to protect right whales through a closure using ESA authority after finding that gillnet fishing in the core right whale calving area off the Southeast U.S. coast during calving season constituted a significant risk to the well-being of right whales.[258] And the Secretary has previously exercised emergency authority under the MSA to create a fishing closure in the drift gillnet fishery on the West Coast to prevent the take of sperm whales.[259]

[256] 62 Fed. Reg. 16,109 (April 4, 1997). Note that in that instance, NMFS used the "immediate and significant adverse impact" threshold for action that applies to all marine mammals under section 118 of the MMPA. There, as here, the more protective "more than negligible impact" threshold for action under section 101 applicable to endangered marine mammals could have been applied instead.

[257] Id.

[258] 71 Fed. Reg. 66,470 (2006).

[259] NMFS has previously created an emergency fishing closure to protect endangered marine mammals from entanglement in fishing gear using its authority under the MSA. In the drift gillnet fishery on the West Coast of the U.S. NMFS created an interim closure to protect endangered sperm whales from entanglement. Final rule issuing emergency temporary regulations creating an immediate closure in the drift gillnet fishery to protect sperm whales, 78 Fed. Reg. 54547 (Sept. 4, 2013).

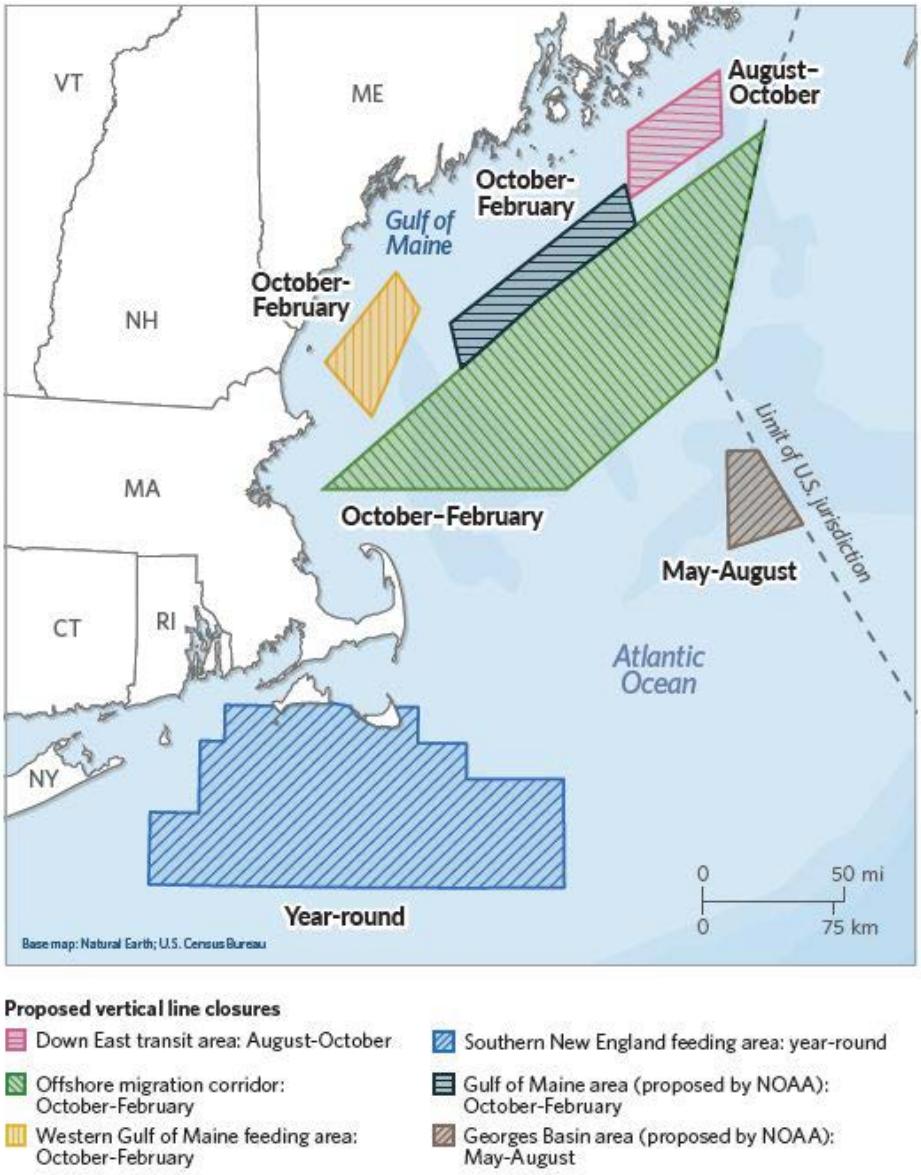


Figure 2: Proposed closures to vertical line trap/pot gear developed by The Pew Charitable Trusts and requested in this petition for emergency and permanent rulemaking.[260]

[260] The vertical closure proposed south of Martha's Vineyard and Nantucket is based on whale sightings in that area provided by the North Atlantic Right Whale Consortium, "Scientific Sightings Database" (2017-2018), (March 11, 2020); NOAA; Natural Earth; U.S. Census Bureau. NOAA Fisheries. Scientific Sightings Database. The North Atlantic right whale sightings data on the NOAA website is continually updated and authenticated. The Secretary should consider the most current and up to date sightings data available when making a determination regarding the emergency action request in this petition. Raw sighting data from the NARWC database are not effort-corrected and the management documents in which they are used are not peer reviewed. Distributional patterns based on these data are likely to be biased by where, and when, surveys were conducted. The areas and months selected for vertical line closures in the Gulf of Maine are based on the mapping by Kraus, et. al. using NARWC data, the Record, et. al. data and map, whale watch data, and the 2019 Roberts, et. al., habitat-based cetacean density maps reproduced below.

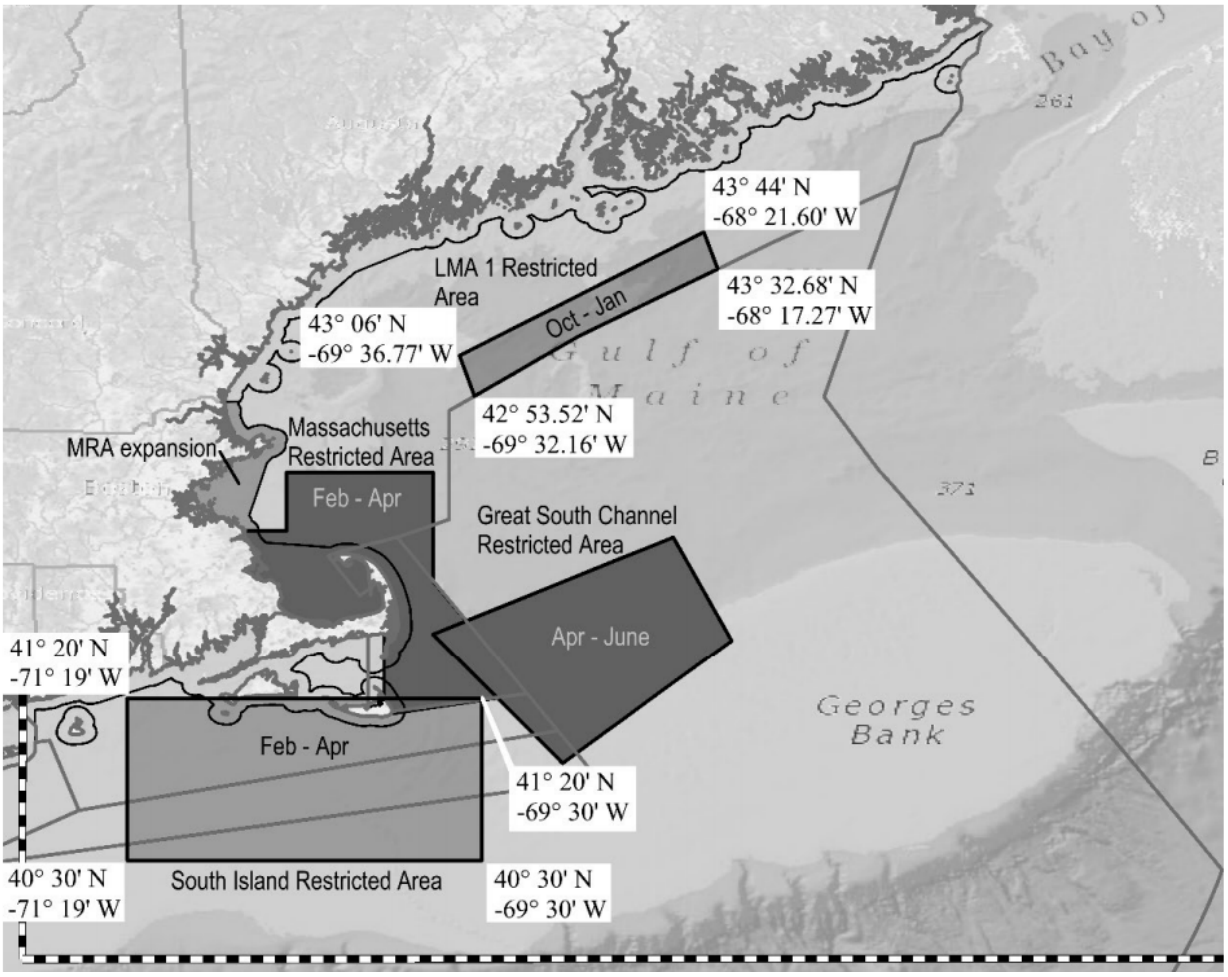


Figure 3. The South Island Restricted Area included in the Preferred Alternative in the Proposed Rule FEIS would prohibit fishing with buoy line and has similar boundaries to the requested vertical line trap/pot closure, however, the requested closure would be year-round, instead of only from February through April. closure south of Martha's Vineyard and Nantucket, [261]

[261] Proposed Rule FEIS, Vol. 1. Figure 1.2 at p. 11.

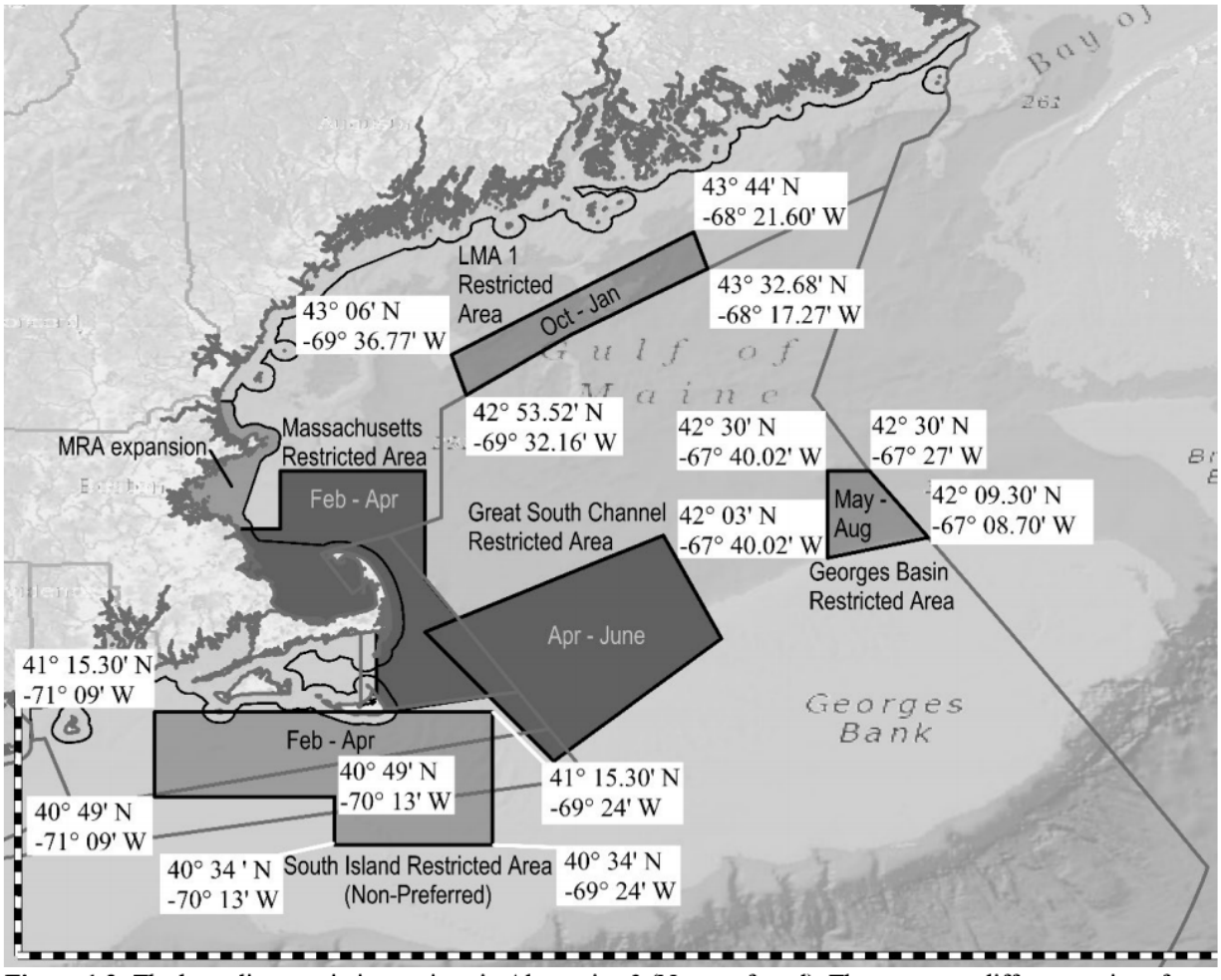


Figure 4: Map of closures in the non-preferred alternative in the Proposed Rule FEIS. As discussed below, this petition for emergency and permanent rulemaking requests that the LMA1 Restricted Area be extended from October through February, as proposed in the Proposed Rule DEIS, as well as the Georges Basin Restricted Area proposed from May through August.

The requested closures to vertical line trap/pot gear fisheries would simply remove risk where and when whales are present and allow for vertical line fishing to be shifted to times and areas with lower risk. Fishing for lobster and crab without the use of persistent vertical buoy lines would still be permitted. Moreover, although economic impacts do not take precedence over the need to eliminate unlawful take in emergency situations under the ESA and MMPA,[262] or to meet the conservation mandates under the MSA, the best scientific and commercial data available indicate that the economic impacts of the requested closures would be minimal compared to other measures that could be required, such as gear modifications. The requested regulations do not require any reduction in traps or for any fishermen to stop fishing, and the majority of lobster landings occur in areas closer to shore that are not included in these proposed closures.[263]

[262] *Kokechik Fishermen's Ass'n v. Sec'y of Comm.*, 839 F.2d 795, 800, 802 (D.C. Cir. 1988) (citing 16 U.S.C. § 1371(a)(2)).
[263] NOAA Fisheries, Fisheries of the United States reports, 2000-2017 (website last visited July 16, 2021).

Our groups specifically request that the Secretary:

A. Immediately establish a year-round closure to all vertical line trap/pot gear fishing in the high right whale density area south of Martha's Vineyard and Nantucket in the northern half of Statistical Areas 526 and 537.

Requested Rule:

> **Southern New England Year-Round Closure.** A year-round closure to vertical line trap/pot gear fishing inclusive of all state and federal waters south of Martha's Vineyard and Nantucket in Statistical Areas 526 and 537 above the 40 degrees, 30 minutes North line.

Discussion:

An emergency vertical line closure south of Martha's Vineyard and Nantucket to protect North Atlantic right whales is required by law and supported by science. A significant increase in right whale presence south of Martha's Vineyard and Nantucket in the northern half of Statistical Areas 526 and 537 above the 40 degrees, 30 minutes North line has been documented since at least 2016.[264] (*See* Figures 5 and 6 below). This closure area includes more co-occurrence of right whales and vertical line gear than any other area in the Northeast.[265] NMFS evaluated a spatially similar closure in the Draft Environmental Impact Statement as the non-preferred Alternative 3 of the Proposed Rule and is proposing this closure as the Preferred Alternative in the Final Environmental Impact Statement (*See* Figure 3 above, South Island Restricted Area).[266] However, NMFS only proposed closing the area seasonally from February 1 through April 30,[267] and a seasonal closure of this area would be insufficient given that the year-round presence and density of right whales in this area has been established by both aerial sightings and acoustic monitoring and continues currently.[268]

[264] NMFS. (April 20, 2019). TRT Meeting Risk Reduction Tool PPT, slides 22-25; NOAA North Atlantic right whales sighting interactive map, NMFS Island and MA 2019 and 2020 Dynamic Management Areas – Spreadsheets 1, 2, and 3; Leiter, et. al .(2017) North Atlantic right whale Eubalaena glacialis occurrence in offshore wind energy areas near Massachusetts and Rhode Island, USA. Endang. Species Res. Vol. 34: 45–59.
[265] NMFS. (April 20, 2019). TRT Meeting Risk Reduction Tool PPT slides 22-25.; NOAA North Atlantic right whales sighting interactive map; NMFS Island and MA 2019 and 2020 Dynamic Management Areas – Spreadsheets 1, 2, and 3; Leiter, et. al .(2017) North Atlantic right whale Eubalaena glacialis occurrence in offshore wind energy areas near Massachusetts and Rhode Island, USA. Endang. Species Res. Vol. 34: 45–59.
[266] Proposed Rule DEIS at 3-44-74; Proposed Rule FEIS at 65-108.
[267] Id.
[268] NMFS Island and MA 2019, 2020, and 201 Dynamic Management Areas – Spreadsheets 1, 2, and 3.

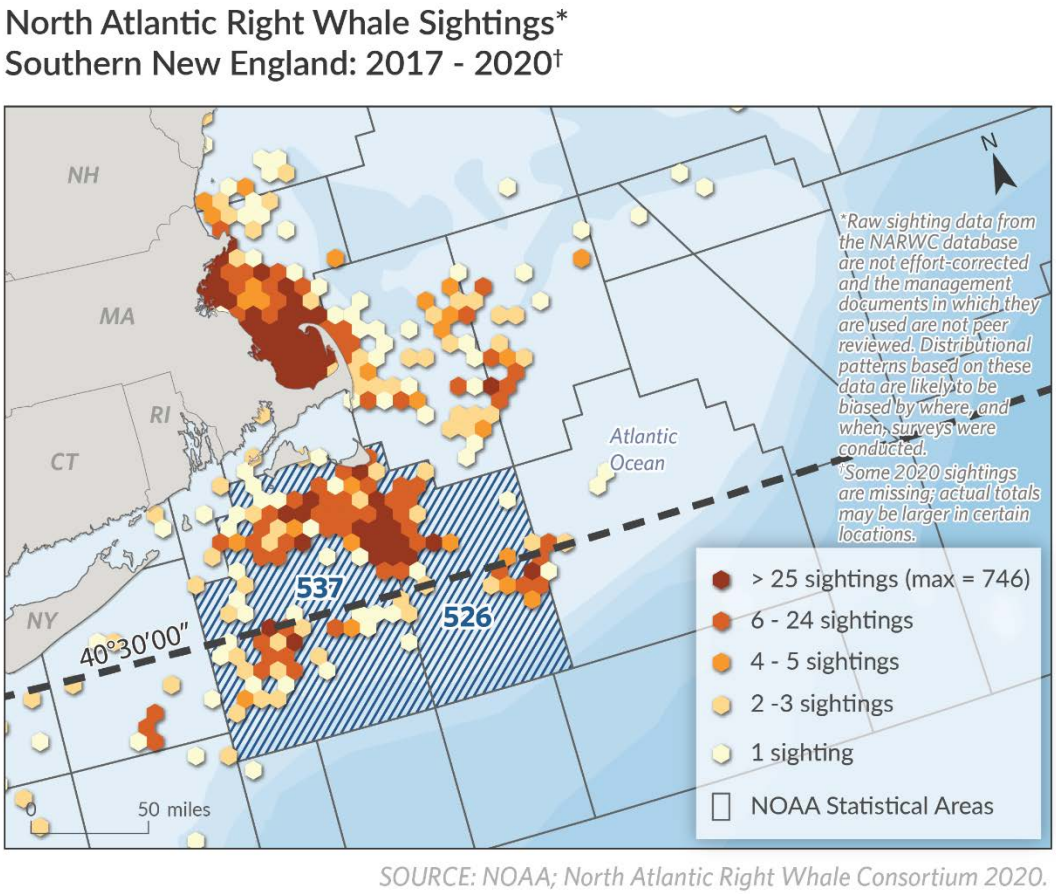


Figure 5: Map developed by The Pew Charitable Trusts. Sources: North Atlantic Right Whale Consortium, "Scientific Sightings Database" (2017-2020), (June 16, 2021); NOAA; Natural Earth; U.S. Census Bureau. Note: Raw sighting data from the NARWC database are not effort-corrected and the management documents in which they are used are not peer reviewed. Distributional patterns based on these data are likely to be biased by where, and when, surveys were conducted. Also, some 2020 sightings are missing; actual totals may be larger in certain locations.[269]

[269] NOAA Fisheries. Scientific Sightings Database. The North Atlantic right whale sightings data on the NOAA website is continually updated and authenticated. The Secretary should consider the most current and up to date sightings data available when making a determination regarding the emergency action request in this petition.

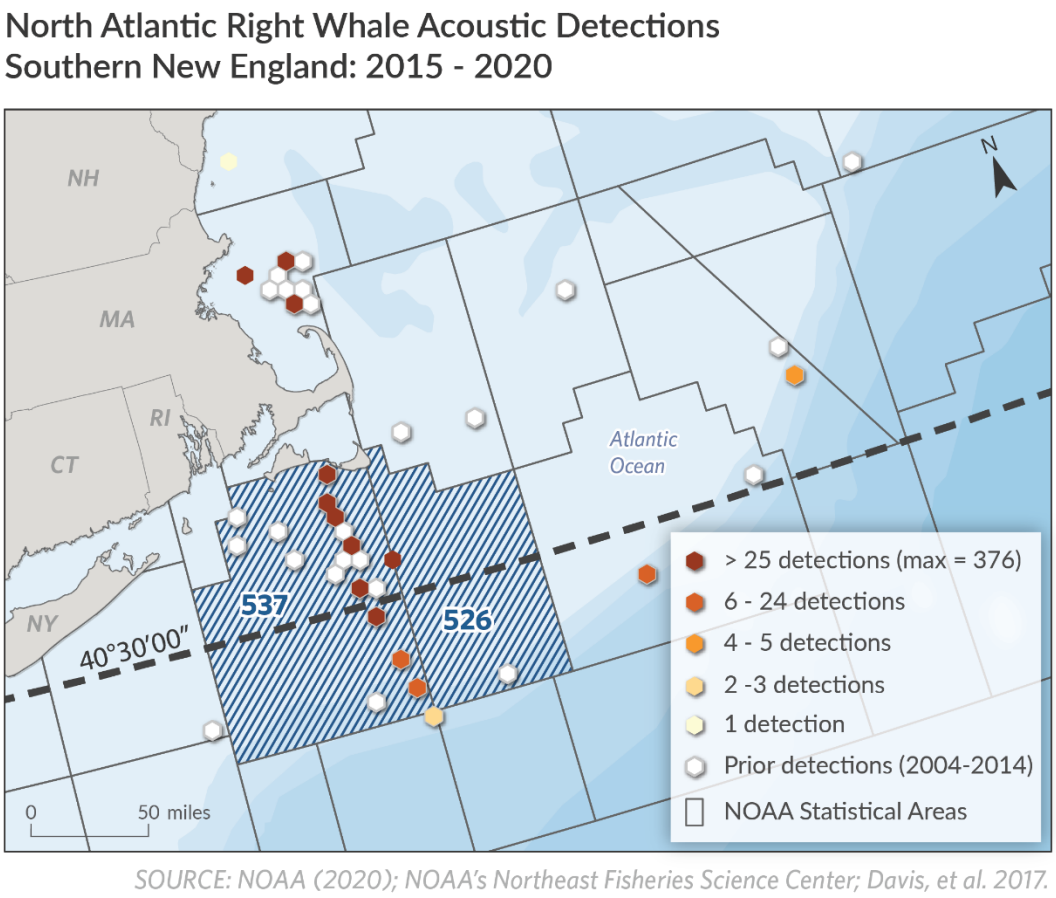


Figure 6: Map developed by The Pew Charitable Trusts. Sources: G.E. Davis et al., "Long-Term Passive Acoustic Recordings Track the Changing Distribution of North Atlantic Right Whales (*Eubalaena glacialis*) from 2004 to 2014" (2017), (2017/10/18), https:// doi.org/10.1038/s41598-017-13359-3; NOAA's Northeast Fisheries Science Center, "North Atlantic Right Whale Acoustic Detections" (2020); NOAA; Natural Earth; U.S. Census Bureau[270]

While the densest aggregations of right whales occur in this area in late fall, winter, and early spring, the whales are present year-round.[271] Throughout the last two and one-half years, NMFS has implemented voluntary vessel speed restrictions, referred to as "Dynamic Management Areas" ("DMAs"), in this area to reduce risk of ship strikes to right whales.[272] Aerial surveys are conducted to document the presence of right whales and right whale aggregations, and acoustic detections are monitored as well. When right whale aggregations are identified, NMFS creates a DMAs in the area, which has occurred in almost every month between January 2019 and May 2021.[273]

[270] NOAA Fisheries. Passive Acoustic Monitoring of North Atlantic Right Whales. The passive acoustic data monitoring North Atlantic right whales is continually updated and authenticated. The Secretary should consider the most current and up to date sightings data available when making a determination regarding the emergency action request in this petition.
[271] NMFS Island and MA 2019, 2020, and 2021 Dynamic Management Areas – Spreadsheets 1, 2, and 3.
[272] NOAA. March 14, 2020. Active Voluntary Dynamic Management Areas.
[273] NMFS Island and MA 2019, 2020, and 2021 Dynamic Management Areas – Spreadsheets 1 , 2, and 3.

2019 Right Whale DMAs

Month	Day	Number of whales	Location
January 2019	2	53	South of Nantucket
	15	100	South of Nantucket
	27	20	South of Nantucket
February 2019	4	11	South of Nantucket
	19	19	South of Nantucket
March 2019	1	10	South of Nantucket
	13	15	South of Nantucket
	28	6	South of Nantucket
April 2019	7	15	South of Nantucket
	23	3	Southwest of Martha's Vineyard
	29	3	South of Martha's Vineyard
May 2019	7	4	Southwest of Martha's Vineyard
	14	4	South of Martha's Vineyard
	15	4	South of Nantucket
	16	5	Southeast of Nantucket
	22	15	Southwest of Martha's Vineyard
	25	9	South of Nantucket
July 2019	15	3	South of Nantucket
	25	7	South of Nantucket
August 2019	3	10	South of Nantucket
	12	9	South of Nantucket
	30	19	Southeast of Nantucket
September 2019		9	Southeast of Nantucket
November 2019	9	3	Southeast of Nantucket
	19	UNK	Southeast of Nantucket
December 2019	12	8	South of Nantucket
	29	14	South of Nantucket

2020 Right Whale DMAs

Month	Day	Number of Right Whales	Location
January 2020	22	58	South of Nantucket
	31	50	South of Nantucket
February 2020	9	14	South of Nantucket
	20	8	South of Nantucket
March 2020	2	66	South & southeast of Nantucket
	12	13	South & southeast of Nantucket
March-August 2020			Surveys stopped due to COVID[274]
August 2020	31	8	South of Nantucket

[274] NMFS' right whale aerial surveillance was suspended on March 20, 2020 because of the coronavirus health pandemic but were resumed in mid-August 2020. Cole, T. Northeast Fisheries Science Center, Email comm. (June 8, 2020).

September 2020	14	7	South of Nantucket
	24	4	South of Nantucket
October 2020	4	3	South of Nantucket
	19	6	South of Nantucket
	31	4	South of Nantucket
November 2020	15	4	Southeast of Nantucket
	17	Acoustic	Southeast of New York City
	20	Acoustic	Southeast of Atlantic City
	29	3	Southwest of Nantucket
	30	Acoustic	Southeast of New York City
December 2020	7	Acoustic	Southeast of Atlantic City
	9	Acoustic	Southeast of New York City
	14	4	Southeast of Nantucket
	20	Acoustic	Southeast of New York City
	20	Acoustic	Southeast of Atlantic City
	30	7	South of Martha's Vineyard
	31	Acoustic	West of Martha's Vineyard

2021 Right Whale DMAs

Month	**Day**	**Number of whales**	**Location**
January 2021	8	8	South of Martha's Vineyard
	9	Acoustic	East of Atlantic City
	13	Marine SP Monitor	East of Atlantic City
	14	3	East of Atlantic City
	15	Acoustic	Southeast of New York City
	15	15	Southeast of Nantucket
	19	Acoustic	Southeast of Atlantic City
	25	Glider	East of Boston
	31	5	South of Nantucket
February 2021	9	Acoustic	Southeast of Atlantic City
	11	3	
	17	Glider	East of Boston
	18	Glider	Southeast of Atlantic City
	21	Glider	Southeast of Atlantic City
	26	12	South of Nantucket Island
	27	Buoy	East of Boston
	27	Glider	Southeast of Atlantic City
March 2021	3	3	East of Virginia Beach
	7	5	South of Martha's Vineyard
	7	5	South of Nantucket Isl.
	16		South of Martha's Vineyard
	16		South of Nantucket Isl.
	26	Glider	
	30		South of Nantucket Island and South of Martha's Vineyard

April 2021	7	8	South of Martha's Vineyard
	8	17	East of Boston, MA
	9	65	South of Nantucket Island
	9	5	Southeast of Chatham, MA
	18	3	East of Boston
	28	46	East of Boston
May 2021	2		North of Cape Cod
	3	3	East of Cape Cod Bay

The acoustic and aerial survey data unambiguously demonstrate that a smaller closure or a closure that was only implemented for a few months out of the year would be inadequate to protect right whales from entanglement in vertical buoy lines in this area. In addition, whale presence in this area can be predicted by the location of right whale's preferred prey: late-stage *Calanus finmarchicus,*[275] a lipid-rich copepod and high energy food source. The location of *Calanus finmarchicus* is often an indicator and predictor of the location of high concentrations of right whales.[276] Plankton research published as far back as 2012 identified the area south of Martha's Vineyard and Nantucket as a right whale feeding area, making this habitat particularly important for right whale growth, reproduction, and survival.[277] (*See* Figure 7 below) Additional research into plankton should be prioritized as this can help predict future feeding hotspots and inform management.

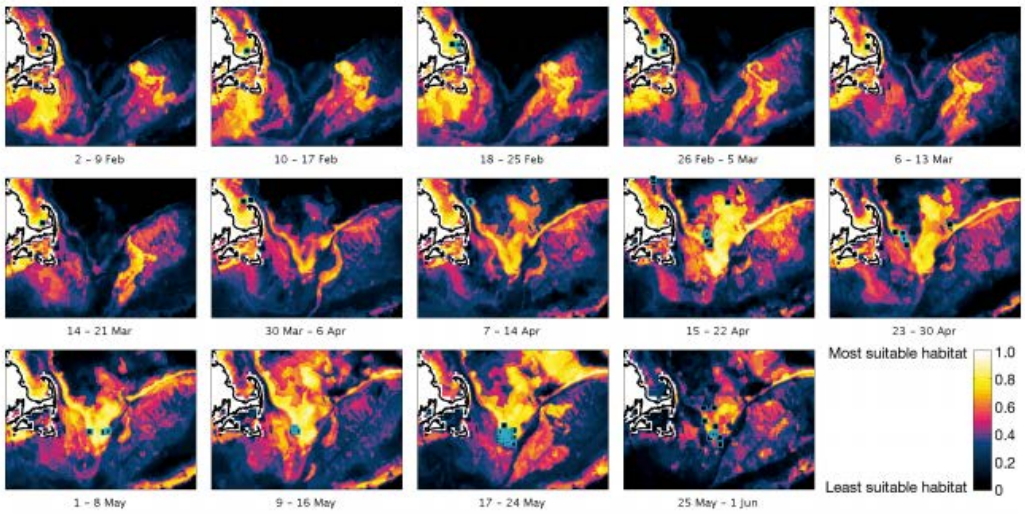


Figure 7: 2012. Pendleton, et. al. Weekly predictions of North Atlantic right whale *Eubalaena glacialis* habitat reveal influence of prey abundance and seasonality of habitat preferences, Vol. 18: 147–161, p. 155.

[275] Record, et. al. (2019). Rapid Climate-Driven Circulation Changes Threaten Conservation of Endangered North Atlantic Right Whales. *Oceanography*, Vol 32: No. 2, p. 163.
[276] Pendleton, et. al. (2012). Weekly predictions of North Atlantic right whale *Eubalaena glacialis* habitat reveal influence of prey abundance and seasonality of habitat preferences, Vol. 18: 147–161, p. 155.; Record, et. al. (2019) at 163.
[277] Pendleton, et. al. (2012) at p. 155.

This area of year-round right whale presence in the northern half of Statistical Areas 537 and 526, above the 40 degrees, 30 minutes North line, is also where some of the heaviest and most lethal vertical line trap/pot fishing gear is used.[278] Lobster fishing in Southern New England and the area south of Martha's Vineyard and Nantucket has remained steady or decreased slightly in recent years.[279] However, the Jonah crab fishery – a trap/pot fishery authorized under the American lobster permit – is bourgeoning,[280] expanding from 2.6 million pounds in 1990[281] to 17.4 million in 2017.[282] Jonah crab harvest began as an incidental catch in the American lobster fishery but the Jonah crab market has expanded, and lobstermen now set legally modified traps for the specific purpose of catching Jonah crabs.[283] Compounding the already existing threat to the right whale, 82 percent of the Massachusetts and Rhode Island Jonah crab landings come from Statistical Areas 537 and 526, [284] the favored right whale feeding grounds south of Martha's Vineyard and Nantucket.[285] Based on NMFS' data, we estimate that 12.7 million pounds of Jonah crab were harvested from Statistical Areas 537 and 526 alone in 2017. Seasonally, much of the Jonah crab landings occur between September 15 and March 15, when right whale congregations are densest.[286] (*See* Figures 8 and 9 below). Finally, the gear used in this area is some of heaviest and thus most dangerous gear for right whales, with a mean number of over 40 traps per trawl,[287] and the thickest endlines (mean of 0.6 inches in diameter).[288] (*See* Figures 10 and 11 below). This combination of significant quantities of heavy gear on thick, unbreakable line in right whales' favored feeding grounds creates a particularly significant risk of severe or lethal entanglements.

[278] NOAA Fisheries, TRT Meeting Risk Reduction Tool PPT (April 20, 2019), slides 21-22.
[279] Atlantic States Marine Fisheries Commission, Jonah Crab Interstate Fishery Management Plan (2015), p. 1.
[280] Id.
[281] Id. at p. 50 (Table 1).
[282] Atlantic States Marine Fisheries Commission, (2018). Review of Atlantic State Marine Fisheries Commission Fishery Management Plan for Jonah Crab, p. 10 (Table 1).
[283] NOAA Fisheries, Final Rule Implementing the Jonah Crab Interstate Fishery Management Plan, 84 Fed. Reg. 10756 (Mar. 22, 2019).
[284] Atlantic States Marine Fisheries Commission, (2015), Jonah Crab Interstate Fishery Management Plan, p. 59 (fig. 4).
[285] Pendleton, et. al. (2012). Weekly predictions of North Atlantic right whale *Eubalaena glacialis* habitat reveal influence of prey abundance and seasonality of habitat preferences, Vol. 18: 147–161, p. 155; NMFS Island and MA DMAs – Spreadsheets 1 and 2.
[286] Atlantic States Marine Fisheries Commission, (2015). Jonah Crab Interstate Fishery Management Plan, p. 60-61 (Figures 5 and 6); NMFS Island and MA 2019, 2020, and 2021 Dynamic Management Areas – Spreadsheets 1,2, and 3.
[287] NOAA Fisheries, (April 20, 2019). TRT Meeting Risk Reduction Tool PPT, slide 23.
[288] Id. at slide 25.

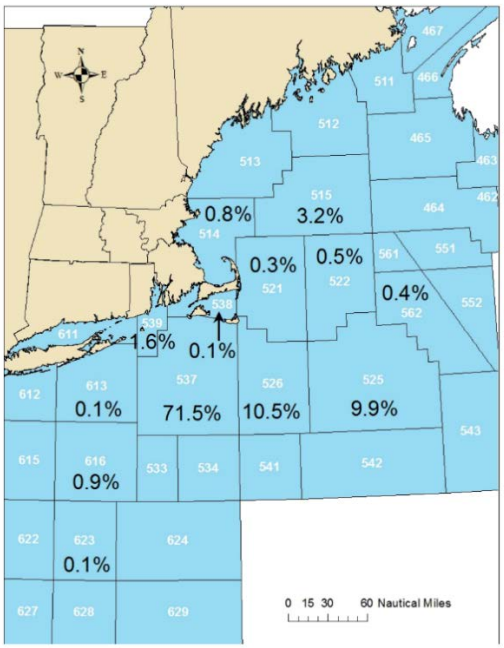


Figure 8: 2015 Massachusetts and Rhode Island Jonah crab landings by area. *Source:* 2015 ASMFS Jonah Crab Interstate Fisheries Management Plan. P. 59.

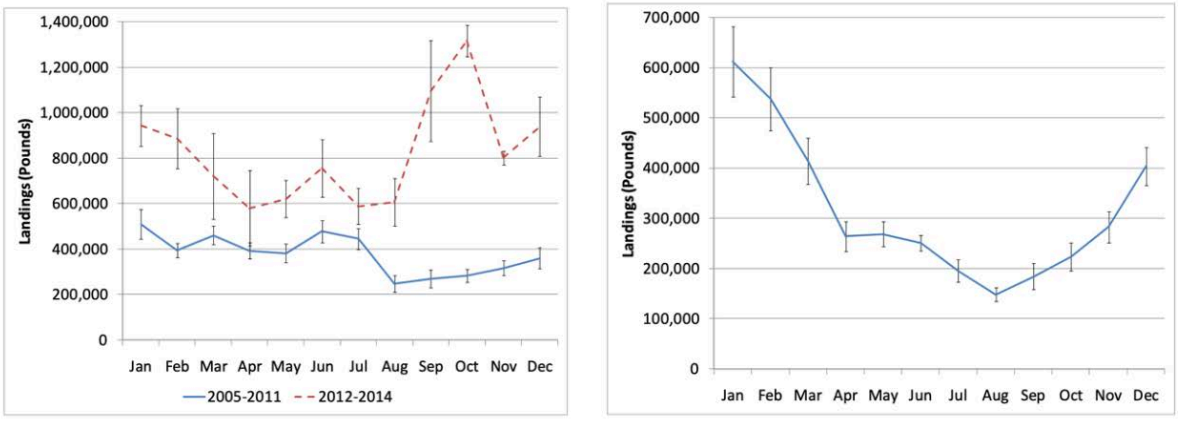


Figure 9: Massachusetts (left) and Rhode Island (right) Jonah crab mean landings (±S.E.) by month (from SAFIS dealer reports). 2015. Jonah Crab Interstate Fishery Management Plan, p. 60-61 (Figures 5 and 6).

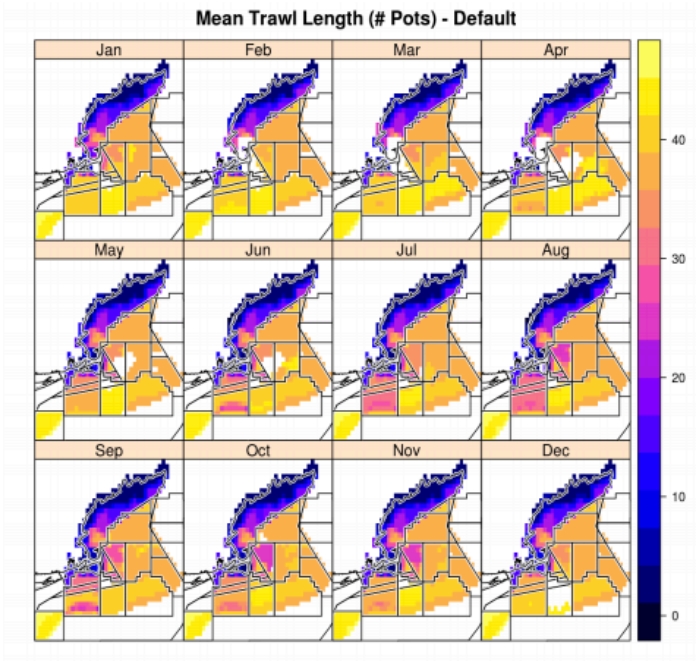


Figure 10: Mean trawl length, number of pots per trawl. *Source*: April 20, 2019, TRT Meeting Risk Reduction Tool PPT, slide 23.

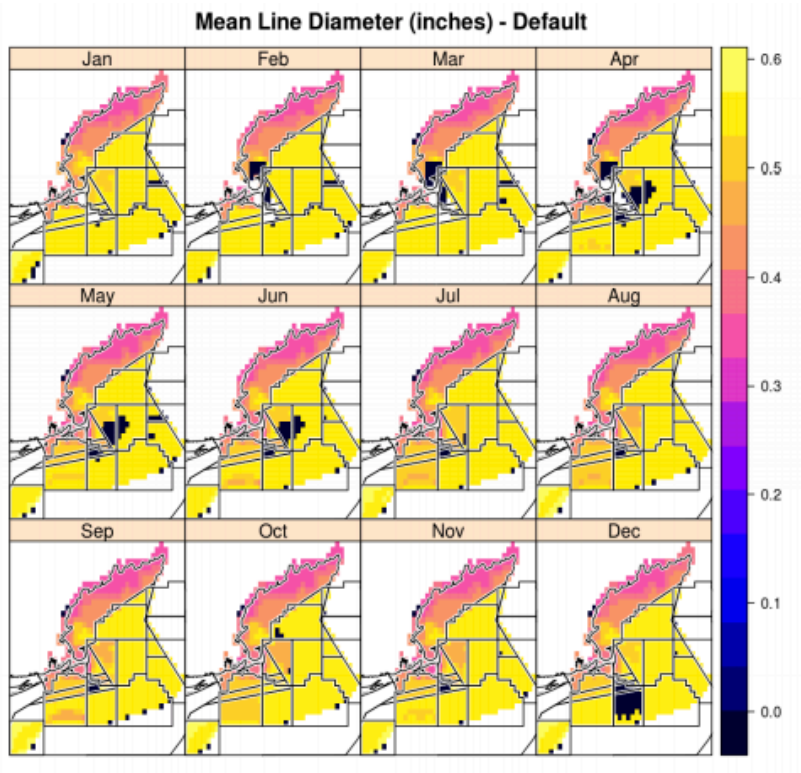


Figure 11: Mean line diameter in the area south of Martha's Vineyard and Nantucket is 0.6. *Source:* April 20, 2019, TRT Meeting Risk Reduction Tool PPT, slide 25.

The area south of Martha's Vineyard and Nantucket is critical for right whale feeding and survival and supports the presence of right whales year-round.[289] Data show that the presence of right whales in this area was again significant in the fall and winter of 2020, and has continued into the spring of 2021.[290] The Secretary should immediately create a closure to vertical line trap/pot gear fishing in Statistical Areas 526 and 537 above the 40 degrees, 30 minutes North line (*See* Figure 2) in order to reduce the risk of entanglement in this densely populated right whale habitat where significant amounts of heavy vertical line trap/pot gear are used. This closure should be year-round based on the most recent sightings and acoustic detections data available and NMFS' dynamic management of shipping speeds over the last several years, which shows that right whales are now present in this area in all 12 months of the year.[291]

B. Gulf of Maine Right Whale Seasonal Closures in waters south and east of Maine that are closed to all vertical line trap/pot gear fishing, defined as follows:

Requested Rule:

Gulf of Maine Seasonal Closures.

1. **DOWNEAST SUMMER CLOSURE**: A 3-month closure from **August 1 to October 31** to all vertical line trap/pot gear fishing inclusive of all federal and state waters – including all waters around Mount Desert Rock. The closure would include all waters inside of the following boundaries: the northwest corner being 43°58'N X 68°20'W, the northeast corner being 44°15N X 67°40W, the southeast corner being 43°56'N X 67°40'W, and the southwest corner being 43°40'N X 68°20'W. (*See* Figure 2).
2. **WESTERN GULF OF MAINE CLOSURE**: A 5-month closure from **October 1 to February 28** to all vertical line trap/pot gear in the Jeffrey's Ledge area. The southern boundary being 42°40'N X 70°10'W, the western most boundary being 42°55'N X 70°30'W, the north boundary being 43°20'N X 70°W, and the eastern most boundary being 43°10'N X 69°50'W. (*See* Figure 2).
3. **OFFSHORE MIGRATION CLOSURE**: A seasonal closure that includes much of northern Lobster Management Area ("LMA") 3 from **October 1 to February 28**. The northwestern boundary being 42°20'N X 70°30'W, the northeast boundary being 43°58'N X 67°22'W, the southwest boundary being 42°55'N X 67°44'W, and the south eastern most boundary being 42°20'N X 68°48'W. (*See* Figure 2).
4. **LMA ONE CLOSURE:** A seasonal closure from **October 1 to February 28** to all vertical line trap/pot gear in the area spanning Maine Lobster Zones C, D, and E. The closure would include all waters inside the following boundaries: the

[289] Pendleton, et. al. (2012). Weekly predictions of North Atlantic right whale *Eubalaena glacialis* habitat reveal influence of prey abundance and seasonality of habitat preferences, Vol. 18: 147–161, p. 155 (2012); NMFS 2019-2021 Dynamic Management Areas.
[290] NMFS 2019-2021 Dynamic Management Areas. NMFS Island and MA 2019, 2020, and 2021 Dynamic Management Areas – Spreadsheets 1, 2, and 3.
[291] NOAA Right Whale Sighting Advisory System; Right Whale Passive Acoustic Monitoring for monthly Dynamic Management Area analysis;); NMFS Island and MA 2019, 2020, and 2021 Dynamic Management Areas – Spreadsheets 1, 2, and 3.

northeast boundary being 43°44'N X 68°21.6'W, the northwest boundary being 43°32.675'N X 68°17.27'W, and the south western most boundary being 42°53.52'N X 69°32.16'W and the south eastern boundary being 43°6'N X 69°36.77'W. (*See* Figures 3 and 4).

5. **GEORGES BASIN MIGRATION CLOSURE:** A seasonal closure that includes the deep-water area along the inside edge of Georges Bank out to the Hague Line from **May 1 to August 31**. The northwest boundary is 42°30'N X 67°40'W, the northeast boundary being 42°30'N X 67°27'W, the southwest boundary being 42°30'N X 67°40.02'W, and the south eastern most boundary being 42°90.3'N X 68°8.7'W. (*See* Figure 4).

Discussion:

Downeast Summer Closure (Aug 1 - Oct 31): This area includes, among other important areas, the waters surrounding Mount Desert Rock, a 3.5-acre island, including all state waters surrounding the Rock, and the Inner and Outer Schoodic Ridges. These are areas that have a long-term, demonstrated presence of right whales during the summer and early fall months. This proposed closure is located 8-10 miles offshore from the exemption line, predominantly in waters where the depth drops from 300 to 600 feet of water. At this shelf break there is significant upwelling, and this higher level of productivity attracts whales to feed.

Western Gulf of Maine Closure (Oct 1 - Feb 28): This area in the south-western Gulf of Maine has a long history of right whale presence. Importantly, it has been identified in recent scientific research as an area where late-stage *C. finmarchicus* abundance is increasing in late spring,[292] and thus similar to the area discussed above south of Martha's Vineyard and Nantucket and will likely continue to be an important feeding area for right whales and should be monitored year-round for right whale presence. Jeffrey's Ledge is a submerged plateau located about 20 to 25 miles off the coast of New Hampshire, that comes within 5 miles of Cape Ann, Massachusetts and extends north to the waters off southern Maine. Jeffrey's Ledge rises as much as ~150 meters from adjacent basins (i.e., Scantum Basin or Wilkinson Basin) to depths less than 50 meters on the ridge top. Its total length is over 60 miles in a north-northeast to south-southwest axes, and generally is only 3 to 6 miles wide with an approximate 12-mile maximum width. The significant upwelling in the Jeffery's Ledge area brings nutrients to the surface that create large blooms of plankton, resulting in a well-known feeding ground for many species of large whales, including right whales.

Offshore Migration Closure (Oct 1 - Feb 28): The northern section of LMA3 is a migratory corridor for right whales in fall and winter months.[293] (*See* Figure 12 below). The area extends from Jordan Basin in the north at the entrance to the Bay of Fundy to Wilkinson Basin in the South, nearly bordering the Stellwagen Bank National Marine Sanctuary. These basins include some of the deepest areas of the Gulf of Maine, with water depths of over 900 feet. This closure extends approximately 150 miles in length and includes very productive areas where shallow

[292] Record, et. al. (2019).
[293] Letter from Scientists Kraus, et al. to Senator Susan Collins, Appendix 1, (Sept. 19, 2019). Reproduced with permission from authors. (Monthly maps Oct. through May).

waters drop quickly into deeper waters creating strong upwelling and feeding opportunities for whales in transit. This area also includes waters in the central GOM, including Cashes Ledge and Outer Falls, where there is a year-round presence of right whales, including as many as 75 right whales recorded in the winter months of 2004-2008.[294]

LMA One Restricted Area (Oct 1 - Feb 28): This area approximately 30 nmi/55.6 km offshore spans Maine Lobster Zones C, D, and E. We recommend this closure be implemented as proposed in Alternative 3 in the Proposed Rule DEIS (October through February). The NMFS hot spot analysis contained in the Proposed Rule DEIS shows that right whales and buoy lines co-occur in this area from October through February, thus a closure to vertical line trap/pot gear is likely to result in important entanglement risk reduction.[295] As described in the DEIS, data from recent acoustic gliders operating in offshore Maine waters during December 2018 and January 2019 detected the presence of right whales, with positive detections within the months and area with nearly identical boundaries selected with the decision support tool used for the analysis.[296] These recent detections also coincide with the area identified as a potential winter breeding ground from 2002 to 2008.[297]

Georges Basin Migration Closure (May 1 - August 31): This is an important spring migratory corridor for right whales leaving the feeding areas around Cape Cod and moving north toward the Gulf of Saint Lawrence. The inside edge of Georges Bank leads into a deep-water area known as Georges Basin. Georges Basin, just north of Georges Bank, is the deepest of the three basins found inside the Gulf of Maine, at just over 1,200 feet deep (370 m). This basin helps create a pocket at the end of the Northeast Channel, which is the large opening between Georges Bank and Browns Bank. Seasonal aggregations and habitat modeling suggest this is an important area for right whales in the spring and summer, and historical records show it is an area of high abundance for the prey *C. finmarchicus* of right whales and is in the migratory pathway to Canada.[298] The hotspot analysis conducted by NOAA shows that this area has a high-risk probability for co-occurrence of right whales and trap/pot gear.[299]

As discussed above, given the need for immediate actions that will meaningfully benefit right whales, vertical line reductions should be targeted in areas where right whales and gear co-occur The areas and months selected for the three Gulf of Maine vertical line trap/pot gear closures developed by Pew (Figure 2) are based on the mapping by Kraus, et. al. using NARWC data (Figure 12), the Record, et. al. data and map (Figure 13), the whale watch data used in Chart 1 below and mapped by Bar Harbor Whale Watch and Allied Whale (Figure 16), and the Roberts, et. al., habitat-based cetacean density maps reproduced below. These data and the analysis below demonstrate a significant and ongoing year-round right whale presence in the Gulf of

[294] Cole, et. al. (2013). Evidence of a North Atlantic right whale Eubalaena glacialis mating ground. *Endangered Species Research.* p. 59-61.
[295] Proposed Rule DEIS at 1-10-11, 3-71-72.; Proposed Rule FEIS at 80-82.
[296] Id.
[297] Cole, et. al. (2013). Evidence of a North Atlantic right whale Eubalaena glacialis mating ground. *Endangered Species Research*. p. 59-61.
[298] NOAA Fisheries, Proposed Rule at 3-71-73; Proposed Rules FEIS at 82-83.
[299] Id.

Maine, which shifts within the Gulf of Maine during different times of the year.[300] There is a significant amount of vertical line trap/pot gear used in the offshore areas requested for protection, much of which is the heaviest, most lethal gear used in lobster and crab fisheries.[301] Thus, the identified vertical line trap/pot closures in the Gulf of Maine, which are focused in the offshore areas where right whales and heavy trap/pot gear co-occur, will significantly reduce the risk of entanglement to right whales[302] and impact relatively few amount of lobstermen.

Sightings data from the NARW Consortium database, which includes data from thousands of aerial surveys, vessel surveys, and whale watch companies' sightings, show the regular presence of right whales in offshore waters approximately 15 miles or more off the coast of Maine in 300 feet or more of water. This data makes clear that right whales occupy these Gulf of Maine waters year-round. The maps below (Figure 12) were made by leading right whale scientists in 2019 using the data from the NARW Consortium database. The maps demonstrate that in recent years, right whales have been observed in offshore Gulf of Maine waters every month of the year, and specifically have been regularly observed in the areas and months proposed in the requested seasonal closures.[303] Although these maps were made using available data from 2006 through 2018, we have carefully reviewed the most recent data contained in the Consortium database, and recent sightings data continue to be consistent with these 2019 maps and support the proposed closures.

[300] In a recent declaration filed in *CBD v. Ross*, No. 118-cv-112 (D.D.C., May 15, 2020), Doc. 105-2, intended to support plaintiffs' request for a year round vertical line trap/pot closure in Southern New England similar to the area requested above, the declarant describes the increased presence of right whales in Cape Cod Bay and south of Nantucket and Martha's Vineyard during the winter and spring, and notes a shift in right whale foraging behavior in the Gulf of Maine due to climate change. *Id.* at ¶¶ 20-21. These statements could be misinterpreted to suggested that all or most right whales have shifted from the Gulf of Maine, or do not transit through the Gulf of Maine in route to Canada, however this does not appear to be the intent of the statements, which do not reference the much of data and analysis included below. As this Petition shows, there is a year-round presence of right whales both south of Nantucket and Martha's Vineyard and in the Gulf of Maine.

[301] NOAA Fisheries (April 20, 2019). TRT Meeting Risk Reduction Tool PPT, slides 21-22.

[302] Id. at slides 23-28.

[303] Scientists Letter from Kraus, et. al. to Senator Susan Collins, Appendix 1, ("This year-round occurrence is consistent with recent historical records of right whales in Maine waters.") *citing* Wikgren, et al. (2014) Modeling the distribution of the North Atlantic right whale Eubalaena glacialis off coastal Maine by areal co-kriging. Endang. Species Res. Vol. 24: 21–31, 2014.

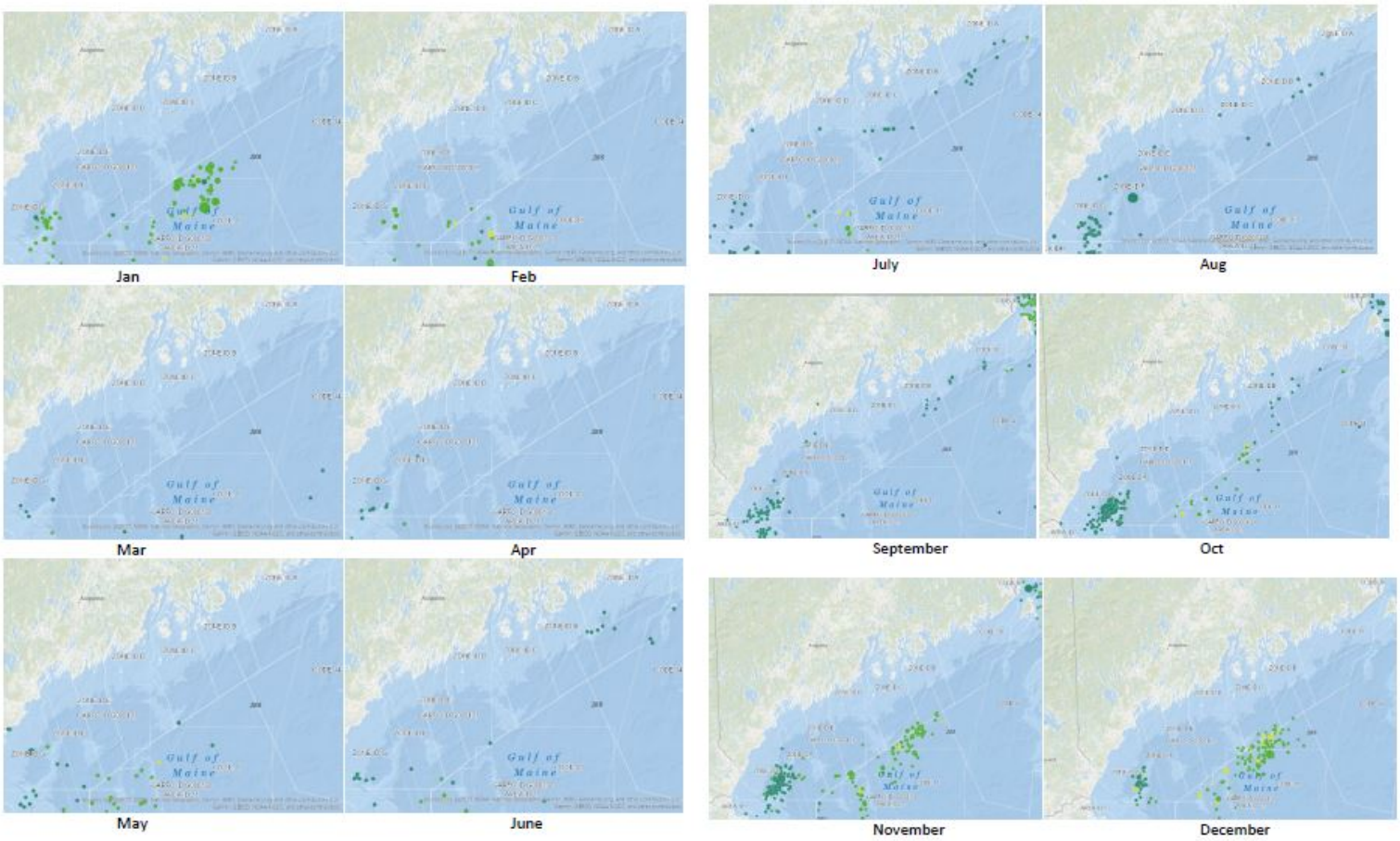


Figure 12: Gulf of Maine Right Whale Sightings 2006-2018. From scientist letter to NOAA dated September 17, 2019 using data from NARW Consortium Database. Note: Raw sightings data from the NARWC database are not effort-corrected and the management documents in which they are used are not peer reviewed. Distributional patterns based on these data are likely to be biased by where, and when, surveys were conducted.

In the September 2019 letter to NOAA that included these maps, the scientists concluded that "because right whales are difficult to see, are distributed unpredictably, and because Maine waters have high concentrations of the whales' primary prey and have not been subject to systematic surveys in recent years, the numbers of North Atlantic right whales that occur in Maine waters are likely significantly underestimated by fishermen and managers."[304]

As indicated, the Downeast Summer Closure Area and the Offshore Migration Closure Area are areas where right whales aggregate and/or transit to and from Canadian waters in the Bay of Fundy and off Nova Scotia and waters further north.[305] The Western Gulf of Maine Closure Area is an area where right whales have aggregated in recent years, with data showing a long-term presence of right whales.[306] It is an important area for right whale survival in part because

[304] Letter from Scientists Kraus, et al. to Senator Susan Collins, p. 3.
[305] NOAA Fisheries. Scientific Sightings Database. The North Atlantic right whale sightings data on the NOAA website is continually updated and authenticated. The Secretary should consider the most current and up to date sightings data available when making a determination regarding the emergency action request in this petition.
[306] Id.

recent oceanographic research shows an increasing abundance of late-stage *C. finmarchicus* in the late winter and spring in this region, and thus the Western Gulf of Maine is highly likely to be a critical right whale feeding ground (similar to Cape Cod Bay) into the future and should be monitored regularly using aerial surveys and passive acoustics buoys and gliders.[307]

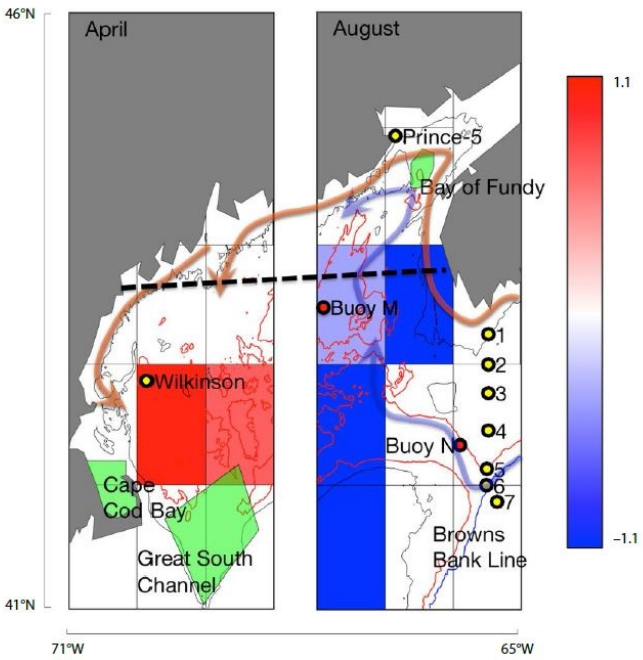


Figure 13. From Record et al paper showing areas of increasing abundance of late-stage *C. finmarchicus* in the Western Gulf of Maine in the spring.

These sightings hotspots identified through the Kraus, et. al., maps are supported by the recently published NOAA Passive Acoustic Cetacean Map, which shows right whale acoustic detections during all months and almost everywhere they have been used in the Northeast (Fig. 14). Areas off the Maine coast where there is a high co-occurrence of lobster fishing and right whale acoustic detections include areas near York, Portland, Monhegan, Duck Islands, Milbridge, Lubec, the Schoodic ridges, all around Mount Desert Rock, and the Outer Falls (Fig 15.)

[307] Record, et al. (2019). Rapid Climate-Driven Circulation Changes Threaten Conservation of Endangered North Atlantic Right Whales, *Oceanography*, p. 4.

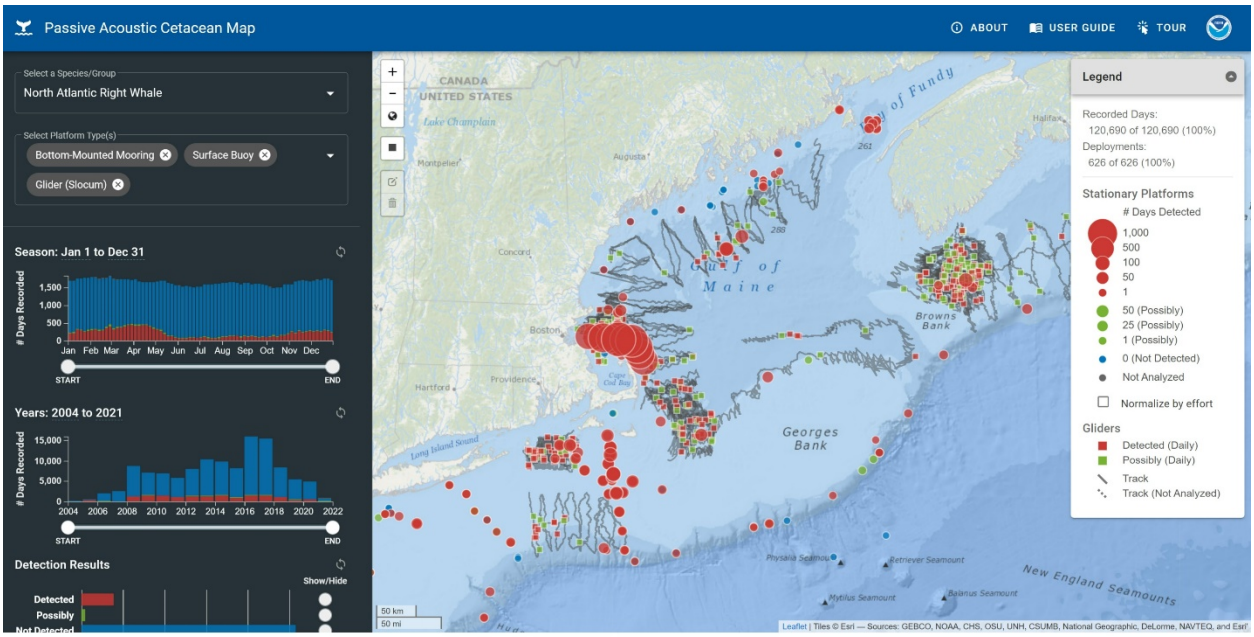


Figure 14. North Atlantic Right Whale Acoustic detections © NOAA Passive Acoustic Cetacean Map.

Location	Total	Days	Poss.	Months	J	F	M	A	M	J	J	A	S	O	N	D	Year
Lubec	110	11	5	3													2010
Great Duck	73	2	3	2.5													2010
Milbridge	88	5	5	3													2010
Schoodic R1	89	1	1	3													2008
Schoodic R2	89	1	0	3													2008
MDR 1	92	1	1	3													2009
MDR 2	68	1	2	2													2011
MDR 3	176	2	3	5.5													2016
MDR 4	173	8	2	5.5													2015
MDR Glide	28	1	0	1													2019
Outer Fall1	213	80	3	6													2011
Outer Fall2	211	103	9	7													2010
GOM Glide	121	15	10	4													2020
Monhegan	105	1	0	3.5													2020
Portland	107	1	1	3.5													2010
York	101	1	0	3													2020

Figure 15. Acoustic Recordings in waters off Maine © NOAA Passive Acoustic Cetacean Map. [308]

The requested closure areas are also corroborated by data collected on whale watching tours in the Gulf of Maine, which for nearly 30 years show sightings in the same waters over all five months that tours operate, between June and October (*See* Chart 1 below). It is important to note that the number of tours in June, September, and October (1 to 2 tours daily) are reduced compared to July and August (3 tours daily), and this should be factored into the analysis. Importantly, analysis of this data must consider the fact that during the timespan it was collected,

[308] NOAA Fisheries, Passive Acoustic Cetacean Map 2004-2021 (website last visited June 21, 2021).

there were many "no go" days when there were no whale watch trips due to high seas and thick fog, and that during each span of twenty-four hours, whale-watch vessels were within offshore waters for only a few hours each day. Thus, as with the scientists' conclusions above, it can be assumed that sightings are significantly underestimated compared to the true number of right whales present or transiting through offshore Maine waters.

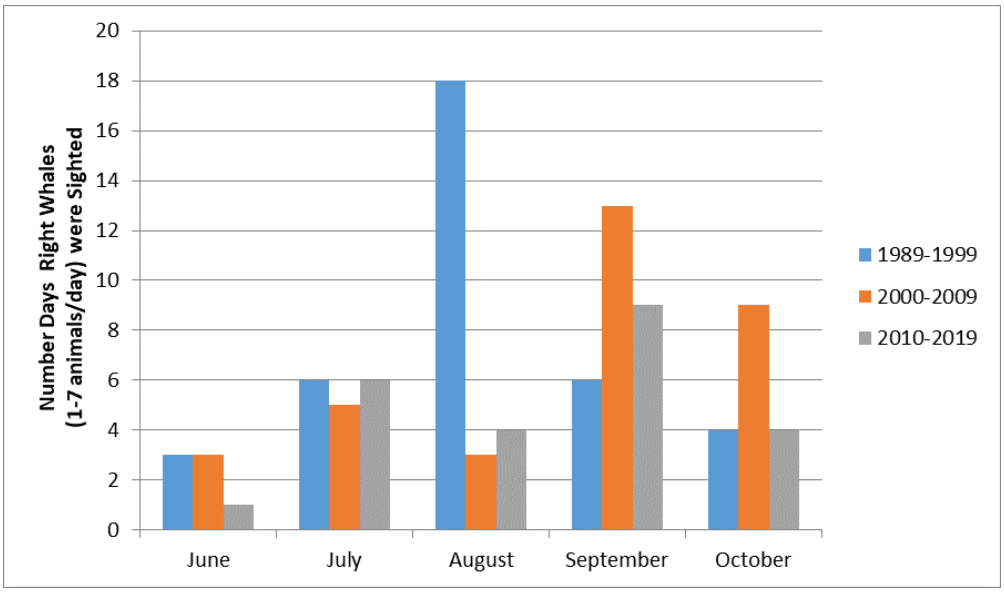


Chart 1: Eastern Maine Whale Watch Sightings 1989-2019. Sightings on 97 days of 133 NARW shown by month by Bar Harbor Whale Watch Co. tours in three ten-year blocks show the consistent presence of NARW in the offshore waters of Maine. The charted time series are between 1989 and 1999 (no data for 1991), 2000 – 2009, and 2010 and 2019. Sightings are grouped by days and not trips, i.e. if a right whale was sighted on multiple tours in a single day it is counted as one sighting, which may have included between 1 to 7 right whales. © Allied Whale/BHWW Co. In 2020, two sightings were made from whale watch tours out of Bar Harbor. Right whales were also sighted during August near Frenchboro, off Long Island, at the entrance to Blue Hill Bay, and in July near Eastport, Maine.

Whale watch sightings data also support that right whales are most frequently found in 300 feet of water or more (off the 50-fathom line) in the Gulf of Maine (*See* Figure 16 below). Whale watch data from 1974 and 1990 show sightings on 59 days totaling over 90 animals in the waters around Mount Desert Rock.[309] Whale watch data from 1989-2019 demonstrate that offshore waters around Schoodic Ridges and Mount Desert Rock have a long-term presence of right whales during the summer and fall months (*See* Figure 16 below). This is consistent with NOAA aerial sightings data, passive acoustic data, 2011 winter vessel surveys, and data and science on migratory corridors.

[309] Todd, et al. (2007) Northern right whales (Eubalaena glacialis) in the northeast Gulf of Maine: are they found within Maine state waters? Poster presented at: 17th Biennial Conference of the Society for Marine Mammalogy, 2007, 29 November – 3 December; Cape Town, South Africa. Column 3, Para. 1.

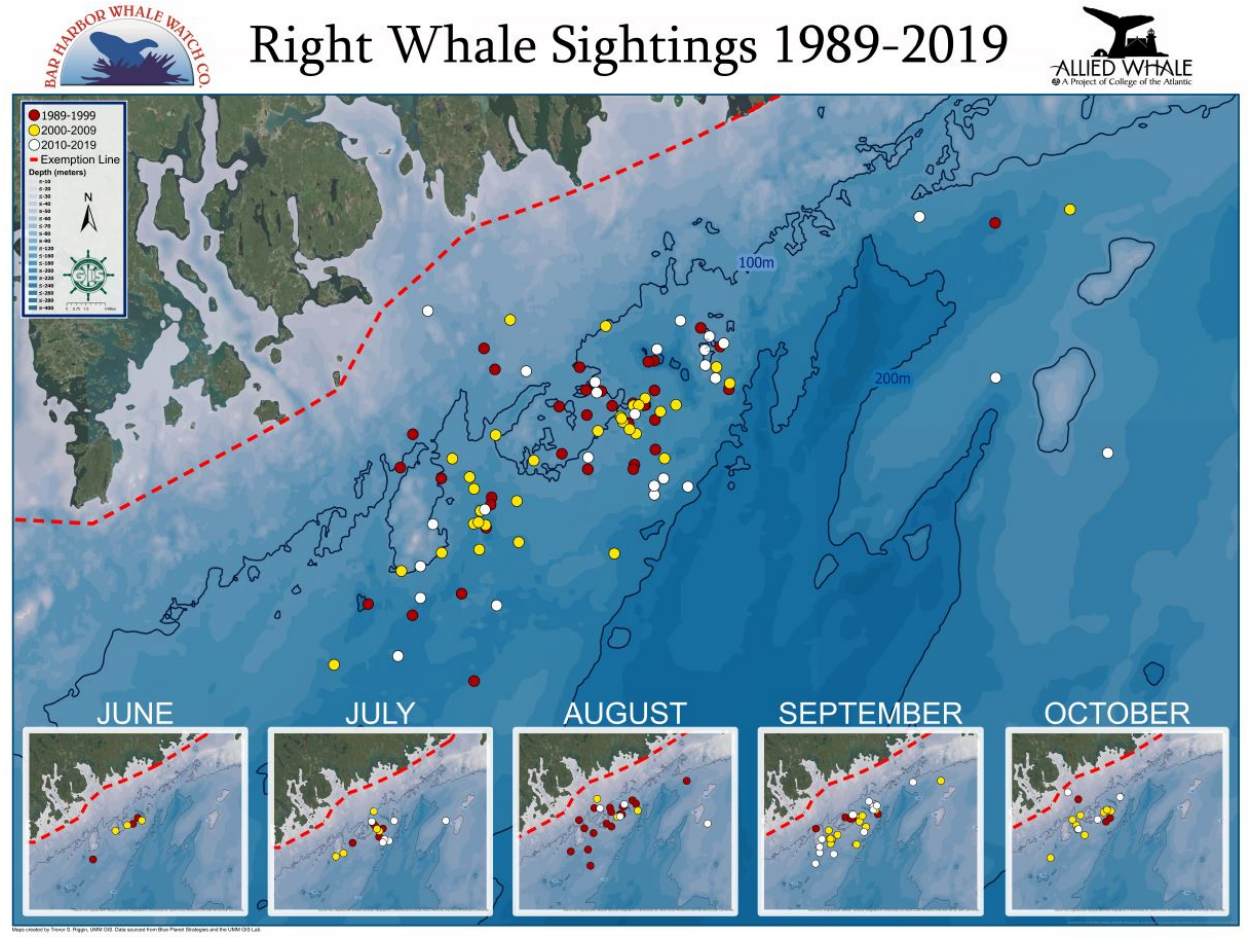


Figure 16. Right Whale Sightings 1989-2019 from Bar Harbor Whale Watch Co. and Allied Whale.

Further, a 2015 study of right whale migration patterns analyzed all right whale sightings and grouped them by month and across locations. The authors found "that the Bay of Fundy (and potentially other areas occupied by right whales during summer and autumn) is an area to which whales frequently immigrate, emigrate from and then, at a later time, re-immigrate."[310] This study corroborated prior studies in 2009, where scientists estimated this pattern of movement using lagged-identification rates and found it consistent with prior scientific observations, and in 1997, where scientists used tags on a small number right whales in the Bay of Fundy to show that "many right whales left the area only to return again later, some travelling a considerable distance in the intervening period."[311] These findings correlate with the NARWC database and whale watch sightings data from Bar Harbor, Maine ("Downeast") that show an increase in right whale sightings between August and October and then into the middle of the Gulf of Maine ("Offshore") during the fall, winter, and spring.

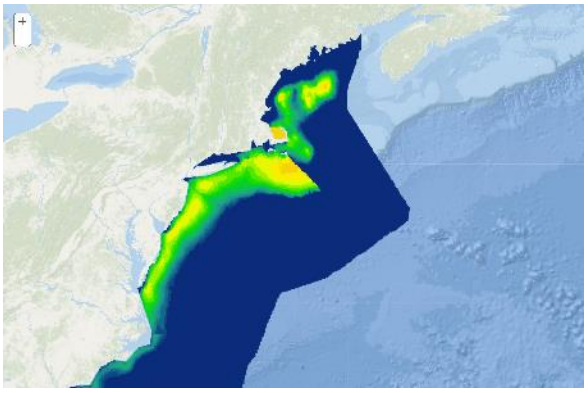
[310] Brillant, et al. (2015). Quantitative estimates of the movement and distribution of North Atlantic right whales along the northeast coast of North America. *Endang. Species Res.* 27:141-154. pp. 147-153.
[311] Id.

Finally, the sightings data above and the proposed seasonal closures to vertical line trap/pot gear are fully supported by recent independent scientific modeling developed by the geospatial marine ecology lab at Duke University, which used habitat-based cetacean density models for 23 species of marine mammal in the U.S. Atlantic and Gulf of Mexico.[312] Duke's methods are described by the scientists as follows: "Pursuant to the urgent need for this knowledge in U.S. waters…, we integrated aerial and shipboard cetacean surveys conducted by five scientific organizations over 23 years and linked them to environmental data relating to cetacean habitat, such as sea surface temperature and chlorophyll concentration, obtained from satellite remote sensing and ocean models."[313]

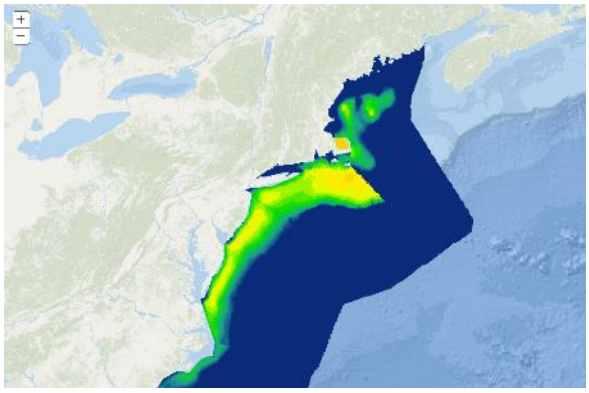
Duke scientists produced monthly maps for North Atlantic right whales based on thousands of hours of survey effort and sightings throughout the entire range of the right whale.[314] These monthly density model maps strongly correlate with the sightings data used to create the requested Gulf of Maine Right Whale Seasonal Closures, further demonstrating the presence of right whales in areas of high vertical line fishing and the need for immediate right whale protections in the identified areas. The original research used data through 2015, and we have included the output maps from the updated models from this research team that use data through 2019. Based on the proposed rule closures, it is clear that NMFS relied on these Duke habitat model maps to propose closure times and places. However, NMFS should use more than just these maps and should look at the broad number of sources available, including those we have outlined above.

These habitat-based cetacean density maps show right whale habitat use in the offshore Gulf of Maine areas and on Jeffrey's Ledge in the late fall and winter as right whales migrate south from Canadian waters, and they show predicted use of the waters surrounding Mount Desert Rock and the Schoodic Ridges in Downeast Maine in the late summer and early fall as whales move in and out of the Bay of Fundy in search of historically important feeding grounds.

HABITAT-BASED RIGHT-WHALE DENSITY MODELS FOR THE U.S. ATLANTIC

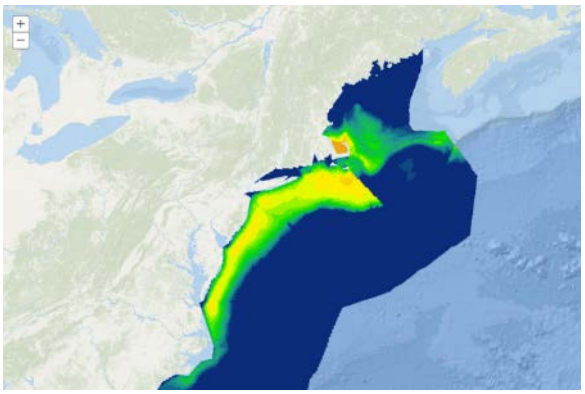


January: © Duke 2019

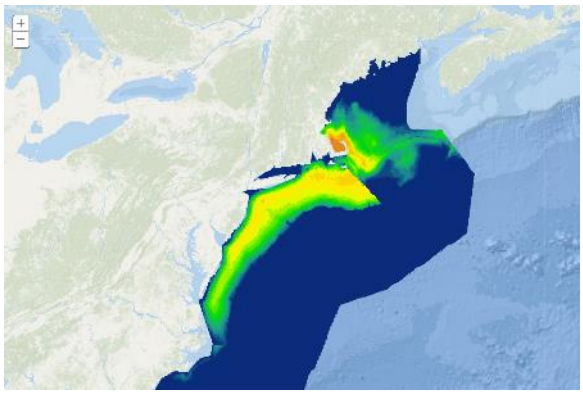


February: © Duke 2019

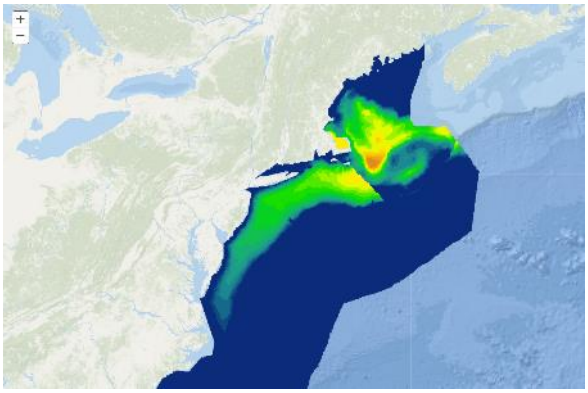
[312] Roberts, et al. (2016). Habitat-based cetacean density models for the U.S. Atlantic and Gulf of Mexico. *Scientific Reports* 6: 22615.
[313] Id. Note that these use data from aerial and vessel surveys only, thus do not incorporate opportunistic sightings like those from whale watch vessels, and do not include all available Bay of Fundy data.
[314] Id.



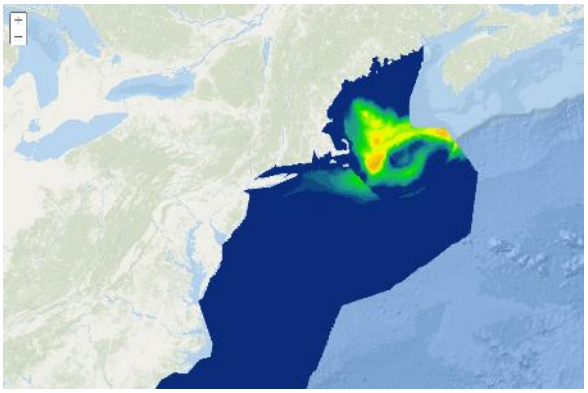
March: © Duke 2019



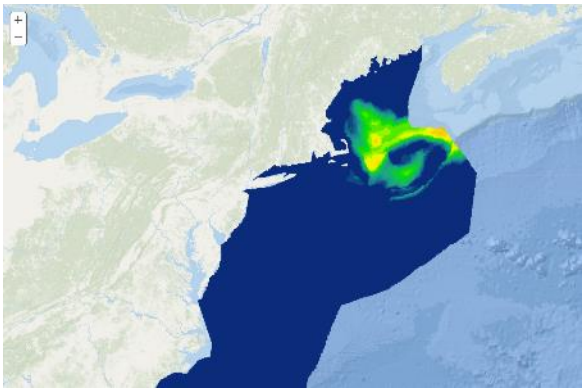
April: © Duke 2019



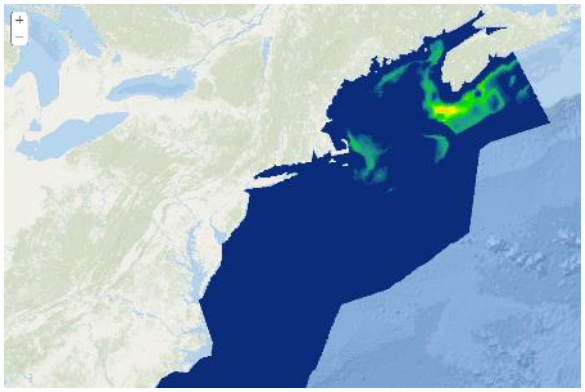
May: © Duke 2019



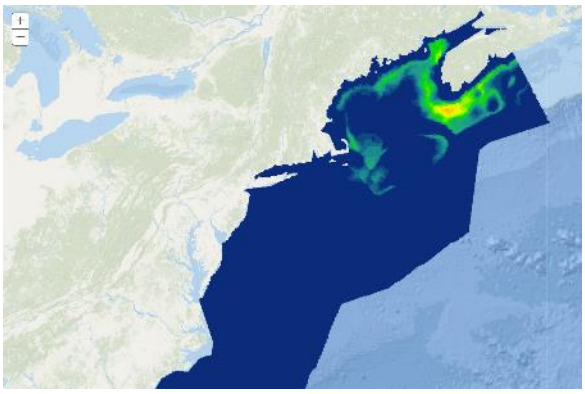
June: © Duke 2019



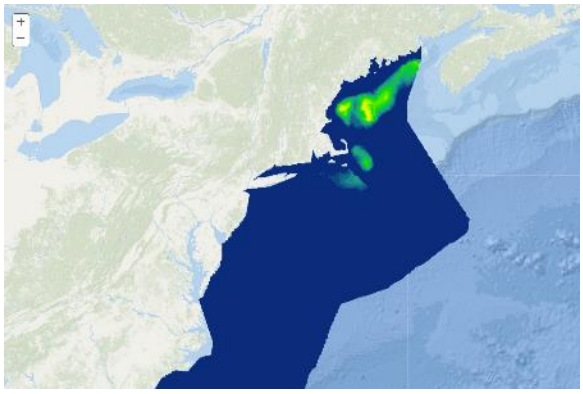
July: © Duke 2019



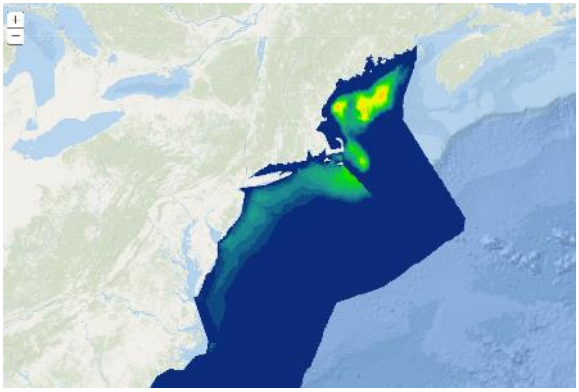
August: © Duke 2019



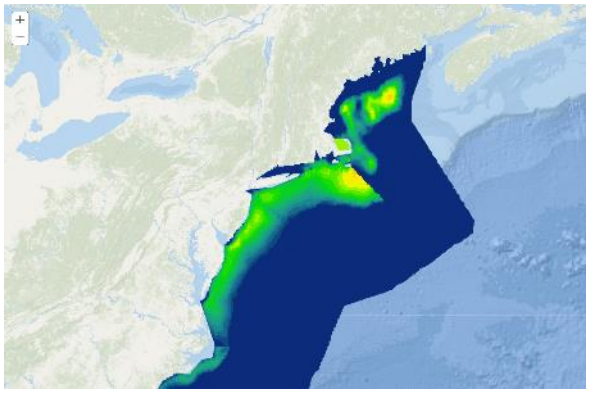
September: © Duke 2019



October: © Duke 2019



November: © Duke 2019



December: © Duke 2019

There are a significant number of lobster traps and pots in the requested Gulf of Maine Seasonal Closures but given the enormity of the lobster fishery as a whole, the requested closures would only impact a small percentage of fisherman, and only seasonally. It is estimated that in both state and federal waters, Maine lobstermen fish about 3 million traps, which represents about 87 percent of the U.S. American lobster fishery.[315] The "offshore" lobster fishery deploys between 50,000 and 80,000 of those traps (1 in every 40-60 traps), all in federal waters,[316] creating significant risk of right whale entanglement. Leading scientists, relying on NOAA data, concluded:

> "Only a few entanglements have been definitively tracked to Maine fisheries because it is extremely rare to identify the origin of gear to any fishery. Still, from 1997-2017 at least three right whales were entangled in Maine coastal lobster fisheries, and three more were caught in the offshore lobster fisheries off Maine (https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/reports/index.html). Further, due to the previous actions of Maine's representatives at the TRT meetings, 70 percent of Maine's waters are exempt from regulations requiring fishing gear to be marked with country and state of origin, with the result that it is not currently possible to determine if right whale entanglements originated in Maine."[317]

[315] Atlantic States Marine Fisheries Commission, American Lobster Stock Assessment Report (2015), p. 33.
[316] Id.; *See also*, Letter from Scientists Kraus, et al. to Senator Susan Collins, p. 4.
[317] Id.

The high density of vertical line trap/pot gear and co-occurrence of right whales will result in continued entanglements of right whales in the Gulf of Maine unless emergency regulations are promulgated. Based on the whale presence and gear data described above, the Secretary should immediately establish the requested Gulf of Maine Seasonal Closures. These emergency closures would impact only a small percentage of fishermen seasonally, because it is estimated that approximately 95 percent of trap/pot gear and landings from the Gulf of Maine come from inshore areas.[318] Maine Department of Marine Resources has also publicly stated that 3,800 of the state's 5,000 lobster permit holders fish in state waters only, thus approximately 75 percent of the Maine lobster fishery would not be impacted by these closures, which are nearly all in federal waters.[319] The requested seasonal closures target risk reduction to areas of the ocean where right whales and some of the heaviest and most dangerous fishing gear co-occur.

C. Ropeless Only Fishing Areas allowing fishing inside areas closed to vertical line trap/pot gear fishing with ropeless gear

Requested Rule:

> **Ropeless Only Fishing Areas**: In all interim or existing seasonal, year-round or temporary (dynamic) closures to vertical trap/pot gear fishing, it would be prohibited to fish with, set, or possess trap/pot gear in such area unless it is fished without buoy lines or with buoy lines that are stored on the bottom until they can be remotely released for hauling, or it is stowed in accordance with 50 C.F.R. § 229.2. Authorizations for fishing without buoy lines must be obtained if such fishing would not be in accordance with surface marking requirements of 50 C.F.R. §§ 697.21 and 648.84.[320]

Discussion:

The requested seasonal and year-round closures to vertical line trap/pot gear fishing would only prohibit fishing with vertical buoy lines, similar to the ropeless fishing regulations contained in the Proposed Rule. This would also modify current Northeast region restricted areas to allow commercial trap/pot fisheries to harvest lobster and crabs if they fish with ropeless gear, without persistent buoy lines. The proposed modifications would affect two existing seasonal restricted areas currently closed to fishing: the Massachusetts Restricted Area[321] and the Great South Channel Restricted Trap/Pot Area.[322] Prohibiting the use of persistent vertical buoy lines in

[318] This statistic appears to be unpublished but has been used often by industry representatives and state officials when discussing potential measures necessary to protect right whales. It is corroborated by the ASMFC data used in the Scientists' September 2019 Right Whale Letter. It is estimated that 50,000 to 80,000 traps are fished offshore in the Gulf of Maine, and over 3 million traps are fished inshore and offshore by Maine fishermen (87% of the entire fishery, which indicates a little less than 3.5 million total traps in the American lobster fishery). Thus, based on these numbers about 2.3 to 2.7 percent of all traps are fished offshore, leaving over 95 percent of all traps fished inshore. *See* 2015 American Lobster Stock Assessment Report.
[319] Overton, P. (Feb. 12, 2020). *Maine's plan to protect shales falls short, regulators say, raising prospect of federal rules*, Portland Press Herald.
[320] *See* Proposed Rule 85 Fed. Reg. 86898.
[321] 50 CFR § 229.32(c)(3).
[322] 50 CFR § 229.32(c)(4).

these areas would allow ropeless (also called "buoyless" or "on-demand" or "pop-up" or "bottom-stowed rope") fishing to occur during the term of the emergency regulations since ropeless gear systems store buoy lines on the ocean floor or do not use buoys or buoy lines at all.

Currently, NMFS authorizes ropeless fishing by granting Exempted Fishing Permits (EFP) which are used to exempt commercial fishing vessels from certain federal gear marking regulations which require fishermen to traditionally mark their trap or trawl with surface buoys.[323] The ropeless only fishing areas would authorize use of ropeless gear inside areas closed to vertical line trap/pot gear, but NMFS would still be required to approve permits for exemptions from surface marking requirements. This will allow for appropriate oversight by federal and state regulators who can carefully design and monitor the conditions for ropeless fishing (designated study fleet, days, traps, low vessel speeds, observer monitoring, reporting requirements, notice to other fleets to avoid gear interactions), thereby keeping both the risk of entanglement and negative gear interaction low. The opportunity for fishermen to gain access to closed areas with ropeless gear under carefully designed conditions will help alleviate potential revenue losses by fishermen who would otherwise be excluded from fishing grounds. In addition, it will provide incentive for enterprising fishermen to develop gear configurations that maximize catch while minimizing entanglement, a goal NMFS should cherish.

Fishing gear entanglements threaten the survival of right whales and the fishing industry. Ropeless fishing is the only potentially viable long-term solution with the potential to nearly eliminate entanglement risk to North Atlantic right whales, as well as to other marine mammals and turtles, while allowing fishing to continue.[324] Economic and cultural challenges surrounding ropeless fishing exist but allowing access to vertical line closures with ropeless fishing systems is a critical next step in the transition to a ropeless fishery in federal waters.

Ropeless fishing trials are imperative for the acceptance of ropeless technologies by the fishing industry and the regulatory community. Numerous opportunities for developing and testing prototype ropeless fishing gear have been made available through grants from NMFS and private foundations.[325] Ongoing successful trials, and allowing ropeless fishing inside vertical-line closures, will demonstrate that ropeless fishing can be operationally and economically viable, thereby creating a market for the technologies that will spur additional investment, competition, and eventually high-volume production that will help drive the costs of ropeless fishing systems down significantly. The 2021 BiOp includes a requirement that NMFS develop a "Roadmap to Ropeless Fishing" by June 2022 to identify ropeless fishing research and technology needs and how those needs will be met, and consider the economic, safety, operational, and enforcement aspects of ropeless technology.[326] Additional government funding to subsidize the cost of the technologies, as well as education and productive dialogue will help facilitate the transition to ropeless fishing by the fishing industry. The challenges to making a transition to ropeless fishing are solvable. NMFS must take a leadership role in finding solutions to these challenges in order to help ensure a successful future for both right whales and the fishing industry.

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[323] 50 CFR §§ 600.745; 697.21.
[324] Moore et al. (2021) Assessing North Atlantic right whale health: threats, and development of tools critical for conservation of the species. Dis Aquat Org Vol. 143: 205–226, 2021.
[325] Id.
[326] 2021 BiOp at 392, Table 84.

D. Increased Aerial Surveys and Acoustic Monitoring in right whale critical habitat, including the areas inside and surrounding all existing and interim vertical line trap/pot gear closures

Requested Rule:

> **Interim Aerial Surveys and Acoustic Monitoring:** Increase aerial surveys and acoustic monitoring in Southern New England and Gulf of Maine right whale critical habitat to frequencies that at minimum exceed recent levels. Surveys and monitoring should have a goal not just for population data collection, but to inform management measures for the protection of right whales. Aerial surveys and/or passive acoustic gliders and buoys should be deployed inside and surrounding all existing and interim vertical line trap/pot closures and be conducted at sufficient frequency to provide additional data to support review of all existing and interim seasonal and year-round closures and inform rulemaking that could make the requested and any implemented interim closures permanent or adjust the boundaries and duration of existing closures in future years.

Discussion:

Aerial survey of right whales to assess seasonal distribution and identify individual right whales is an essential element to effectively estimating right whale population and health, determine the location of whales in relation to shipping lanes to reduce collisions, and locating animals that are entangled or have died.[327] In New England, the surveys are conducted throughout the year by the NOAA Fisheries Science Center and seasonally by the New England Aquarium and the Center for Coastal Studies. NOAA also deploys acoustic monitoring buoys to improve understanding of spatio-temporal movements of North Atlantic right whales. Passive acoustic monitoring (PAM) is an excellent way to augment aerial surveying and provides an essential contribution to our understanding of right whale distribution and habitat use, and in one study provided a 2- to 10-fold increase in days with right whale detection over visual methods.[328] Recent information gathered from PAM demonstrates that right whales use habitat in the northeast and mid-Atlantic year-round.[329] Fisheries and Oceans Canada, along with academic institutions, have also successfully increased the use of PAM to inform right whale management in 2020 and 2021.[330]

Immediate increases in aerial and acoustic monitoring is essential given the severely depleted population level of right whales. Close monitoring of right whales in New England and Atlantic

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[327] NOAA (May 5, 2020). Aerial Survey Results for North Atlantic Right Whales in the Southeast; NOAA. Flying High to Save North Atlantic Right Whales. (website last visited July 16, 2021); PEER. NOAA to reduce right whale aerial surveys (Sept. 3, 2020).

[328] Soldevilla, et al. (2014). Passive acoustic monitoring on the North Atlantic right whale calving grounds. Endang. Species Rs. Vol. 25: 115-140, (2014).

[329] Davis,. et. al. (2017). Long-term passive acoustic recordings track the changing distribution of North Atlantic right whales (Eubalaena glacialis) from 2004 to 2014. 7 Sci. Rpts. 13460.

[330] Fisheries and Oceans Canada. North Atlantic right whale monitoring and surveillance activities. (website last visited July 13, 2021).

Canadian waters when they are present in areas with a significant amount of vertical line trap/pot fishing gear can help reduce risk of entanglement by improving management measures and helping disentanglement teams to respond quickly when entangled right whales are seen. With improved monitoring, risk reduction measures can be better targeted, validated and adapted, especially as ocean conditions shift due to climate change. In August of 2020 NOAA announced it was planning to decrease aerial surveys in favor of increased vessel surveys and acoustic monitoring.[331] It is critical to maintain and increase aerial surveys, however, because they allow observers to survey more extensive area in less time than vessel surveys and are an indispensable tool for locating and documenting individual right whales, including entangled whales.[332]

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V. PETITIONERS' REQUEST FOR RULEMAKING TO MAKE THE REQUESTED INTERIM REGULATIONS PERMANENT AND FOR RELATED ADDITIONAL REGULATIONS

The best scientific information available, along with all other data and information provided herein, demonstrates that, in addition to immediately implementing the requested emergency regulations, the Secretary should immediately initiate rulemaking to make the requested interim regulations "permanent," and consider additional related regulations and alternatives, in order to protect right whales from vertical line trap/pot gear fishing in future years. Petitioners therefore also formally request that the Secretary exercise her authority under APA Section 553 and the MMPA, ESA, and MSA[333] to initiate rulemaking to consider the petitioned for emergency regulations, and the additional regulations described below, in accordance with standard rulemaking procedures under these statutes ("permanent rulemaking").

Emergency regulations issued under the MMPA may remain in effect for up to 270 days.[334] Emergency regulations issued under the ESA and MSA may remain in effect for up to 240 days,[335] and 366 days,[336] respectively. Because an emergency exists under all three of these statutes, the Secretary should take the actions necessary to extend the requested emergency regulations for a minimum of 366 days in order to ensure right whale protections are in place while permanent rules that fully comply with MMPA, ESA and other applicable laws are developed and implemented. During the time that the emergency regulations are in effect, the Secretary should complete action on this requested permanent rulemaking consistent with standard APA, MMPA, ESA, and MSA rulemaking procedures.

A. Regulations Establishing Targeted Seasonal and Year-Round Closures to Vertical Line Trap/Pot Gear Fishing, and Related Measures, in the American Lobster and Jonah Crab Fisheries to Prevent the Continued Unlawful Take of North Atlantic Right Whales

[331] Oleson et al. (2020). North Atlantic Right Whale Monitoring and Surveillance: Report and Recommendations from the National Fisheries Service's Expert Working Group.
[332] Center for Coastal Studies, Population Monitoring (website last visited June 14, 2021).
[333] 5 U.S.C. §§ 553(e); 16 U.S.C. §§ 1533(d), 1855(d), 1387(g), 1855(d).
[334] 16 U.S.C. § 1387(g)(3),(4).
[335] 16 U.S.C. § 1533(b)(7).
[336] 16 U.S.C. § 1855 (c)(3), (c)(3)(B), (d).

Requested Rules:

1. **Year-Round and Seasonal Closures to Vertical Line Trap/Pot Gear Fishing and Related Measures.** Petitioners request that the Secretary exercise her authority under APA Section 553 and the MMPA, ESA, and MSA to immediately initiate rulemaking to make the following requested interim regulations, described and fully justified in detail above, permanent:
   (1) A Southern New England Year-Round Closure to all vertical line trap/pot gear fishing in the high right whale density area south of Martha's Vineyard and Nantucket, in the northern half of Statistical Areas 526 and 537, and;
   (2) Five Gulf of Maine Right Whale Seasonal Closures in waters south and east of Maine that are closed to all vertical line trap/pot gear fishing.

   Requested Closure Alternatives for Analysis:

   As noted above, as part of such permanent rulemaking, the Secretary should also consider reasonable alternatives to the requested year-round and seasonal closures, including adjustments to the requested closure boundaries and duration based on additional or updated scientific and commercial data on right whale presence, aggregations, migration, and feeding grounds. At minimum, among any alternatives analyzed the Secretary should consider whether the closures south of Martha's Vineyard and Nantucket in the Statistical Areas 526 and 537 should be extended to include all of these blocks for a period of months or throughout the year, and whether any of the Gulf of Maine Right Whale Seasonal Closures should be extended to include additional months or throughout the year.

2. **Ropeless Only Fishing Areas allowing fishing inside areas closed to vertical line trap/pot gear fishing with ropeless gear**. Petitioners request that the Secretary exercise her authority under APA Section 553 and the MMPA, ESA, and MSA to immediately initiate rulemaking to make permanent the requested Ropeless Only Fishing Areas interim regulations, described and fully justified in detail above.

   Requested Ropeless Only Fishing Areas Alternatives for Analysis:

   The Secretary should also consider adjustments to the interim regulations authorizing Ropeless Only Fishing Areas fishing necessary to facilitate continued testing and use of ropeless gear as the science and engineering related to this gear develops. These should include the use of ropeless gear in areas outside of vertical line trap/pot gear closures, and options that will facilitate the eventual permanent approval and use of ropeless fishing gear, as appropriate, inside closed areas and/or throughout the fishery. Ropeless fishing is the only potentially viable long-term solution with the potential to nearly eliminate entanglement risk to North Atlantic right whales, as well as to other marine mammals and turtles, while allowing fishing to continue.

3. **Increased Aerial Surveys and Acoustic Monitoring in right whale critical habitat, including the areas inside and surrounding all existing and interim vertical line**

trap/pot gear closures. Petitioners request that the Secretary exercise her authority under APA Section 553 and the MMPA, ESA, and MSA to immediately initiate rulemaking to make the requested Increased Aerial Surveys and Acoustic Monitoring interim regulations, described and fully justified in detail above, permanent.

Requested Aerial Surveys and Acoustic Monitoring Alternatives for Analysis

The Secretary should also consider reasonable modifications to any interim regulations establishing increased right whale surveys and acoustic monitoring. Specifically, the Secretary should consider as one alternative a "Comprehensive Right Whale Survey Program" that increases right whale aerial surveys, passive acoustic monitoring and ocean acoustic gliders, vessel surveys, exploratory use of drones, and plankton monitoring in right whale critical habitat and areas along the eastern seaboard where vertical line trap/pot gear is used. As part of this alternative, NMFS should consider requiring expanded use of the continuous plankton recorder[337] and increased zooplankton research and systematic monitoring in order to help inform predictive modeling for right whale habitat and presence. The program should ensure surveys and monitoring of the areas inside and surrounding all existing and interim vertical line trap/pot closures, and be conducted at sufficient levels throughout right whale critical habitat to provide statistically significant data to support review of such closures on an ongoing basis, support identification of new closures or other measures necessary to protect right whales, support a Dynamic Closure System (see below), and otherwise help inform right whale science.

4. **Additional alternatives to meet requirements of MMPA and other applicable law.**

The requested closures to vertical line trap/pot gear fishing set forth above are, based on our analysis of the best scientific and commercial data available, located in the currently unprotected waters in the region that have some of the highest seasonal and year-round densities of North Atlantic right whales. We recognize, however, that North Atlantic right whales are not confined to these areas and often transit other waters in the region throughout the year, and therefore also require more diffuse protections from entanglement. Thus, in order to fully meet the level of entanglement risk reduction required by law and necessary to protect and recover right whales, we also request that through the permanent rulemaking the Secretary consider and implement additional measures that would complement vertical line trap/pot closures. Such measures should include trap reductions and vertical line limits that cumulatively, with vertical line trap/pot gear closures, will reduce takes, mortalities and serious injuries below the legal thresholds. For example, a 50 percent reduction in vertical lines in each lobster management area achieved through trap reductions would significantly reduce entanglement risk throughout the region. As discussed above, trap reductions can lead to

[337] McQuatters-Gollop, et al. (2015). The Continuous Plankton Recorder survey: How can long-term phytoplankton datasets contribute to the assessment of Good Environmental Status? Estuarine, Coastal and Shelf Science, Volume 162, pp. 88-97, ISSN 0272-7714, https://doi.org/10.1016/j.ecss.2015.05.010.

more efficient fishing operations and improve a fishing business's profitability.[338] Specifically, we also request consideration of one or more alternatives that would implement a dynamic closure system as described below.

B. Dynamic Closure System for Vertical Line Trap/Pot Gear Fishing to Supplement Year-Round and Seasonal Closures, or as an Effective Alternative to Seasonal Closures

Requested Rule

Dynamic Closure System for LMA 3 and LMA 2/3 Overlap

When a right whale is visually or acoustically located within LMA 3 and the LMA 2/3 Overlap, a 25nmi by 25nmi area will be temporarily closed to all vertical line trap/pot gear fisheries equidistant from the sighting location for a period of 15 days. When a closure is triggered, fishermen will be notified through an email listserv, online posting, and other means deemed appropriate. At NOAA Fisheries' discretion, the closure area may be extended seaward to the LMA 2/3 Overlap boundary in order to minimize risk of entanglement to right whales.

If a right whale is visually or acoustically detected during days 9-15 of the closure, a new 15-day closure will be triggered starting from the day of the new sighting.

Two survey flights with no right whale detections will be required before an area can re-open to fishing. If a whale is not detected again within a closed area during the 15-day closure, the area will re-open to fishing after day 15.

Fishermen with vertical line trap/pot gear within the closed area must complete one of three dynamic management options in as short a time period as possible, not to exceed 3 days, and register the action taken with the designated NOAA offices, including NOAA's Office of Law Enforcement:

Option A. Remove all vertical line trap/pot gear completely from within the closure area.

Option B. Hibernate vertical line trap/pot gear by dropping the endlines to the seafloor. The surface gear location where the gear is dropped must be recorded using an approved GPS location marking method and submitted to the designated NOAA offices, including NOAA's Office of Law Enforcement, which in turn will be disseminated as appropriate to avoid interactions with mobile fishing gear. At the end of the closure period, the gear can be retrieved by one of the following methods:

1) Grappling;
2) Use of a stowed buoy or lift bag fitted with a galvanic time release set for a minimum of 15 days to lift an endline, to be reset if the area remains closed beyond 15 days, or;
3) Another approved means.

[338] Myers, H. J. and Moore, M.J. (2019) (Figures). Reducing effort in the U.S. American lobster (*Homarus amreicanus)* fishery to prevent North Atlantic right whale (*Eubalaena glacialis*) entanglements may support higher profits and long-term sustainability. Woods Hole Oceanographic Institution.

Option C. Remove endlines and switch to approved ropeless fishing gear at each end of a trawl. The sub-surface or surface gear location must be marked using approved acoustic modem-based or GPS location marking methods and submitted to the designated NOAA offices, including NOAA's Office of Law Enforcement, which in turn will be disseminated as appropriate to avoid interactions with mobile fishing gear.

Dynamic Closure System for LMA 1, 2 and Outer Cape LMA

When a right whale is visually or acoustically located within LMA 1, 2 or Outer Cape LMA, a 25nmi by 25nmi area will be temporarily closed to all vertical line trap/pot gear fisheries equidistant from the sighting location for a period of 15 days. When a closure is triggered, fishermen will be notified through an email listserv and, at minimum, the closure also will be posted online. Maine waters landward of the Exemption Line are excluded from this section. At NOAA Fisheries' discretion, the closure area may be extended seaward to the LMA 1, 2, Outer Cape Area, or LMA 2/3 Overlap boundary in order to minimize risk of entanglement to right whales.

If a right whale is visually or acoustically detected during days 9-15 of the closure, a new 15-day closure will be triggered starting from the day of the new sighting.

Two survey flights with no right whale detections will be required before an area can re-open to fishing. If a whale is not detected again within a closed area during the 15-day closure, the area will re-open to fishing after day 15.

Fishermen with gear within the closed area must complete one of two dynamic management options in as short a time period as possible, not to exceed 3 days, and register the action taken with the designated NOAA offices, including NOAA's Office of Law Enforcement:

Option A. Remove all vertical line trap/pot gear completely from within the closure area, or;

Option B. Remove endlines and switch to approved ropeless fishing gear at each end of a trawl. The sub-surface or surface gear location must be marked using approved acoustic modem-based or GPS location marking methods and submitted to the designated NOAA offices, including NOAA's Office of Law Enforcement, which in turn will be disseminated as appropriate to avoid interactions with mobile fishing gear.

Discussion:

Our understanding of ocean ecosystems and the animals that are part of them has improved considerably in recent years. Oceans are dynamic, making protection of vulnerable species as part of fisheries management challenging. The ability to institute targeted, short-term closures to vertical line trap/pot gear in response to real time right whale presence information would provide an essential tool for protecting right whales, while limiting the impacts to fisheries that rely on the use of vertical lines to fish when right whales are not present.

Implementing a dynamic management system as a part of the suite of protections for right whales is important because right whales migrate and their preferred habitat changes.[339] Most right whales seasonally traverse fishing grounds as they move between historic feeding and calving grounds. As explained previously, right whales' preferred prey is a specific fatty copepod, *Calanus finmarchicus*. Thus, within larger migration patterns right whale distribution and presence timing can shift based on the location of this food source.[340] Further, changing ocean conditions due to climate change is affecting larger distribution patterns.[341] As right whale distribution changes in response to these factors, it can be important that protections to reduce entanglement risk also be available to respond quickly.

Section IV.A. highlights the overwhelming scientific information showing there is a long-term year-round presence of right whales in the area south of Martha's Vineyard and Nantucket in the requested proposed Southern New England year-round closure. In this area, a year-round closure to vertical line trap/pot fishing gear is essential to help protect the continued existence of the species. The requested seasonal closures in Gulf of Maine presented in Section IV.B. are also fully justified by the current data and are required to protect significant numbers of right whales as they feed and migrate to and from Canadian waters. Because the ocean ecosystem is dynamic and changing, right whales can be present in areas and times outside of the seasonal closure boundaries and timing. Further, over time the appropriate boundaries and length of seasonal closures may become less predictable, requiring regular review and rulemaking to adjust their timing and boundaries. If a robust dynamic closure system were developed and implemented, it could be a preferable to continued implementation of the recommended seasonal closures.

Implementing dynamic management for the American lobster fishery will be complicated by the different lengths of trap trawls, the distance from shore of some of the heaviest gear, related safety issues during inclement weather, the benthic habitat, and potential interactions with mobile gear fisheries. While there are differences between the American lobster fishery and the California Dungeness crab fishery and the Canadian snow crab fishery, these precedents still provide excellent models for developing a dynamic closure system in the lobster fishery. Parts of those dynamic management systems can be combined with knowledge gained from previous efforts at dynamic management in the American lobster fishery and U.S. shipping industry to create an effective dynamic closure system to reduce risk of right whale entanglements in vertical line trap/pot gear.

NOAA is currently implementing dynamic management systems. Since 2008, NOAA has implemented a system of seasonal and dynamic management areas along the U.S. Atlantic coast to help prevent ship strike mortality of right whales. The rule implements several seasonal

[339] *See e g.*, Pendleton, et. al. (2012). Weekly predictions of North Atlantic right whale *Eubalaena glacialis* habitat reveal influence of prey abundance and seasonality of habitat preferences, Vol. 18: 147–161, p. 156; Record, et. al. (2019). Rapid Climate-Driven Circulation Changes Threaten Conservation of Endangered North Atlantic Right Whales. (2019) *Oceanography,* Vol 32: No. 2, p. 163.
[340] *See e g.*, Pendleton, et. al. (2012) at 158-159; Record, et al. (2019) at 166-167. *see also* 2021 BiOp at 215.
[341] Record, et. al. (2019) at 163.

management areas (SMAs) with mandatory vessel speed restrictions reduce collisions with right whales. SMAs were created based on right whale habitat use and vessel traffic levels, especially near port entrances.[342] Inside the SMAs all vessels 65 feet or longer must travel at 10 knots or less, while outside of the SMAs NOAA may create dynamic management areas (DMAs) to protect right whales when 3 or more right whales are sighted in close proximity.[343] DMAs last 15 days and vessels are encouraged to either avoid the areas or transit through at less than 10 knots,[344] though NOAA recently recommended vessel speed limits south of Martha's Vineyard and Nantucket become mandatory because of the high number of DMAs in the area, and the lack of efficacy of voluntary speed restrictions.[345] DMAs can be extended if whales stay in the areas. When a DMA is triggered, mariners are notified through an email listserv and it is posted online.[346] NOAA's successful implementation of DMAs for ship speeds shows that a management scheme that implements seasonal, year-round, and/or and dynamic management areas, relying on aerial and acoustic surveys, triggers for closures, and an adequate process for providing notice to affected parties, can be implemented.

In California, regulators have implemented a dynamic management system in the Dungeness crab fishery to reduce entanglements of blue whales, humpback whales, and leatherback sea turtles. This fishery uses fixed pot/trap gear that must be serviced every 96 hours. Risk assessments are conducted at least monthly to determine the risk of entanglement. If risk is high, regulators can delay the opening of the fishery, close the fishery early, or implement two-week fishing zone closures or gear modifications. A "Whale Safe Fisheries" email list is used to contact the fleet, and fishermen have three days to remove or modify their gear in response to a closure.[347] Canada implemented a dynamic closure system in the Gulf of St. Lawrence and the Bay of Fundy in 2018 to protect right whales from entanglement. In areas subject to closure protocols, if a whale is detected, a targeted closure of approximately 2,000 square kilometers to fixed gear fishing is put into effect for 15 days.[348] If a right whale is detected again in days 9-15 of the closure, the closure will be extended for another 15 days, or in some cases the fishery will be closed for the duration of the season. If a whale is not detected in days 9-15 of the closure, the area will reopen after day 15. Outside of the dynamic zones in the Bay of Fundy and the Gulf of St. Lawrence, dynamic closures are considered on a case-by-case basis, with special consideration given to a group of three or more whales or a mother and calf pair.[349]

When dynamic area management was implemented in the American lobster fishery from 2002-2009, the primary criticisms centered around the length of time for fishermen to receive notice of

[342] NOAA Fisheries (2020). North Atlantic Right Whale (*Eubalaena glacialis*) Vessel Speed Rule Assessment. p. 5.
[343] Id. at p.6.
[344] Id.
[345] NOAA Fisheries (2020). North Atlantic Right Whale (*Eubalaena glacialis*) Vessel Speed Rule Assessment. p. 35-36.; See also NOAA Fisheries (2020). North Atlantic Right Whale (*Eubalaena glacialis*) Vessel Speed Rule Assessment. p. 37.
[346] Id.
[347] State of California Office of Administrative Law, (2020). Notice of Approval of Regulatory Action, §132.8. Risk Assessment Mitigation Program: Commercial Dungeness Crab Fishery.
[348] Fisheries and Oceans Canada. Fisheries Notices Related to North Atlantic Right Whales. (website last visited July 15, 2021).
[349] Id.

the closure, and the difficulty of removing their gear within the two days provided.[350] This system was discontinued when the broad-based sinking groundline rule was implemented in 2009. Since that time, the ability to provide notice to the regulated community has improved and there have been technological advances in communications, fishing gear, and gear marking technologies. For example, from 2002-2009 smart phones were only beginning to come into broad use and the first 4G network was being developed. Twelve years later every New England fishermen has a smart phone (or easily could), and many have satellite phones on their vessels, and 4G or 5G networks are available throughout most parts of the world. The requested Dynamic Closure System rule is based on NOAA's experience implementing dynamic management to protect large whales in both the U.S. fishing and shipping industries, and Canada's current successful implementation of its dynamic fishing area closures to protect the same population of right whales.

The requested dynamic closure system rule would rely on similar triggers as the Canadian system for establishment, extension, and reopening of closures to vertical line trap/pot gear, and the closures would be of approximately the same size. There are differences between the single pot gear used in Dungeness and Canadian snow crab fisheries, and the U.S. lobster fishery which uses lighter individual traps configured into trawls that offshore can be over one mile long with 45 traps. Thus, options are provided that do not require fishermen to move the gear in all cases. For all areas covered by the Dynamic Closure System rule, affected fishermen would have up to three days to either remove their gear from the area or switch to an approved ropeless fishing system (that removes fixed vertical buoy lines), which would allow them to continue fishing during the closure. In the areas further offshore, where the longest trap trawls are used, and the prevalent benthic habitat is sand or mud,[351] an additional option is provided that would allow fishermen to remove vertical buoy lines, mark their gear using an approved method, and "hibernate" the gear on the bottom. Gear could be recovered, and vertical buoys restored, when the area reopens by either use of a galvanic release timer that would bring a stowed buoy and rope or lift bag to the surface or grappling. The potential habitat impacts caused by grappling is reduced in sand and mud sediment and could be further minimized by limiting the grappling option in protected habitat areas or areas otherwise identified as hard-bottom.[352] Options should be explored during rulemaking to ensure gear is removed, switched to ropeless, or hibernated as quickly as possible, such as options that take into account fishermen's harvest schedule at the time of notice. Criteria should also be developed for exceptions necessary to ensure fishermen safety. These methods would significantly reduce the risk of right whale entanglement in the heaviest and most lethal gear used in the fishery, while taking into account fishermen safety and the difficulty of moving long trawls with limited notice.

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[350] Borggaard, et. al. (2017). Managing U.S. Atlantic large whale entanglements: Four guiding principles. Mar. Pol. 84, 202-212, 208; National Marine Fisheries Service (2002). Taking of Marine Mammals Incidental to Commercial Fishing Operations; Atlantic Large Whale Take Reduction Plan Regulations. Final Rule. 67 Fed. Reg. 1133–1142.

[351] National Marine Fisheries Service (2016). Omnibus Essential Fish Habitat Amendment 2, FEIS Vol. 1, Maps 21-35 and accompany text.

[352] *See* Id. at Sect. 4.2.2.; Stevens, B. (2020). The Ups and Downs of Traps: Environmental Impacts, Entanglement, Mitigation, and the Future of Trap Fishing for Crustaceans and Fish. *ICES J. of Mar. Sci.*, 135:1-13. p. 7. Note that the expanded use of longer trap trawls likely has already increased benthic habitat impacts as the longer trawls are dragged during retrieval, storms, or other causes. Id. at 5.

As is done for vessel DMAs, notice of the closure area can be provided quickly through an email listserv, by posting notice of the closure online, and through other means deemed appropriate by NOAA Fisheries. Buoys mark the position and orientation of fishing gear. If endlines and buoys are removed in order to switch to approved ropeless fishing gear or to hibernate the gear, accurate location-marking of the gear is required for avoiding gear conflict and recovering the gear. Currently, several methods exist and are being further developed to locate gear on the sea floor (marking acoustically) or by marking the gear location at the surface (GPS). The gear location and position of ropeless or hibernated gear must be marked and recorded using an approved method, and submitted to the designated NOAA offices, including NOAA's Office of Law Enforcement. The designated office will then disseminate the location of the hibernated or ropeless gear, as appropriate, to fishermen in the area, including mobile gear fishermen, to avoid gear interactions. NOAA Fisheries' will retain discretion to extend closures seaward to the LMA 1, 2, Outer Cape Area, or LMA 2/3 Overlap boundaries in order to minimize risk of entanglement to right whales.

VI. CONCLUSION

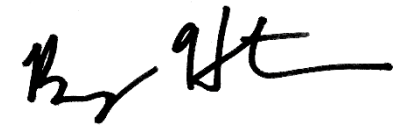
North Atlantic right whales continue to die at a rate that will lead to their functional extinction in the near future, which is compounded because their reproduction rate is far below what is needed for the species to survive and recover. These trends are in large part due to entanglement in the vertical line trap/pot fishing gear used in the American lobster and Jonah crab fisheries. The Secretary's ongoing authorization of these fisheries jeopardizes the continued existence of right whales. In the face of this threat, the Secretary has an unavoidable obligation under the MMPA, and also has duties under the ESA and MSA, to issue emergency rules that immediately protect right whales and reduce their deaths and serious injuries. A plain reading of the applicable laws reveals that this is clearly a non-discretionary situation. Pew requested emergency action more than one year ago due to the dire status of right whales then and the failure of the U.S. government to take any significant actions to protect them. Since Pew's 2020 Petition, still no actions have been taken to protect right whales and, as shown above, the measures NMFS indicates will be in its forthcoming Final Rule will not bring the fishery into compliance with the law, nor will it be significant enough to spur recovery of the species.

Consistent with the mandates and legal authority contained in the MMPA, ESA and MSA, The Pew Charitable Trusts, Environment America, Georgia Wildlife Federation, and One Hundred Miles request that the Secretary determine that the level of incidental MSI from the American lobster fishery has resulted or is likely to result in an impact on right whales that is "more than negligible," and promulgate emergency regulations that immediately establish the requested closure to vertical line trap/pot gear fishing in Southern New England and the five identified areas in the Gulf of Maine, the related measures establishing Ropeless Only Fishing Areas and increased aerial surveys and acoustic monitoring, and, or substantially similar and equally effective measures. The requested vertical line closures will significantly reduce the risk of further entanglements of right whales while the requested rulemaking to establish permanent regulations that fully meet the required risk reduction in the American lobster and Jonah crab fisheries is completed. The survival and recovery of the iconic North Atlantic right whale depends upon swift and effective action by the Secretary.

In closing, we remind you that extinction is forever and allowing a major whale species to go extinct off the East Coast of North America should be unacceptable to all Americans.

Sincerely,

Peter Baker
Director, Northern Oceans Conservation
The Pew Charitable Trusts



Ben Hellerstein
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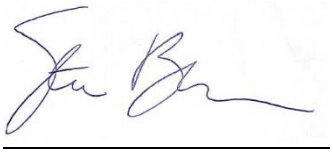

Steve Blackledge
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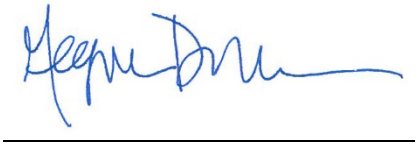

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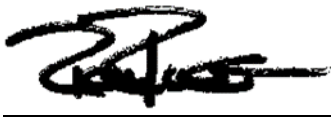

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