



November 29, 2017

# Via Electronic & Certified Mail

Wilbur Ross Secretary of Commerce U.S. Department of Commerce 1401 Constitution Avenue, N.W., Room 5516 Washington, DC 20230 TheSec@doc.gov

Chris Oliver Assistant Administrator for Fisheries NOAA Fisheries 1315 East-West Highway Silver Spring, MD 20910 chris.oliver@noaa.gov

John Bullard Northeast Regional Administrator Greater Atlantic Regional Fisheries Office National Marine Fisheries Service 55 Great Republic Drive Gloucester, MA 01930 john.bullard@noaa.gov

# Re: Notice of Violations and Intent to File Suit under the Endangered Species Act

Secretary Ross, Mr. Oliver, and Mr. Bullard:

The Conservation Law Foundation ("CLF") and co-counsel Earthjustice hereby give notice pursuant to 16 U.S.C. § 1540(g) of our intent to sue the U.S. Department of Commerce, the Secretary of Commerce, the National Ocean and Atmospheric Administration's National Marine Fisheries Service, and the Assistant Administrator for Fisheries (collectively "NOAA Fisheries" or the "Agency") for violations of the Endangered Species Act, 16 U.S.C. §§ 1531 *et seq.*, specified below. The alleged violations concern the effects of the American lobster fishery on the endangered North Atlantic right whale (*Eubalaena glacialis*) ("right whale"). We intend to file suit in United States District Court seeking appropriate declaratory relief, injunctive relief, and other relief no earlier than sixty days from the postmark date of this notice letter.

CLF is located in New England, whose ocean waters are an important part of the right whale's designated critical habitat. CLF has long been engaged in efforts to protect and promote the recovery of the right whale, which is unique to the Atlantic coast. The right whale is one of the most endangered whale species in the world, with an estimated population of 458 individuals in 2015. Richard M. Pace III et al., *State-space mark-recapture estimates reveal a recent decline in abundance of North Atlantic right whales*, 7(21) ECOLOGY & EVOLUTION 1 (2017). After a brief period of some population increases, the right whale population has been steadily declining since 2010. *Id*.

Right whales are deeply connected to the history, economy, and culture of New England, and to the health of its ocean ecosystems. CLF and its members are alarmed by the right whale's declining abundance, the troubling number of recent mortalities, the pervasive threat of entanglement in fishing gear, and regulators' failure to take effective management action, all of which jeopardize the species' very survival at this point in time. This year, 2017, has been a particularly deadly year, with at least seventeen confirmed right whale mortalities—equivalent to about 3 percent of the population—leading the Agency to declare an unusual mortality event under the Marine Mammal Protection Act. NOAA FISHERIES, 2017 North Atlantic Right Whale Unusual Mortality Event (Oct. 31, 2017).<sup>1</sup> See also NOAA FISHERIES, NORTH ATLANTIC RIGHT WHALE (*EUBALAENA GLACIALIS*) 5-YEAR REVIEW: SUMMARY AND EVALUATION 12 (Oct. 2017) [hereinafter "Five-Year Review"]. According to NOAA Fisheries' own stock assessment, entanglement in fishing gear is a leading cause of attributable human-caused right whale mortalities and serious injuries. See Sean A. Hayes et al., US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2016 (NOAA Tech. Memo. 2017) 13-14, tbl.1 (2017) (reporting that fishery-related entanglement accounted for 80 percent of reported right whale mortality and serious injury cases in 2010–2014). NOAA Fisheries must take immediate action to prevent further serious harm from commercial fishing operations that is jeopardizing the species' continued existence.

As outlined herein, NOAA Fisheries' continued authorization, permitting, and oversight of the American lobster fishery is causing the unauthorized "take" of right whales in violation of Section 9 of the Endangered Species Act, 16 U.S.C. § 1538.

NOAA Fisheries also is in violation of Section 7 of the Endangered Species Act, 16 U.S.C. § 1536, because it is a federal agency that is failing to "insure" that its authorization, permitting, and oversight of the operation of the American lobster fishery "is not likely to jeopardize the continued existence of" endangered right whales. 16 U.S.C. § 1536(a)(2). In analyzing the effects of the American lobster fishery on right whales, NOAA Fisheries relies on a biological opinion that is fundamentally flawed and is arbitrary and capricious, an abuse of discretion, and not in accordance with law, in violation of the Endangered Species Act (*see id.* § 1536) and the Administrative Procedure Act (*see* 5 U.S.C. § 706). *See* GREATER ATLANTIC REGIONAL FISHERIES OFF., ENDANGERED SPECIES ACT SECTION 7 CONSULTATION ON THE

<sup>&</sup>lt;sup>1</sup> http://www.nmfs.noaa.gov/pr/health/mmume/2017northatlanticrightwhaleume.html.

CONTINUED IMPLEMENTATION OF MANAGEMENT MEASURES FOR THE AMERICAN LOBSTER FISHERY [CONSULTATION NO. NER-2014-11076] (July 31, 2014) [hereinafter "Lobster BiOp"].

In addition, NOAA Fisheries has failed to reinitiate consultation regarding the effects of the American lobster fishery on right whales as required by law. NOAA Fisheries has a duty to reinitiate consultation in light of recent right whale deaths, new information about the right whale population, and new information regarding the impacts of commercial fishing activities. *See* 50 C.F.R. § 402.16; Lobster BiOp, *supra*, § 12. The agency's failure to reinitiate consultation is in violation of the Endangered Species Act (*see* 16 U.S.C. § 1536), and arbitrary and capricious, an abuse of discretion, and not in accordance with law, in violation of the Administrative Procedure Act (*see* 5 U.S.C. §§ 701–706).

NOAA Fisheries is also subject to, and in violation of, the Marine Mammal Protection Act, 16 U.S.C. §§ 1371(a), 1387. The Agency has failed to authorize incidental take of right whales in the American lobster fishery by issuing an incidental take statement ("ITS") that complies with the Marine Mammal Protection Act's requirements, and the Agency has failed to take other appropriate action as necessary to protect right whales from the continued operation of the American lobster fishery. *See* 16 U.S.C. §§ 1371(a), 1387. As a consequence of these statutory violations, the Agency is in violation of the Marine Mammal Protection Act and the Administrative Procedure Act. *See* 5 U.S.C. §§ 701–706.

If NOAA Fisheries does not take appropriate action within sixty days to cure the violations outlined in this notice letter, our organizations will file suit and pursue appropriate remedies. However, we would prefer to avoid litigation, thereby allowing the parties to focus their resources on solutions for right whale protection and recovery. Avoiding litigation is also in the interests of the American lobster industry. Regulators and lobster fishermen appear committed to avoiding right whale entanglements and deaths. Despite the Agency's and industry's efforts, however, the right whale species is in a dire condition and rates of entanglement remain high. Immediate action by the Agency is necessary, and required by law, to protect right whales from U.S. commercial fishing operations and forestall the threat of extinction.<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> Cross-border action and Canadian action is also urgently necessary considering that some right whale mortalities, serious injuries, and entanglements in recent years have been observed in Canadian waters, including twelve deaths in 2017. *Accord* Sean W. Brillant et al., *A timely opportunity to protect North Atlantic right whales in Canada*, 81 MARINE POL'Y 160 (2017). *See, e.g.*, NOAA FISHERIES, *2017 North Atlantic Right Whale Unusual Mortality Event*, *supra* (documenting five live whale entanglements and twelve right whale deaths in Canada in 2017, but also reporting that U.S. mortalities exceeded Canadian mortalities for the period 2012–16). *See also* Five-Year Review, *supra*, at 21 (noting that right whale distribution is shifting northward into Canadian waters). NOAA Fisheries has recognized "a disparity between efforts undertaken by the governments of the US and Canada in addressing right whale entanglement risks . . . ." Five-Year Review, *supra*, at 20. In an effort to promote implementation of transboundary protection measures, NOAA Fisheries recently classified Canadian fisheries in its draft List of Foreign Fisheries subject to the Marine Mammal Protection Act "import rule," which requires certain fish and fish products imported to the United States to be harvested in accordance with conservation measures comparable to those of the United States. *See* 81 FED. REG. 54,389 (Aug. 15, 2016); 82 FED. REG. 39,762 (Aug. 22, 2017). The United States must continue to collaborate with Canada and intensify efforts to reduce risks to right whales throughout their range. *Cf.* Five-Year Review, *supra*, at 22 (stating that the Agency "will continue to develop [its]

## BACKGROUND

#### A. Conservation Law Foundation

Founded in 1966, CLF is a non-profit, member-supported environmental organization with offices in Massachusetts, Maine, New Hampshire, Vermont, and Rhode Island. CLF's advocates use law, science, and economics to solve the problems threatening New England's natural resources and communities. For decades, CLF has worked to promote marine conservation and stewardship, and revitalization of New England's once-legendary ocean resources. CLF and its members have a significant interest in ensuring the survival of the right whale. The entanglement of right whales and the alarming decline of the species adversely affect the interests of CLF's members.

Protection of right whales has long been a concern of CLF. In the 1970s and 1980s, CLF challenged proposed oil and gas lease sales on the outer continental shelf in part due to potential impacts to endangered right whales.<sup>3</sup> In the 1990s, CLF participated as an *amicus curiae* in litigation under the Endangered Species Act concerning the impacts of commercial fishing gear, including lobster gear, on right whales. *See Strahan v. Coxe*, 939 F. Supp. 963 (D. Mass. 1996), *aff'd in part and vacated in part*, 127 F.3d 155 (1st Cir. 1997), *cert. denied*, 525 U.S. 978 (1998). Eleanor Dorsey, CLF Staff Scientist, served on the Atlantic Large Whale Take Reduction Team formed in 1996 to develop recommendations for reducing incidental take of right whales and other large whales in commercial fishing operations. *See Atlantic Large Whale Take Reduction Plan*, 62 FED. REG. 39,157 (July 22, 1997) [hereinafter "ALWTRP"]. More recently, CLF sued NOAA Fisheries for violations of the Endangered Species Act related to right whale entanglements in fishing gear and forced the agency to amend its fisheries management regulations to address threats to right whales. *See Conservation Law Found. v. Evans*, Civil Action No. 00-12069-DPW (D. Mass. 2001).

For decades, CLF has also been closely engaged in management of New England's fisheries resources. CLF has long advocated for NOAA Fisheries, the New England Fishery Management Council, and the Atlantic States Commission to end overfishing, promote recovery of overfished stocks, protect essential fish habitat, restore forage fish stocks, mitigate adverse impacts to marine mammals, and pursue ecosystem-based fishery management approaches. Overall, CLF's fisheries work, through participation, negotiation, and litigation, helps to advance the protection and recovery of right whales by promoting the health and vibrancy of New England's marine ecosystems and foodweb.

partnership with Canada on right whale conservation"). Importantly, however, the need to mitigate right whale threats in Canadian waters does not obviate the urgent need for, nor alleviate requirements under U.S. law that mandate, the Agency to take additional action to protect right whales in U.S. waters.

<sup>&</sup>lt;sup>3</sup> See, e.g., Conservation Law Found. v. Watt, 586 F. Supp. 1238 (D. Mass. 1984); Massachusetts v. Clark, 594 F. Supp. 1373 (D. Mass. 1984); Conservation Law Found. v. Watt, 560 F. Supp. 561 (D. Mass.), aff'd sub nom. Massachusetts v. Watt, 716 F.2d 946 (1st Cir. 1983); Conservation Law Found. v. Andrus, 623 F.2d 712 (1st Cir. 1979), amended, (1st Cir. Feb. 22, 1980).

Additionally, CLF has been actively engaged in ensuring the successful development and implementation of the Northeast Regional Ocean Plan, the nation's first such regional plan, and associated Northeast Ocean Data Portal. The Northeast Regional Ocean Plan sets forth a blueprint for efficient and sustainable utilization of the region's coastal and marine resources through long-term planning, improved intergovernmental and interagency coordination, and decision-making based on the best available science and extensive stakeholder engagement. Continued implementation of the Northeast Regional Ocean Plan will help protect right whales by ensuring that any federal actions in federal ocean waters take into account the best available science and information about right whales and affected stakeholders.

CLF is also directly engaged in protecting right whales from risks associated with offshore wind development in wind energy areas in federal waters off the coast of New England. Together with a coalition of advocacy groups, CLF works collaboratively with offshore wind energy developers to establish mutually agreed upon survey, development, and operations protocols to protect right whales and other marine resources. CLF and a number of other conservation organizations signed a voluntary agreement with Deepwater Wind, LLC that sets forth a suite of mitigation measures to protect right whales during certain site assessment and characterization activities necessary for offshore wind energy development in the Rhode Island/Massachusetts Wind Energy Area.

#### **B.** Management of the American Lobster Fishery

The American lobster fishery is managed by the Atlantic States Commission in a cooperative management scheme between the States and the federal government under Amendment 3 to the Interstate Fishery Management Plan and Addenda thereto and NOAA Fisheries regulations. *See* 50 C.F.R. pt. 697. Lobster Management Areas span from Maine to North Carolina, but the primary area of harvest is the Gulf of Maine, which is fished primarily by Maine, Massachusetts, and New Hampshire fishermen. *See id.* § 697.18; Lobster BiOp, *supra*, at 9, 12. The lobster fishery is the most active fixed-gear fishery in the region; though multiple gear types are used, trap or pot gear accounts for 98 percent of landings. *See* Lobster BiOp, *supra*, at 8, 9.

The Atlantic States Commission is comprised of state and federal government representatives, as established by interstate compact. *See* PUB. L. 77-539; PUB. L. 81-721. Under the Atlantic Coastal Fisheries Cooperative Management Act, 16 U.S.C. §§ 5101 *et seq.*, the Atlantic States Commission must prepare and adopt management plans for coastal fisheries, including the American lobster fishery. All commercial fishermen harvesting lobster in federal waters, with limited exceptions, are required to have a federal permit as well as a state permit for where the lobster is landed. Federal rules apply regardless of whether lobster fishing occurs in state or federal waters. *See* 50 C.F.R. §§ 697.3, 697.4, 697.19.

#### C. The Endangered Species Act

The purpose of the Endangered Species Act is to conserve endangered and threatened species and the ecosystems on which they depend. *See* 16 U.S.C. § 1531(b). Endangered species are those so listed by the Secretary of the Interior. *See id.* § 1533(a)(1) & (2). The Endangered Species Act imposes a continuing and affirmative duty on federal agencies to "insure that any action authorized, funded, or carried out by such agency is not likely to

jeopardize the continued existence of any endangered species or result in the destruction or adverse modification of" its critical habitat. *Id.* § 1536(a)(2).

Federal agencies, including NOAA Fisheries, are required to consult with the Secretary of Commerce (whose jurisdiction includes marine species, *see* 50 C.F.R. § 224.101) or the Secretary of the Interior regarding any agency action to insure that it is not likely to jeopardize the continued existence of any endangered species. 16 U.S.C. § 1536(a). In a case where NOAA Fisheries is both the acting agency and the consulting agency, NOAA Fisheries must engage in intra-agency consultation. When "insuring" no jeopardy or adverse modification, the Agency must "use the best scientific and commercial data available." *Id.* § 1536(a)(2).

The consultation concludes in the issuance of a biological opinion that determines whether the action is likely to jeopardize the continued existence of the listed species. Jeopardy is likely where "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 . . . ." 50 C.F.R. § 402.02. In its jeopardy analysis, the agency must consider *inter alia* the indirect and direct effects of the proposed action and the cumulative effects of reasonably certain future public and private activities. *Id.* §§ 402.14(g), 402.02. If jeopardy is found, the biological opinion must specify reasonable and prudent alternatives that would avoid the likelihood of jeopardy. 16 U.S.C. § 1536(b).

The Agency is required to reinitiate any consultation previously concluded if new information reveals that an agency action may affect an endangered species or critical habitat in a manner or to an extent not previously considered or considered adequately. 50 C.F.R. § 402.16. Specifically, "[r]einitiation of formal consultation is required and shall be requested" by the Agency: a) "[i]f the amount or extent of taking specified in the incidental take statement is exceeded;" b) "if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;" or c) "if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion[.]" *Id*.

The Endangered Species Act also makes it unlawful for any person to "take any [endangered] species" within the United States or the territorial sea, or upon the high seas without authorization. 16 U.S.C. § 1538(a)(1)(B) & (C). The take prohibition extends not only to persons directly causing a taking but also to governmental third parties whose actions allow or authorize acts that cause a taking, such as through commercial fishing permitting programs. *See Strahan v. Coxe*, 127 F.3d 155, 163 (1st Cir. 1997), *cert. denied*, 525 U.S. 978 (1998). *See id.* § 1538(g) ("It is unlawful for any person . . . to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in [the Act]."). The statute defines "take" broadly to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." *Id.* § 1532(19). By regulation, the Secretary of the Interior has further defined the term "harm" to mean "an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering." 50 C.F.R. § 17.3.

If a biological opinion concludes that a federal agency action may result in the take of an endangered species, the Agency must issue an ITS that specifies a permissible take level and includes "reasonable and prudent measures . . . necessary . . . to minimize such impact." 16 U.S.C. § 1536(b). The ITS must also include any additional measures necessary to comply with the Marine Mammal Protection Act. 50 C.F.R. § 402.14(i).

## **D.** Marine Mammal Protection Act

The Marine Mammal Protection Act prohibits any unauthorized take of a marine mammal. 16 U.S.C. §§ 1371(a), 1372(a). "The term 'take' means to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal." *Id.* § 1362(13). *See also id.* § 1362(18) (defining "harassment" as "any act of pursuit, torment, or annoyance" that "has the potential to injure" or "to disturb . . . by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.")

Notwithstanding the Act's take prohibition, the Marine Mammal Protection Act allows for limited incidental take of endangered marine mammals in commercial fishing operations with the express authorization of NOAA Fisheries. 16 U.S.C. §§ 1371(a)(5)(E), 1387(a)(2). NOAA Fisheries may authorize the incidental take of endangered marine mammals by commercial fishing operations for a three-year period, provided it finds, after a public notice-and-comment process, that: 1) the taking will have a "negligible impact" on the species or stock; 2) a recovery plan has been or is being developed under the Endangered Species Act; and 3) if required, a monitoring plan and take reduction plan are in effect. *Id.* § 1371(a)(5)(E)(i).

If, during the operation of the commercial fishery, NOAA Fisheries determines that the incidental take authorized has resulted in, or is likely to have, more than a "negligible impact" on the listed species or stock, the Agency "shall" use its emergency authority to protect the species or stock, "and may modify any permit granted . . . as necessary." 16 U.S.C. § 1371(a)(5)(E)(iii).

In addition, the Marine Mammal Protection Act requires NOAA Fisheries to develop a Take Reduction Plan for each "strategic stock" of marine mammals to limit incidental take from commercial fisheries to below the potential biological removal ("PBR") level. 16 U.S.C. § 1387(f)(2). The PBR level is the maximum number of non-natural animal mortalities that still allow the stock to reach or maintain its optimum sustainable population. *Id.* § 1362(20). NOAA Fisheries must amend the Take Reduction Plan as necessary to comply with the Act. *Id.* § 1387(f)(7)(F). Furthermore, the Agency must "prescribe emergency regulations" consistent with a Take Reduction Plan when necessary to protect a species or stock from commercial fishing operations. *Id.* § 1387(g)(1)(A).

#### E. History of Efforts to Protect the Critically Endangered Right Whale

The right whale has been listed as "endangered" under the Endangered Species Act since its inception. *See* 16 U.S.C. § 1533; 50 C.F.R. § 224.101; 35 FED. REG. 18,319 (Dec. 2, 1970) (original listing); 73 FED. REG. 12,024 (Mar. 6, 2008) (revised listing). The right whale frequents and inhabits state and federal waters, including waters off the coast of New England and other U.S. waters. *See* Five-Year Review, *supra*, at 13; Hayes et al., *supra*, at 8. *See also* Timothy V.N. Cole et al., *Evidence of a North Atlantic right whale* Eubalaena glacialis *mating ground*, 21(1) ENDANGERED SPECIES RESEARCH 55 (2013). Right whales frequent areas in which

the American lobster fishery operates in large numbers during specific seasons, and they are present in the Gulf of Maine year-round. *See* Hayes et al., *supra*, at 8–9. Right whales are long-lived and highly mobile; they travel frequently within and between habitat areas. *See id.* at 8. NOAA Fisheries has designated certain of those areas, in both state and federal waters, as "critical habitat" for right whales. *See* 81 FED. REG. 4838 (Jan. 27, 2016) (designating critical habitat for right whales in the Gulf of Maine, in Georges Bank, and off the Southeast U.S. coast); 50 C.F.R. § 226.203. "Critical habitat" is a specific area occupied by an endangered species containing physical or biological features essential to the conservation of the species, and which may require "special management considerations or protection." 16 U.S.C. §1532(5)(A)(1).

Right whale habitats are substantially degraded as a result of a variety of commercial fishing activity and practices authorized and managed by NOAA Fisheries. Moreover, right whales are injured or killed by entanglement in fishing gear, and they are harassed when entangled and forced to tow fishing gear, even if they eventually break free. *See, e.g.*, Michael J. Moore & Julie M. van der Hoop, *The painful side of trap and fixed net fisheries: Chronic entanglement of large whales*, 2012 J. MARINE BIOLOGY 1 (2012). NOAA Fisheries has long admitted that entanglement in fishing gear adversely affects and causes takings of right whales. *See, e.g.*, ALWTRP, *supra*; Lobster BiOp, *supra*, at 135–136. In particular, the Agency has identified pot/trap gear as a gear type that causes injuries and mortalities of right whales, and has documented instances of right whale mortalities and serious injuries caused by pot/trap gear from, or consistent with, the American lobster fishery. Lobster BiOp, *supra*, at 75–76, 98.

Pursuant to the Marine Mammal Protection Act, 16 U.S.C. § 1387(f), NOAA Fisheries undertook development of a Take Reduction Plan for endangered great whales in the Atlantic. See ALWTRP, supra. The ALWTRP specified requirements for certain commercial fishing gear that apply to all U.S. waters in the Atlantic, except for those waters expressly exempted. See 50 C.F.R. §§ 229.32, 217.12. Over more than a decade of implementation, however, the ALWTRP failed to reduce the rate of fishing-related entanglements and mortalities. See Richard M. Pace III et al., Incremental fishing gear modifications fail to significantly reduce large whale serious injury rate, 26 ENDANGERED SPECIES RESEARCH 115 (2014); Julie M. van der Hoop et al., Assessment of management to mitigate anthropogenic effects on large whales, 27 CONSERVATION BIOLOGY 121 (2013). Consequently, the Agency adopted a 2007 rule mandating the use of sinking groundline by fixed gear fisheries, known as the "sinking line rule." See 72 FED. REG. 57,104 (Oct. 5, 2007). Right whale entanglements continued to occur in the period following implementation of the sinking line rule. See, e.g., Hayes et al., supra, at 13. In 2014, NOAA Fisheries amended the ALWTRP to specify requirements for trap and pot gear designed to reduce the number of vertical lines in the water column and expand gear-marking requirements (the "vertical line rule"). See 79 FED. REG. 36,586 (June 27, 2014).

NOAA Fisheries has also taken action to reduce the threat of ship strikes to right whales. In 2008, the Agency implemented a provisional "ship speed rule" requiring vessels 65-feet long or longer to reduce speed to 10 knots or less inside seasonal management areas. *See* 73 FED. REG. 60,173 (Oct. 10, 2008); 50 C.F.R. § 224.105. Concurrently, the Agency developed a voluntary dynamic management area program to encourage ship speed reductions when three or more right whales are sighted in a specific area. *See* 73 FED. REG. at 60,180. In 2013, the Agency indefinitely extended the ship speed rule. *See* 78 FED. REG. 73,726 (Dec. 9, 2013).

## F. The Continuing Threat of Entanglement to the Survival of the Right Whale

Entanglement of right whales has continued despite historical efforts to mitigate the impact of commercial fisheries. As NOAA Fisheries acknowledged in its recent five-year review of the right whale's status, regulation of commercial fishing activities through the ALWTRP has been ongoing since 1996; yet, "[t]hroughout the same period, right whale entanglements rates have remained high .... "Five-Year Review, supra, at 18. NOAA Fisheries reports a significant number of entanglements of right whales in U.S. waters that have resulted in death or serious injuries. According to the Agency's most recent marine mammal stock assessment report, for the period 2010–2014, twenty-four recorded right whale mortalities or serious injuries involved entanglements or fishery interactions, representing 80 percent of all reported human-caused mortalities or serious injuries for that period. Haves et al., *supra*, at 13. See also Scott D. Kraus et al., Recent Scientific Publications Cast Doubt on North Atlantic Right Whale Future, opinion, 3 FRONTIERS IN MARINE SCI. 137 (2016) (reporting that entanglementrelated deaths accounted for 85 percent of diagnosed right whale deaths 2010–2015). The stock assessment report concludes there was a minimum average rate of human-caused right whale mortality of 5.66 whales per year in 2010–2014, including commercial fisheries mortality of 4.65 whales per year. See id. at 12-13. See also Five-Year Review, supra, at 17. During this same period, the right whale PBR level was no more than 1 whale per year. See Hayes et al., supra, at 12. See also van der Hoop et al. (2013), supra (finding that over two decades, human-caused mortality of right whales exceeded the PBR level in all years but one). Of the right whale deaths documented to date in 2017, chronic entanglement or probable entanglement was the cause of death for at least two whales. HEATHER M. PETTIS ET AL. NORTH ATLANTIC RIGHT WHALE CONSORTIUM 2017 ANNUAL REPORT CARD (2017).<sup>4</sup> In addition, there have been ten live entanglement sightings reported over the past year, half of which occurred in the United States. *Id.* at tbl.5.

Even more troubling is that right whale "[s]carring rates suggest that entanglements are occurring at about an order of magnitude greater than that detected from observations of whales with gear on them." Hayes et al., *supra*, at 14. *Cf.* Lobster BiOp, *supra*, at 37 (acknowledging that not all right whale deaths and injuries are observed). It is estimated that 82.9 percent of right whales have scars due to entanglements, and 59 percent are entangled more than once, with at least one whale showing evidence of seven entanglements. Amy R. Knowlton et al., *Monitoring North Atlantic right whale* Eubalaena glacialis *entanglement rates: A 30 yr retrospective*, 466 MARINE ECOLOGY 293 (2012). Additionally, scarring data indicate that juveniles and calves are entangled at higher rates than adults. *Id*.

Recent research shows that chronic entanglement in fishing gear is a source of extreme stress, pain, and suffering for right whales, and can interfere with behaviors such as foraging and locomotion.<sup>5</sup> The substantial energy requirements associated with chronic entanglement are

<sup>&</sup>lt;sup>4</sup> Available at http://www.narwc.org/pdf/2017%20Report%20CardFinal.pdf.

<sup>&</sup>lt;sup>5</sup> See, e.g., Julie M. van der Hoop et al., Entanglement is a costly life-history stage in large whales, 7(1) ECOLOGY & EVOLUTION 92 (2017); Julie M. van der Hoop et al., Swimming kinematics and efficiency of entangled North Atlantic right whales, 32 ENDANGERED SPECIES RESEARCH 1 (2017); Heather M. Pettis et al., Body condition changes arising from natural factors and fishing gear entanglements in North Atlantic right whales Eubalaena

equivalent to the energetic demands of major life events such as migration or female reproduction. Julie van der Hoop et al., *Entanglement is a costly life-history stage in large whales*, 7(1) ECOLOGY & EVOLUTION 92 (2017).

The sublethal impacts of chronic entanglement are linked to population decline. See Kraus et al., supra ("Sublethal entanglements can cause reproductive failure and declining health long after the entanglement is over."); Jooke Robbins et al., Apparent survival of North Atlantic right whales after entanglement in fishing gear, 191 BIOLOGICAL CONSERVATION 421 (2015) (finding "that both juveniles and adult [right whales] have a lower probability of survival after a reported entanglement"). Entanglement is contributing to not only right whale mortality and morbidity but also decreasing reproduction. See AMY R. KNOWLTON ET AL., STATUS OF REPRODUCTIVE FEMALES IN THE NORTH ATLANTIC RIGHT WHALE POPULATION AND IMPACTS OF HUMAN ACTIVITIES ON THEIR REPRODUCTIVE SUCCESS (NOAA Rpt. 2012); Knowlton et al., Monitoring North Atlantic right whale Eubalaena glacialis entanglement rates: A 30 vr retrospective, supra. In recent years, right whale calving rates have been below average and right whale body condition has declined. See Five-Year Review, supra, at 21. Calving rates have decreased since 2008. See PETTIS ET AL., supra. In the period 2012-2016, only 18 percent of females available to calve gave birth; and in 2017, only 7 percent of available females calved. Id. See also Hayes et al., supra; Pace et al. (2017), supra. Troublingly, annual productivity in 2016 and 2017 has "likely been less than needed for replacement of dying whales ....." Pace et al. (2017), *supra*. Compounding the declining calving rates is the fact that the right whale population has an uneven sex ratio (an estimated 272 males to 186 females in 2015). Id. These factors, which are linked to the sublethal impacts of chronic entanglement, impede the right whale population's ability to increase and jeopardize the continued existence of the species. See Julie van der Hoop et al., Entanglement is a costly life-history stage in large whales, 7(1) ECOLOGY & EVOLUTION 92 (2017); Pace et al. (2017), supra (finding that the once-growing right whale population experienced a decline of approximately 1 percent per year during the period 2010–2015, with females declining approximately 7 percent).

Of further concern is that the risks of entanglement have increased over time and within the lifetimes of right whales. Fishing line strength and gear heaviness have increased since the 1990s, likely leading to more severe entanglements and injuries. *See* Amy R. Knowlton et al., *Effects of fishing rope strength on the severity of large whale entanglements*, 30(2) CONSERVATION BIOLOGY 318 (2015). *See also* Logan H. Arthur et al., *Estimating maximal force output of cetaceans using axial locomotor muscle morphology*, 31(4) MARINE MAMMAL SCI. 1401 (2015) (concluding that large whales are unlikely to break free from entanglements in today's extremely strong fishing lines). Meanwhile, the number of American lobster traps licensed to fish in the Gulf of Maine has also increased significantly from approximately 2.3

glacialis, 32 ENDANGERED SPECIES RESEARCH 237 (2017); Rosalind M. Rolland et al., *Health of North Atlantic right whales* (Eubalaena glacialis) over three decades: From individual health to demographic and population health trends, 542 MARINE ECOLOGY PROGRESS SRS. 265 (2016); Julie M. van der Hoop et al., Drag from fishing gear entangling North Atlantic right whales, 32(2) MARINE MAMMAL SCI. 619 (2016); Moore & van der Hoop, supra; Knowlton et al., Monitoring North Atlantic right whale Eubalaena glacialis entanglement rates: A 30 yr retrospective, supra.

million traps in 1993 to more than 3.2 million traps in 2013. ATLANTIC STATES COMM'N, AMERICAN LOBSTER BENCHMARK STOCK ASSESSMENT AND PEER REVIEW REPORT 33 (2015).<sup>6</sup>

There is evidence of entanglement in rope from all parts of the fixed gear fishing industry, including inshore and offshore gear, vertical lines and groundlines, and floating and sinking lines. *See* Amanda Johnson et al., *Fishing gear involved in entanglements of right and humpback whales*, 21 MARINE MAMMAL SCI. 635 (2005). In other words, as NOAA Fisheries has recognized, all fixed gear fishing lines pose a threat to right whales anywhere in the water column. *See* Lobster BiOp, supra, at 130. *See also* Mark F. Baumgartner et al., *North Atlantic right whale foraging ecology and its role in human-caused mortality*, 581 MARINE ECOLOGY PROGRESS SRS. 165, 178 (2017) (finding that "right whales use the entire water column from surface to sea floor"). In addition, there is evidence that right whale distribution patterns are shifting, which may render the population more vulnerable to entanglement. *See* Hayes et al., *supra*, at 21; Pace et al. (2017), *supra*.

Notably, NOAA Fisheries recently published a five-year review of the status of the right whale that acknowledges the adverse impacts of chronic entanglement as well as the decline of the right whale species. *See* Five-Year Review, *supra*, at 18–20. The review concluded with a series of recommendations for right whale recovery, including a recommendation that NOAA Fisheries "should evaluate the current status of the species and serious injury/mortality triggers in biological opinions for commercial fisheries consultations under Section 7 of the Endangered Species Act to determine if re-initiation is warranted." *See id.* at 25.

# G. Endangered Right Whales Face Other Significant Anthropogenic Threats

In addition to entanglement in commercial fishing gear, right whales face other significant human-caused threats to their survival, including, but not limited to, potential offshore oil and gas development, ocean noise, and ship strikes. *Cf.* Five-Year Review, *supra*, at 21 ("Right whales, due to their near constant interaction with human activities along the East Coast of North America, face a number of complex factors limiting their recovery.").

Offshore oil and gas activities off the U.S. Atlantic Coast threaten right whales and their habitat. Five-Year Review, *supra*, at 15. The Bureau of Ocean Energy Management is preparing a new five-year Outer Continental Shelf Oil and Gas Leasing Program for 2019–2024 in accordance with a recent Executive Order calling for annual lease sales in the Mid-Atlantic and South Atlantic "to the maximum extent permitted by law." *See* 82 FED. REG. 30,886, 30,887 (July 3, 2017); Exec. Order. No. 13,795 (Apr. 28, 2017). As NOAA Fisheries has recognized, "[i]f drilling activities are allowed to occur in the future, there may be consequent adverse effects to the right whale population by vessel movements, noise, spills, or effluents." Five-Year Review, *supra*, at 15.

Anthropogenic ocean noise, such as noise from ships, is another chronic stressor that negatively impacts right whales and may threaten the species' continued viability. *See* Five-Year

<sup>6</sup> Available at

http://www.asmfc.org/uploads/file/55d61d73AmLobsterStockAssmt\_PeerReviewReport\_Aug2015\_red2.pdf.

Review, *supra*, at 15; Rosalind M. Rolland et al., *Evidence that ship noise increases stress in right whales*, 279(1737) PROC. ROYAL SOC'Y B: BIOLOGICAL SCI. 2363 (2012).

Additionally, "[r]ight whales continue to face the risk of being struck by vessels throughout their range." Five-Year Review, supra, at 17 (citing David N. Wiley et al., Vessel strike mitigation lessons from direct observations involving two collisions between noncommercial vessels and North Atlantic right whales (Eubalaena glacialis) in the western north Atlantic, 32(4) MARINE MAMMAL SCI. 1501 (2016)). Research has demonstrated poor compliance with voluntary speed restrictions in dynamic management areas, and concluded it unlikely that voluntary measures meaningfully reduced the risk of ship strikes in these areas. See GREGORY K. SILBER & SHANNON BETTRIDGE, AN ASSESSMENT OF THE FINAL RULE TO IMPLEMENT VESSEL SPEED RESTRICTIONS TO REDUCE THE THREAT OF VESSEL COLLISIONS WITH NORTH ATLANTIC RIGHT WHALES, NMFS-OPR-48 (NOAA Tech. Memo. 2012). Other research finds that ship strikes have decreased within seasonal management areas as a result of the ship speed rule, but *increased* outside of seasonal management areas. See Julie M. van der Hoop et al., Vessel strikes to large whales before and after the 2008 ship strike rule, 8 CONSERVATION LETTERS 24 (2015). See also Five-Year Review, supra, at 18; David W. Laist et al., Effectiveness of mandatory vessel speed limits for protecting North Atlantic right whales, 23 ENDANGERED SPECIES RESEARCH 133 (2014). As noted in NOAA Fisheries' most recent stock assessment report, for the period 2010 - 2014, vessel strikes accounted for 20 percent of right whale mortalities and serious injuries. Hayes et al., supra, at 14. In sum, the ship speed rule appears to have reduced risks in some areas, but vessel strikes remain a significant threat to the right whale.

# **LEGAL VIOLATIONS**

At issue is the current regulatory scheme by which NOAA Fisheries authorizes, permits, and manages commercial fishing activities—specifically, operation of the American lobster fishery, the most active fixed gear fishery in the Greater Atlantic Region—that result in harm, harassment, injury, and death to critically endangered right whales, degrade their habitats, and threaten the continued existence of the species.

# A. Section 7 of the Endangered Species Act

NOAA Fisheries is failing to insure that its management and authorization of the American lobster fishery is not likely to jeopardize the continued existence of right whales in violation of Section 7 of the Endangered Species Act. *See* 16 U.S.C. § 1536(a)(2). At the root of NOAA Fisheries' violation is its reliance on the legally inadequate Lobster BiOp. As described below, the Lobster BiOp is fundamentally flawed and NOAA Fisheries failed to reinitiate consultation in light of new information in violation of the Endangered Species Act, 16 U.S.C.S. §§ 1536(a)(2), (4) and 1538(a)(1)(G), and implementing regulations, 50 C.F.R. § 402.16.

# 1. The Lobster BiOp is Fundamentally Flawed

The Lobster BiOp is legally inadequate. In violation of statutory requirements, the Lobster BiOp fails to rely on the best available scientific information, is improperly limited in scope, includes a flawed jeopardy analysis, and fails to include an ITS. Any of these flaws on its

own would render the Lobster BiOp unlawful; together, they demonstrat the Agency's utter abdication of its duty to consult. Accordingly, NOAA Fisheries' continued reliance on the inadequate Lobster BiOp in their ongoing management and authorization of the American Lobster Fishery violates Section 7 of the Endangered Species Act. *See* 16 U.S.C. §1536.

The Lobster BiOp's first fatal flaw is that it fails to rely on the best scientific data available. The Agency's Section 7 consultation must "use the best scientific and commercial data available" in determining whether operation of the American lobster fishery is likely to ieopardize the continued existence of right whales. See 16 U.S.C. § 1536(a)(2). Yet, the Lobster BiOp fails to properly analyze the severe sublethal impacts of chronic entanglement. As summarized above, the best available scientific information demonstrates that entanglement not only causes serious direct injuries and mortalities to right whales but also contributes to decreased reproductive success and morbidity, interferes with behaviors such as foraging and locomotion, and is linked to the overall decline of the population. See, e.g., supra note 5; Pace et al. (2017), *supra*; Kraus et al., *supra*. Additionally, the Lobster BiOp fails to properly analyze the effects of other stressors to right whales, such as noise pollution, in its analysis of the environmental baseline and cumulative effects. See Lobster BiOp, supra, §§ 4, 7. Cf. Rolland et al. (2012), *supra*. Furthermore, in concluding that entanglement in American lobster gear is unlikely to jeopardize the survival and recovery of right whales, the Lobster BiOp relies on an assumption that the right whale population is increasing. See Lobster BiOp, supra, at 146-49. Yet, the best available science indicates that the right whale population has been in decline since 2010. See Pace et al. (2017), supra.

Second, the Lobster BiOp is improperly limited in scope. The Lobster BiOp arbitrarily and unlawfully defines the agency action subject to consultation as the management of the American lobster fishery over a ten-year period. *See* Lobster BiOp, *supra*, at 8. According to the Agency, it is not possible to reliably analyze "speculative" effects beyond ten years "with reasonable certainty." *Id.* The Agency argues that "[1]onger-term effects of the fishery on []listed species, whatever they may be, are much more difficult to pinpoint and extrapolate beyond ten years." *Id.* Furthermore, the Agency claims that it lacks information suggesting that analysis of a longer period would alter the Agency's conclusion that the fishery is not appreciably reducing the likelihood of the survival of right whales. *Id.* 

The narrow ten-year scope of the Agency's analysis is plainly at odds with the Agency's duty under Section 7 to "insure" that the American lobster fishery is not likely to jeopardize the continued existence of right whales. *See* 16 U.S.C. § 1536(a)(2). The Agency's selection of a ten-year timeframe for its analysis is arbitrary and wholly disconnected from both right whale biology and industry trends.

Given the declining condition of the right whale population and current reproduction trends (*see* Pace et al. (2017), *supra*), the level of take assumed to occur over a ten-year period in the Lobster BiOp —32.5 whales—could decimate the species in a matter of decades. *See* Lobster BiOp, *supra*, at 135–36. Moreover, right whales are long-lived and will be affected by fishing gear beyond the ten-year timeframe analyzed. If the Agency considers the impacts of the fishery in successive ten-year increments, the Agency will fail to properly analyze the impacts of chronic entanglement on the species and the connection of entanglement to long-term species decline.

Similarly, the Agency has no rational basis for assuming that the American lobster fishery, which has existed for generations, and increased in effort over recent decades, will shut down or otherwise substantially change operations on a decadal scale. Indeed, the best available information about the industry suggests the opposite. For instance, the Atlantic States Commission reports that traps have been the dominant gear used to fish lobster for nearly 200 years, that regulations have, in many cases, grown less restrictive over time, and that harvest and management methods have remained largely stable over time such that "resource managers from the late 19th to early 20th century would be familiar with . . . [the] process for managing lobster today." *See, e.g.*, ATLANTIC STATES COMM'N, *supra*, at 28–31. It is unreasonable for the Agency to claim that analysis of this enduring fishery's effects beyond ten years would be merely "speculative." *See* Lobster BiOp, *supra*, at 8.

The Lobster BiOp's improper scope and the Agency's failure to use the best available science contribute to the Agency's fundamentally flawed and unlawful jeopardy analysis. The Lobster BiOp concludes that the continued operation of the American lobster fishery "may adversely affect, but is not likely to jeopardize, the continued existence of North Atlantic right whales . . . ." Lobster BiOp, *supra*, at 160. This finding is conclusory and lacks rational basis. The Endangered Species Act dictates that a jeopardy finding is appropriate if operation of the American lobster fishery "reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of" the right whale. *See* 50 C.F.R. § 402.02. The Agency's analysis does not support its conclusion that up to 3.25 deaths or serious injuries of right whales per year over ten years, in addition to other acknowledged cumulative stressors, is not likely to jeopardize a species experiencing steady decline and for which the PBR level is 0.9 whales. *See* Lobster BiOp, *supra*, at 35. Indeed, proper consideration of the best available science on the impacts of entanglement, cited above, must lead to a conclusion that unmitigated operation of the American lobster fishery is jeopardizing and will continue to jeopardize the survival of the right whale species.

Finally, the Lobster BiOp fails to include a proper ITS as required by federal law. The Endangered Species Act requires an ITS if a biological opinion concludes that the agency action under review may result in the take of an endangered species. See 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(g). The Agency knows, or should know, that its permitting and management of American lobster fishing gear takes endangered right whales. The Endangered Species Act's take prohibition applies to not only actions that directly cause a taking but also acts by third parties that authorize actions causing a taking. Strahan v. Coxe, 127 F.3d 155, 163 (1st Cir. 1997), cert. denied, 525 U.S. 978 (1998). Here, the Agency is well aware that activities they authorize and oversee, and which could not occur but for their management and oversight, cause takings of right whales. See, e.g., 82 FED. REG. 3655 (Jan. 2, 2017) (listing the American lobster fishery as a fishery that must comply with the ALWTRP, and listing the fishery as a "Category I" fishery due to frequent incidental mortality and serious injury to marine mammals, including right whales). See also Hayes et al., supra, at 13 (recognizing that one of "[t]he principal factors believed to be retarding growth and recovery of the [right whale] population" is "entanglement with fishing gear"). The Lobster BiOp itself acknowledges at least one documented case of entanglement in lobster fishing gear between 2007 and 2011. Lobster BiOp, supra, at 135. The Lobster BiOp further acknowledges that "[e]ntanglements of right whales in pot/trap gear continue to occur despite the measures implemented by the ALWTRP" and finds that "the

lobster fishery has the potential to seriously injure or kill an average of 3.25 right whales per year." *Id.* at 135–36. Yet, in spite of the Agency's own findings regarding the impact of the American lobster fishery, the Agency failed to include an ITS in the Lobster BiOp. *See* Lobster BiOp, *supra*, at 160–61.

For the foregoing reasons, the Lobster BiOp is legally inadequate. Consequently, the Agency's continued reliance on the flawed Lobster BiOp has violated and continues to violate the Endangered Species Act. The Agency has failed to fulfill its statutory mandate to insure that authorization, permitting, management, and operation of the American lobster fishery does not jeopardize the survival of right whales. *See* 16 U.S.C. § 1536.

## 2. The Agency is Violating Its Duty to Reinitiate Consultation

The Agency is violating its legal duty to reinitiate consultation regarding the impacts of the American lobster fishery in the wake of recent right whale deaths, as well as new information about the right whale population and the impacts of commercial fishing. *See* 50 C.F.R. § 402.16.

By law, the Agency is required to reinitiate consultation regarding the impacts of the American lobster fishery "if new information reveals effects of the action that may affect [right whales] or critical habitat in a manner or to an extent not previously considered." 50 C.F.R. § 402.16. That threshold has been reached. NOAA Fisheries' duty to reinitiate consultation is triggered by new science and information, cited above, regarding the sublethal impacts of chronic entanglement on right whales, the current declining trajectory of the population, other stressors and threats to right whales, right whales' shifting distribution, the 2017 unusual mortality event, the impact of recent rules (i.e., the ship speed rule, sinking line rule, and vertical line rule), and the increasing risks of entanglement. These new data and information indicate that the American lobster fishery may be affecting right whales and their critical habitat "in a manner or to an extent not previously considered" by the Agency. *See* 50 C.F.R. § 402.16.

In particular, recent science undermines the Agency's assumption that the right whale population is increasing (*see* Lobster BiOp, *supra*, at 146–49) as well as the Agency's assumptions regarding the species' environmental baseline, cumulative effects, and the impacts of entanglement (*see id.* at 140–149). Additionally, there is an urgent need for the Agency to reinitiate consultation in the wake of the unprecedented number of right whale deaths in 2017 and the significant impact of those deaths on the survival of the species in light of its declining population. *Cf.* Five-Year Review, *supra*, at 25 (recommending that NOAA Fisheries "evaluate the current status of the species . . . to determine if reinitiation is warranted").<sup>7</sup>

<sup>&</sup>lt;sup>7</sup> The Agency's duty to reinitiate consultation is also triggered by the terms of the Lobster BiOp itself. As set forth in the Lobster BiOp, NOAA Fisheries must reinitiate consultation if (1) the annual average rate of serious injuries and mortalities exceeds 3.25 whales in the period 2012–2016, or (2) "at any time during the five-year period the number of [serious injuries and mortalities] make it statistically impossible for the average to be [less than 3.25 whales] at the end of the five-year period." Lobster BiOp, *supra*, at 18–19. For the purposes of monitoring serious injuries and mortalities of right whales, the Agency stated that it will rely upon serious injury determination reports, marine mammal stock assessment reports, and the Atlantic Large Whale Take Reduction Team monitoring reports. Serious injuries and mortalities reported in the most recent marine mammal stock assessment reports and presented to the Atlantic Large Whale Take Reduction Team now render it statistically impossible for the average number of

## **B.** Section 9 of the Endangered Species Act

NOAA Fisheries' regulatory scheme currently authorizes and manages commercial fishing activities and gear that injure, harm, harass, and degrade the habitats of endangered right whales, in violation of the take prohibition of the Endangered Species Act, 16 U.S.C. § 1538. *See also* 50 C.F.R. § 17.3.

American lobster gear causes entanglements that kill or seriously injure endangered right whales. As noted above, the Lobster BiOp finds that "the lobster fishery has the potential to seriously injure or kill an average of 3.25 right whales per year." Lobster BiOp, *supra*, at 135–36. Such harms constitute a "take" under the Endangered Species Act. *See* 16 U.S.C. § 1532(19). Additionally, as described above, chronic entanglement constitutes a take of endangered right whales because it significantly impairs right whale primary behaviors and causes injury and harm. *See id.*; 50 C.F.R. § 17.3. In spite of the Agency's own findings regarding the impact of the American lobster fishery, the Lobster BiOp fails to include an ITS authorizing the incidental take of right whales by the American lobster fishery. *See* 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(g). Therefore, such takings violate the Act.

Accordingly, NOAA Fisheries, through its authorization, permitting, and management of the American lobster fishery in a way that allows for unauthorized takes of right whales, has violated and is continuing to violate Section 9 of the Endangered Species Act, 16 U.S.C. § 1538.

## C. Marine Mammal Protection Act

NOAA Fisheries' authorization and oversight of the operation of the American lobster fishery also causes a take of right whales in violation of the Marine Mammal Protection Act. 16 U.S.C. §§ 1371(a), 1372(a), 1387. The Agency has failed to authorize incidental take of right whales by properly issuing an ITS that complies with the Marine Mammal Protection Act's requirements, and the Agency has failed to take other appropriate action as necessary to protect the right whale from the continued operation of the American lobster fishery. *See id.* §§ 1371(a), 1387.

As described above, the operation of the American lobster fishery causes entanglement of right whales, which harasses, injures, and kills right whales and disturbs their behavioral patterns, thereby causing "takes" under the Marine Mammal Protection Act. *See* 16 U.S.C. § 1362(13) & (18). The Act allows NOAA Fisheries to permit limited incidental take of endangered marine mammals in commercial fishing operations, but only if the Agency finds, *inter alia*, that the taking will have no more than a "negligible impact" on the species. *Id.* § 1371(a)(5)(E)(i). Here, NOAA has made no such finding. Indeed, a finding of negligible impact is impossible by the Agency's own analysis regarding the dire condition of the right whale species and the impacts of the American lobster fishery on right whales. *See* Lobster BiOp,

serious injuries and mortalities to be less than 3.25 whales per year for the period 2012–2016. Therefore, by its own terms, the Agency must reinitiate consultation. *See* Letter from Ctr. for Biological Diversity et al. to Wilbur Ross, Sec'y of Commerce & Chris Oliver, Asst. Admin. for Fisheries, NOAA Fisheries, att. A (Oct. 2, 2017). *See also* Hayes et al., *supra*; PETTIS ET AL., *supra*.; NOAA FISHERIES, *2017 North Atlantic Right Whale Unusual Mortality Event, supra*.

*supra*, at 136 (assuming that that the fishery will cause 3.25 serious injuries or mortalities per year over the ten-year period analyzed). The Agency admits as such in the Lobster BiOp, stating that it did not include an ITS because such a statement "cannot be lawfully issued" as "the incidental take of []listed whales by the American lobster fishery has not been authorized under [the Marine Mammal Protection Act]." *Id.* at 161.

The Agency's authorization, permitting, and management of the American lobster fishery in a way that allows for unauthorized takes of right whales violated and is continuing to violate the Marine Mammal Protection Act.

## **RELIEF REQUESTED**

Our organizations will seek declaratory relief and injunctive relief to prevent further violations of the Endangered Species Act, the Marine Mammal Protection Act, and the Administrative Procedure Act, and such other relief as permitted by law. We will also seek recovery of any costs and fees associated with this matter to which we may be entitled.

# **CONCLUSION**

As outlined herein, NOAA Fisheries is in violation of the Endangered Species Act as well as the Marine Mammal Protection Act and Administrative Procedure Act. Without expeditious action, additional entanglements will bring about or accelerate the extinction of the already decimated right whale population. If the Agency does not take action within sixty days to remedy their violations, we will pursue litigation.

As noted above, during the sixty-day notice period, we are willing to discuss effective remedies for the violations noted in this letter that may avoid the necessity of further litigation. If you wish to pursue such discussions, please contact us as soon as possible.

Sincerely,

Megan M. Herzog, Esq. Peter Shelley, Esq. CONSERVATION LAW FOUNDATION 62 Summer Street Boston, MA 02110 Phone: 617-850-1727 mherzog@clf.org pshelley@clf.org

Erica A. Fuller, Esq. Roger M. Fleming, Esq. EARTHJUSTICE 1625 Massachusetts Avenue, Suite 702 Washington, DC 20036 Phone: 508-400-9080 efuller@earthjustice.org rfleming@earthjustice.org

Cc: James J. Gilmore, Jr., Chair, Atlantic States Marine Fisheries Commission





November 29, 2017

# Via Electronic & Certified Mail

Wilbur Ross Secretary of Commerce U.S. Department of Commerce 1401 Constitution Avenue, N.W., Room 5516 Washington, D.C. 20230 TheSec@doc.gov

Chris Oliver Assistant Administrator NOAA Fisheries 1315 East-West Highway Silver Spring, MD 20910 chris.oliver@noaa.gov

John Bullard Northeast Regional Administrator Greater Atlantic Regional Fisheries Office National Marine Fisheries Service 55 Great Republic Drive Gloucester, MA 01930 john.bullard@noaa.gov

## Re: Notice of Violations and Intent to File Suit under the Endangered Species Act Regarding the Omnibus Essential Fish Habitat Amendment 2

Secretary Ross, Mr. Oliver, and Mr. Bullard:

The Conservation Law Foundation ("CLF") and co-counsel Earthjustice hereby give notice pursuant to 16 U.S.C. § 1540(g) of our intent to sue the U.S. Department of Commerce, the Secretary of Commerce, the National Marine Fisheries Service, and the Assistant Administrator for NOAA Fisheries (collectively "NMFS") for violations of Section 7 of the Endangered Species Act ("ESA"), 16 U.S.C. § 1536. These violations arise from NMFS's failure to comply with substantive and procedural requirements of Section 7 in its proposed implementation of the Omnibus Essential Fish Habitat Amendment 2 ("OHA2"), as

recommended by the New England Fishery Management Council ("Council" or "NEFMC"). *See* Proposed Rule, 82 FED. REG. 51,492 (Nov. 6, 2017). We intend to file suit in United States District Court seeking appropriate declaratory relief, injunctive relief, and other relief no earlier than sixty days from the postmark date of this notice letter.

As the action agency that will implement OHA2 and the delegated consulting agency for North Atlantic right whales (*Eubalaena glacialis*) ("right whales"), NMFS has an affirmative duty to insure that OHA2 is not likely to jeopardize the continued existence of right whales or result in the destruction or adverse modification of their habitat by undertaking an intra-agency consultation and, if necessary, issuing new biological opinions. *See* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.16 (duty to consult lies with action agency and consulting agency). If jeopardy or adverse modification is found, NMFS must specify reasonable and prudent alternatives to avoid the likelihood of jeopardy. 16 U.S.C. § 1536(b)(3).

NMFS has not satisfied its substantive and procedural duty to insure that the proposed OHA2—which opens more than five thousand square nautical miles of previously closed ocean to fishing<sup>1</sup>—will not jeopardize the continued existence of right whales or adversely modify their habitat. *See* 16 U.S.C. § 1536(a)(2).<sup>2</sup> NMFS cannot reasonably rely on the impacts analysis in the OHA2 Final Environmental Impact Statement ("FEIS") because the identified biological opinions and relevant Atlantic Large Whale Take Reduction Plan ("ALWTRP")<sup>3</sup> do not consider the effects of the proposed opening of closed areas, the unprecedented right whale mortalities in 2017, or new scientific information on the declining reproductive health and status of right whales and the impacts of commercial fishing.<sup>4</sup> *See* 50 C.F.R. § 402.16(b) (federal agencies must reinitiate consultation if "new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered"). Consistent with NMFS's duty to ensure that the action will not jeopardize or adversely modify right whale critical habitat, consultations on all fisheries operating in the Action Area are required where, as here, critically endangered right whales occur in the action area, the proposed activity "may affect" right whales, and the effects of the activity on right whales will not be insignificant,

<sup>&</sup>lt;sup>1</sup> See New England Fishery Mgmt. Council, Final Omnibus Essential Fish Habitat Amendment 2 [OHA2 FEIS], Vol. I, tbl.37 (2016), available at <u>https://www.nefmc.org/library/omnibus-habitat-amendment-2</u>.

<sup>&</sup>lt;sup>2</sup> NMFS must also fulfill its consultation obligations on all other threatened and endangered species that may be affected by the action such as fin whales, sei whales, leatherback sea turtles, Kemp's ridley sea turtles, Green Sea turtles (North Atlantic DPS), Loggerhead Sea turtles (Northwest Atlantic Ocean DPS), Atlantic salmon, and Atlantic sturgeon. *See* OHA2 FEIS Vol. I at 445-46.

<sup>&</sup>lt;sup>3</sup> Pursuant to the Marine Mammal Protection Act, 16 U.S.C. § 1387(f), NOAA Fisheries undertook development of a Take Reduction Plan for endangered great whales in the Atlantic. *See* 62 FED. REG. 39,157 (July 22, 1997). The ALWTRP and its adjustments specify requirements for certain commercial fishing gear that apply to all U.S. waters, except for those expressly exempted. *See* 50 C.F.R. §§ 229.32, 217.12.

<sup>&</sup>lt;sup>4</sup> For instance, the OHA2 FEIS assumes right whales are on a positive trajectory. *See* FEIS Vol. VI at 36 ("Large whale assessments indicate general increases in the population sizes for these species (again, *see* Volume 1, section 4.8.2.1, and Waring et al. 2015)."). Yet the best available science indicates that the right whale population has been declining since 2010 (Pace et al. 2017).

discountable, or wholly beneficial.<sup>5</sup> See OHA2 FEIS Vol. I at 452, 464-67. See also OHA2 FEIS Vol. IV at 340, 346, 361, 392.

Founded in 1966, the Conservation Law Foundation is a non-profit, member-supported environmental organization located in New England, whose ocean waters are an important part of the right whale's designated critical habitat. Conservation Law Foundation advocates use law, science, and economics to solve the problems threatening New England's natural resources and communities. For decades, the Conservation Law Foundation has worked to promote marine conservation and stewardship, and revitalization of New England's once-legendary ocean resources.

The Conservation Law Foundation and its members have a significant interest in ensuring the survival of the right whale, which is unique to the Atlantic coast. Right whales are deeply connected to the history, economy, and culture of New England, and to the health of its ocean ecosystems. The right whale is one of the most endangered whale species in the world, with an estimated population of 458 individuals in 2015 (Pace et al. 2017). After a brief period of some population increases, the right whale population has been steadily declining since 2010. *Id.* The Conservation Law Foundation has long been engaged in efforts to protect and promote the recovery of the right whale. Those efforts have included challenges to proposed oil and gas lease sales on the outer continental shelf, engagement in management of New England's fisheries resources through participation, negotiation, and litigation, engagement in ensuring the successful development and implementation of the Northeast Regional Ocean Plan and associated Northeast Ocean Data Portal, and collaborative work with offshore wind energy development of New England.

The Conservation Law Foundation and its members are alarmed by the right whale's declining abundance, the troubling number of recent mortalities, the pervasive threats and habitat destruction associated with commercial fishing, and regulators' failure to take effective management action, all of which jeopardize the species' very survival at this point in time. This year, 2017, has been a particularly deadly year, with at least seventeen confirmed right whale mortalities—equivalent to about 3 percent of the population.<sup>6</sup> An alarming number of these deaths were females and only a small percentage of the remaining females regularly bear calves.<sup>7</sup>

Despite NMFS's existing efforts to avoid right whale deaths and injuries, many activities including commercial fishing continue to threaten the right whale population, and existing

<sup>5</sup> See NMFS, Guidance for Carrying Out Endangered Species Act (ESA) Section 7 Consultations with NMFS Greater Atlantic Regional Fisheries Office 6-7, available at

https://www.greateratlantic.fisheries.noaa.gov/protected/section7/guidance/consultation/garfo\_esa\_section\_7\_techni cal\_guidance\_050216.pdf.

<sup>&</sup>lt;sup>6</sup> See NMFS, 2017 North Atlantic Right Whale Unusual Mortality Event (Oct. 31, 2017), http://www.nmfs.noaa.gov/pr/health/mmume/2017northatlanticrightwhaleume.html.

<sup>&</sup>lt;sup>7</sup> HEATHER M. PETTIS ET AL., NORTH ATLANTIC RIGHT WHALE CONSORTIUM 2017 ANNUAL REPORT CARD (2017), *available at* <u>http://www.narwc.org/pdf/2017%20Report%20CardFinal.pdf</u> [2017 Report Card].

conservation measures are inadequate to prevent extinction. If NMFS does not take action within sixty days to remedy the violations alleged herein we will pursue litigation. We are available to discuss this matter and seek a mutually acceptable solution that avoids litigation.

# BACKGROUND

Simultaneously with this notice, CLF and Earthjustice filed a separate "Notice of Violations and Intent to File Suit under the Endangered Species Act" pertaining to the American lobster fishery. That notice letter describes NMFS's unreasonable reliance on a 2014 biological opinion, purporting to analyze the effects of the American lobster fishery on right whales, that fails to insure that the ongoing operation of the fishery does not jeopardize the continued existence of right whales under Section 7, and allows unauthorized takes in violation of Section 9 of the ESA, 16 U.S.C. §§ 1531 *et seq.*, and also violates the Marine Mammal Protection Act, 16 U.S.C. §§ 1371(a), 1387.<sup>8</sup>

On October 20, 2017, NMFS announced the completion of a 5-year review for the right whale assessing developments in science and management for right whales from 2012-2017.<sup>9</sup> The 5-Year Review cited significant new scientific information on the long-term detrimental effect of chronic entanglement on right whale health and reproduction, and on right whale population decline, and described new factual information on the significant mortality event that occurred in 2017. *See* 5-Year Review at 19-21. It concluded with a series of recommendations for right whale recovery over the next five years, including a recommendation to "evaluate the current status of the species and serious injury/mortality triggers in biological opinions for commercial fisheries consultations under Section 7 of the Endangered Species Act to determine if re-initiation is warranted." *See id.* at 25 (recommendation 2017-9).

Regardless of whether NMFS reinitiates consultation regarding the lobster fishery and/or the other commercial fisheries alluded to (but not identified) in its 5-Year Review, it must separately and immediately insure that the OHA2 is not likely to jeopardize the continued existence of right whales or adversely modify their habitat. NMFS's proposed action would open several thousand square miles of previously closed ocean to fisheries under NMFS's authorization and oversight.<sup>10</sup> NMFS has not initiated a consultation for this action even though the OHA2 FEIS fully acknowledges that right whales are in the action area, may be affected, and negative impacts could occur. *See* OHA2 FEIS Vol. I at 452, 464-67. *See also* OHA2 FEIS Vol. IV at 340, 346, 361, 392. Further, the OHA2 FEIS does not include any analysis of the impacts

<sup>&</sup>lt;sup>8</sup> On October 2, 2017, the Center for Biological Diversity, Defenders of Wildlife, The Humane Society of the United States, and Whale and Dolphin Conservation also filed a "Sixty-Day Notice of Intent to Sue over Violations of Sections 7 and 9 of the Endangered Species Act Related to Entanglements of North Atlantic Right Whales."

<sup>&</sup>lt;sup>9</sup> See NMFS, NORTH ATLANTIC RIGHT WHALE (*EUBALAENA GLACIALIS*) 5-YEAR REVIEW: SUMMARY AND EVALUATION (Oct. 2017), *available at* <u>http://www.nmfs.noaa.gov/pr/species/Status%20Reviews/final\_narw\_5-year\_review\_2017.pdf</u> [5-Year Review].

<sup>&</sup>lt;sup>10</sup> See OHA2 FEIS Vol. VI at 183 ("The Omnibus Habitat Amendment 2 regulates all fishermen with federal permits allowing the holder to fish in the federal waters off Southern New England, Georges Bank, and the Gulf of Maine.").

of increased dredging by the Scallop fishery or the Atlantic Surfclam and Ocean Quahog fishery on right whale habitat, yet states that "none of the Greater Atlantic Region fisheries are likely to adversely modify or destroy designated critical habitat for right whales." OHA2 FEIS Vol. I at 450. To comply with the ESA, its regulations, and NMFS's own technical guidance, NMFS must meet statutory consultation requirements regarding the effects of all fisheries directly addressed or affected by the OHA2 and, if appropriate, issue new a biological opinion(s) that determines whether the OHA2 is likely to jeopardize the continued existence of right whales or result in the destruction or adverse modification of their habitat. *See* 16 U.S.C. § 1536; 50 C.F.R. § 402.16.

If jeopardy or adverse modification is found, NMFS must specify reasonable and prudent alternatives to avoid the likelihood of jeopardy. 16 U.S.C. § 1536(b). And if the action may result in the take of right whales, the agency must issue an incidental take statement ("ITS") that specifies a permissible take level. *Id.* § 1536(b).

Moreover, once NMFS initiates a consultation, the prohibitions of Section 7(d), 16 U.S.C. § 1536(d), apply, and NMFS may not make an irreversible and irretrievable commitment of resources that forecloses the formulation or implementation of reasonable and prudent alternatives. *See also Oceana v. Bureau of Ocean Energy Management*, 37 F.Supp.3d 147, 175– 76 (D.D.C., 2014) (Section 7(d) bars an agency from irreversibly or irretrievably committing resources during the consultation to ensure status quo until such time as a jeopardy determination is completed under section 7(a); *Thomas v. Peterson*, 753 F.2d 754, 764 (9th Cir. 1985) ("If a project is allowed to proceed without substantial compliance with those procedural requirements, there can be no assurance that a violation of the ESA's substantive provisions will not result.") (citing *TVA v. Hill*, 437 U.S. 153 (1978)).

## APPLICABLE LAW

## A. Endangered Species Act

Under ESA Section 7(a)(2), "[e]ach federal agency *shall*...*insure* that any action authorized, funded, or carried out by such agency... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species." 16 U.S.C. § 1536(a)(2) (emphasis added); 50 C.F.R. § 402.14(a). The obligation to "insure" against a likelihood of jeopardy or adverse modification requires the agency to give the benefit of the doubt to endangered species and to place the burden of risk and uncertainty on the proposed action. The substantive duty imposed by Section 7(a)(2) is constant, relieved only by an exemption from the Endangered Species Committee. 16 U.S.C. § 1536(h).

Compliance with the procedural requirements of the ESA—making the determination of the effects of the action through the consultation process—is integral to compliance with the substantive requirements of the Act. Under this statutory framework, federal actions that "may affect" a listed species or critical habitat may not proceed unless and until the federal agency ensures, through completion of the consultation process, that the action is not likely to cause jeopardy or adverse modification of critical habitat. 16 U.S.C. § 1536(a); 50 C.F.R. §§ 402.14,

402.13; *American Rivers v. U.S. Army Corps of Engineers*, 271 F. Supp. 2d 230, 262 (D.D.C. 2003) (enjoining Army Corps of Engineers from implementing management plan for river basin where plaintiffs established likelihood of success on the merits of claims that supplemental biological opinion was flawed and Corps' operating plan violated the ESA and Administrative Procedure Act); *Greenpeace v. Nat'l Marine Fisheries Serv.*, 106 F. Supp. 2d 1066 (W.D. Wash. 2000) (enjoining ocean-bottom fishing until Section 7(a)(2) consultation was completed, stating: "In the absence of a completed comprehensive biological opinion NMFS has not, and cannot, insure that continued fishing in designated critical habitat will not result in harm to endangered Steller sea lions.").

As described above, the consultation process begins with the action agency's determination that the action "may affect" a listed species or critical habitat. The threshold for a finding of "may affect" is extremely low. A triggering effect need not be significant; rather "any possible effect, whether beneficial, benign, adverse, or of an undetermined character, triggers the formal consultation requirement . . . ." 51 FED. REG. 19,926, 19,949 (June 3, 1986). See also U.S. Fish and Wildlife Service & NMFS, Endangered Species Consultation Handbook xvi (Mar. 1998). If a proposed action "may affect" a listed species or designated critical habitat, formal consultation is required unless NMFS concurs in writing with an action agency's finding that the proposed action "is not likely to adversely affect" listed species or designated critical habitat. 50 C.F.R. §§ 402.02, 402.13(a), 402.14 (a). This "informal consultation" process consists of discussions and correspondence between the Services and the action agency and is designed to assist the action agency in determining whether formal consultation is required. 50 C.F.R. § 402.13(a). Intra-Service consultations use the same legal standards. See Endangered Species Consultation Handbook at 1-5. An action is "likely to adversely affect" protected species, and formal consultation is required, if "any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial." Endangered Species Consultation Handbook at xv. In fulfilling these Section 7 consultation duties, agencies are required to use the best scientific and commercial data available. 16 U.S.C. § 1536(a)(2).

In addition, an agency must reinitiate Section 7 consultation whenever: a) "take[] specified in the incidental take statement is exceeded;" b) "new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;" or c) "the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion." 50 C.F.R. § 402.16.

Even after the procedural requirements of a consultation are complete, the ultimate duty to insure that an activity does not jeopardize a listed species lies with the action agency. Thus, the substantive duty not to jeopardize listed species (or adversely modify critical habitat) remains in effect regardless of the status of the consultation. Jeopardy is found when "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." 50 C.F.R. § 402.02. This analysis requires NMFS to consider the aggregate effects of past and present activities to establish an environmental baseline, the indirect and direct effects of the proposed action, the impacts of all reasonably certain future activities, to

determine whether the totality of these factors likely jeopardizes survival and recovery. *Id.* §§ 402.14(g), 402.02. If NMFS concludes that a proposed action is likely to jeopardize a listed species or result in adverse modification of its critical habitat, NMFS must propose reasonable and prudent alternatives ("RPA") to mitigate the proposed action so as to avoid jeopardy and/or adverse modification of critical habitat. 16 U.S.C. § 1536(b)(3).

Separately, ESA Section 7(d) prohibits federal agencies, after the initiation of consultation under ESA Section 7(a)(2), from making any irreversible or irretrievable commitment of resources if doing so would foreclose the formulation and implementation of reasonable and prudent alternatives. 16 U.S.C. § 1536(d). This prohibition is not an exception to the requirements of Section 7(a)(2); it remains in effect during the consultation process and until the requirements of Section 7(a)(2) are satisfied (50 C.F.R. § 402.09), and it ensures that Section 7(a)(2)'s substantive mandate is met. *See N. Slope Borough v. Andrus*, 486 F. Supp. 332, 354 (D.D.C.), *order vacated in part sub nom, Nat'l Wildlife Fed'n v. Andrus* (D.C. Cir. July 8, 1980), *and aff'd in part, rev'd in part*, 642 F.2d 589 (D.C. Cir. 1980) ("Thus, once a s 7(a)(2) issue arises, the consultation process is activated, s 7(d) is effective, and resources may not be committed in violation of this section. Any other interpretation would defeat the legislative purposes underlying the amendments to the Endangered Species Act, and undermine the effectiveness of the Endangered Species Committee.").

Under Section 9, the ESA also makes it unlawful for any person to "take any [endangered] species" within the United States or the territorial sea, or upon the high seas without authorization. 16 U.S.C. § 1538(a)(1)(B) & (C). "Take" is defined broadly to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." *Id.* § 1532(19). "Harm" includes "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering." 50 C.F.R. § 17.3. If a biological opinion concludes that a federal agency action may result in the take of an endangered species, the agency must issue an ITS that specifies a permissible take level and includes "reasonable and prudent measures . . . necessary . . . to minimize such impact." 16 U.S.C. § 1536(b). The ITS must also include any additional measures necessary to comply with the Marine Mammal Protection Act. 50 C.F.R. § 402.14(i).

## B. Magnuson-Stevens Act

Under the Magnuson-Stevens Fishery Conservation and Management Act, a Council amendment is deemed approved within thirty days of the end of the comment period unless NMFS specifically disapproves it. 16 U.S.C. § 1854(a)(3). NMFS is on a similarly strict schedule for reviewing proposed regulations; the agency has fifteen days to make an initial evaluation, it must initiate a public comment period of fifteen to sixty days after publishing a proposed regulation, and it has thirty days after that to promulgate a final rule. *Id.* at § 1854(b). Given the length of time consultations may take, NMFS should initiate consultations immediately.

## THE FAILURE TO CONSULT REGARDING THE EFFECTS OF OHA2 ON RIGHT WHALES AND THEIR HABITAT VIOLATES SECTION 7 OF THE ESA

## A. North Atlantic Right Whales Are Critically Endangered and Face Ongoing Threats From Commercial Fishing And Other Human Activities

North Atlantic right whales are critically endangered, and new models estimate the population at 458 animals (Pace et al. 2017). Although the species has been listed under the ESA since 1973, it has never recovered, and experts now predict it could be functionally extinct in 20 years. The North Atlantic Right Whale Recovery Plan (2005) contains comprehensive data on the biology of and threats to right whales; however, more recent scientific information is available in NMFS's latest 5-Year Review (2017) and the North Atlantic Right Whale Consortium 2017 Report Card. These new sources cite scientific studies demonstrating that right whales have been on a steady decline since 2010 (Pace et al. 2017), entanglement deaths account for 85 percent of diagnosed mortalities (Kraus et al. 2016), and chronic entanglement in commercial fishing gear is a significant energetic stressor that causes reproductive failure and reduced survivability in the remaining females (van der Hoop et al. 2017).

Right whale critical habitat was first designated in Cape Cod Bay and the Great South Channel in 1994 due to these areas' importance as spring and summer foraging grounds. See 59 FED. REG. 28,805 (June 3, 1994) (also designating nearshore waters off Georgia and Florida as critical habitat due to its importance as winter calving and nursery grounds). In the Northeast, right whales typically congregate in the Great South Channel and northern edge of Georges Bank, Massachusetts Bay and Eastern Cape Cod Bay, the Bay of Fundy, and the southeastern Scotian Shelf to feed on copepods, before migrating to Georgia and Florida to calve in the winter. See 5-Year Review at 13-14. NMFS expanded its right whale critical habitat designation in 2016 to include approximately 29,763 square nautical miles of marine habitat in the Gulf of Maine, Georges Bank, and along the Southeast coast. See 81 FED. REG. 4837 (Jan. 27, 2016); 50 C.F.R. § 226.203. Recently, right whale distribution and habitat use has shifted northwards, and right whales have been documented in the central Gulf of Maine, as well as Roseway Basin and Grand Manan basin (Canadian waters) even in the winter months (Cole et al. 2013; Brillant et al. 2015; Bort et al. 2015). Threats to right whale habitat identified in the 5-Year Review include oil and gas development, noise pollution, dredging, and contaminants. See 5-Year Review at 15-16.

To address the major threats to right whales—entanglements and ship strikes—NMFS has taken a number of actions. These include: (1) the ALWTRP (*see* 62 FED. REG. 39,157 (July 22, 1997); *see also* Taking of Marine Mammals Incidental to Commercial Fishing Operations; Atlantic Large Whale Take Reduction Plan Regulations and subsequent amendments at 50 C.F.R. § 229.32); (2) Federal Regulations Governing the Approach to North Atlantic Right Whales (*see* 69 FED. REG. 69,536 (Nov. 30, 2004); *see also* 50 C.F.R. § 222.32 and 217.12); and (3) Final Rule to Implement Speed Restrictions to Reduce the Threat of Ship Collisions with North Atlantic Right Whales (*see* 73 FED. REG. 60,173 (Oct. 10, 2008); *see also* Final Rule to Implement Speed Restrictions to Reduce the Threat of Ship Collisions with North Atlantic Right Whales, 50 C.F.R. § 224.105). However, after 10 years with these rules in effect, both ship strikes and entanglement rates in commercial fishing gear remain high, and NMFS admits that

existing regulatory measures are inadequate to meet recovery criteria. *See* 5-Year Review at 8-10, 17-20.

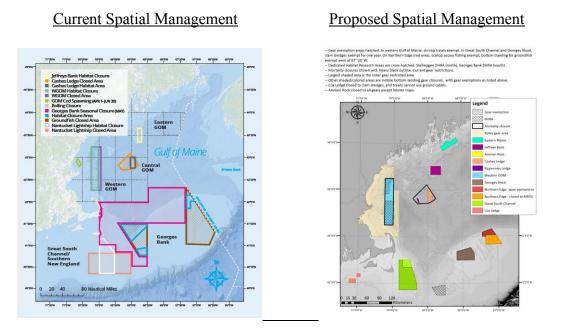
In 2017, an unprecedented number of mortalities caused the loss of more than 3 percent of the right whale population—at least 17 known right whale deaths occurred including 12 documented in Canadian waters and 5 in waters of the United States. In addition to lethal "takes" that exceed the potential biological removal threshold for right whales, new scientific information demonstrates a steady decline in condition over the past thirty years (Rolland et al. 2016) and a 40-percent decline in reproductive output (Kraus et al. 2016), in large part, from sublethal entanglements. These factors threaten the continued existence of right whales. *See* 5-Year Review at 20-21.

In this context, one right whale death could jeopardize the continued existence of right whales. NMFS's careful and thorough consideration of the potential impacts of the OHA2 on right whales through the Section 7 consultation process is of paramount importance, and is required by federal law. Indeed, NMFS concluded long before recent events that the loss or decrease in reproductive capacity of a single individual is likely to reduce the likelihood of survival and recovery of the species. *See* 69 FED. REG. 30,857, 30,858 (June 1, 2004).

## B. The OHA2 Reduces the Size and Scope of Current Protections for Right Whales

The OHA2 revises the system of closed areas that restrict certain types of fishing gear in the Northeast, eliminates or modifies several large year-round groundfish and habitat closures (including some that have been closed for more than twenty years) to provide increased access to fisheries, and includes other fishery management measures that will affect right whales. The fisheries that will change as a result of the OHA2, and therefore are addressed by this notice, include the groundfish fishery, Sea Scallop fishery, Monkfish fishery, Atlantic herring fishery, Red Crab fishery, and Skate fishery, Surf Clam and Ocean Quahog fishery, and the American lobster fishery. *See* OHA2 FEIS Vol. IV at 336. As proposed, the action revises protections in five sub-regions: Eastern Gulf of Maine, Central Gulf of Maine, Western Gulf of Maine, Georges Bank, and Great South Channel/Southern New England.

Across the Northeast, the proposal reduces currently protected areas by 60 percent. *See* OHA2 FEIS Vol. I tbl. 37. In the western Gulf of Maine, 25 percent of the area currently closed is proposed to be reopened. *Id.* On Georges Bank, 80 percent of the currently protected area will be reopened, *id.*, (and what remains will be open to some fishing gear, including scallop dredges, clam dredges and trawls). In the Great South Channel and Southern New England, the action eliminates the Nantucket Lightship Habitat Closure Area and Nantucket Lightship Closed Area entirely, replacing them with a small habitat management area that represents a 60-percent reduction in footprint. *Id.* Maps below show the current spatial management and the proposed spatial management under the proposal.



See OHA2 Public Hearing Document<sup>11</sup> at 35 (current spatial management); OHA2 FEIS Vol. I at 61 (Map 15).

# C. Risk of Entanglement-Related Injuries and Mortalities

The OHA2 FEIS acknowledges that the OHA2 "may affect" right whales, *see* OHA2 FEIS Vol. I at 445, tbl.61, and notes that "the greatest entanglement risk to large whales is posed by fixed fishing gear (e.g., sink gillnet and trap/pot gear)," *id.* at 464. The action would amend fishery management plans ("FMPs")<sup>12</sup> that use bottom trawl, mid-water trawl, sink gillnets, scallop dredge, trap/pot, bottom longline, hydraulic clam dredge, purse seine, and hook and line gear, in their fisheries. The OHA2 FEIS notes that sink gillnet and trap/pot gear pose the greatest risk from entanglements. *See id.* at 464 ("[A]ny type or part of fixed gear is considered to create an entanglement risk to large whales and should be considered potentially dangerous."). Further, the OHA2 FEIS acknowledges that opening certain areas could result in effort shifts from an area where entanglement is low into an area where higher interaction risks are present, but avoids finding harm by repeatedly stating that "the first sighting of an entanglement does not necessarily equate to the origin of the entanglement." *See* OHA2 FEIS Vol. IV at 337, 382; OHA2 FEIS Vol. I at 464-65.

<sup>&</sup>lt;sup>11</sup> NEW ENGLAND FISHERY MANAGEMENT COUNCIL, OMNIBUS ESSENTIAL FISH HABITAT AMENDMENT 2 PUBLIC HEARING DOCUMENT, *available at* <u>http://s3.amazonaws.com/nefmc.org/NEFMC-Habitat-Doc-Web-1.pdf</u>.

<sup>&</sup>lt;sup>12</sup> Specifically, the OHA2 would amend the Northeast Multispecies FMP, Atlantic Sea Scallop FMP, Monkfish FMP, Atlantic Herring FMP, Red Crab FMP, Skate FMP, and the Atlantic Salmon FMP.

Right whales forage, travel in, and use the entire action area, and shifts in timing or location of fishing effort<sup>13</sup> should raise concerns about entanglement, especially in light of new information indicating the population is on a steep decline due, in part, to fishing-related entanglements.<sup>14</sup> Risk varies by time and area and changes to extant open or closed area can, and will, affect entanglement rates.<sup>15</sup> It is precisely because of differences in time- and area-specific whale and gear density that NMFS developed co-occurrence models to assess right whale entanglement risk. *See* OHA2 FEIS Vol. I at 453, tbl.63 (noting that important foraging grounds for right whales include Cape Cod Bay (January-April), Great South Channel (April-June), Gulf of Maine (e.g. Jordan Basin; Wilkinson Basin; Cashes Ledge, Platts Bank; April-October), northern edge of Georges Bank (May-July)). However, the OHA2 FEIS states when analyzing specific gear interactions with protected resources that it is "not a comprehensive review of all fishing gear types known to interact with a given species." *See id.* at 463-68.

The proposed OHA2 will shift fishing effort and could result in localized increases in fishing effort. Although the information relied upon is out-of-date and the analysis is inadequate, the OHA2 FEIS—which generally lumps right whales in with other large whales— acknowledges the following impacts of the proposal:

- <u>Eastern Gulf of Maine</u> fishing behavior and effort (distribution and quantity of gear) not expected to change substantially in this sub-region. In reliance on Waring et al. (2014 and 2015), the ALWTRP, and biological opinions for Red Crab (NMFS 2002), Sea Scallop (NMFS 2012), Northeast Multispecies (NMFS 2013), and American Lobster (NMFS 2014), the FEIS concludes that operation of fisheries identified in the OHA2 "may affect, but will not jeopardize existence of ESA listed species of marine mammals." OHA2 FEIS Vol. IV at 340 (impacts slightly negative to neutral).
- <u>Central Gulf of Maine</u> "trap and gillnet gear pose the greatest interaction risk to large whales" in this sub-region. OHA2 FEIS Vol. IV at 344. In reliance on Waring et al. (2014 and 2015), and the American Lobster biological opinion (NMFS 2014), the FEIS acknowledges that "interaction risks are present," but generally claims that "delineating a particular sub-region as having high or low incidences of large whale entanglements is

<sup>&</sup>lt;sup>13</sup> Although the Council claims no significant changes in overall fishing effort, *see* OHA2 FEIS Vol. IV at 336, it is possible or even likely that effort in some portions of the commercial fishing fleet will increase as a result of increased opportunities to harvest certain target species. For example, NMFS has allowed dogfish to be targeted by gillnet vessels without using an allocated number of "days at sea" and increased the quota and trip limit for monkfish and spiny dogfish, species primarily caught using sink gillnets. Although the FEIS did not address the issue, the Draft Environmental Impact Statement ("DEIS") for OHA2 noted that "gillnet effort shifts into the currently closed Nantucket Lightship Closure Areas could result in placing gear in the path of traveling whales" and concluded that there is "the potential that spiny dogfish fishermen will choose to expand the use of sink or anchored gillnets into these [re-opened Nantucket Lightship Closed Area, Closed Area I, and Closed Area II] areas during the open times of the year." *See* OHA2 DEIS, Vol. 3, at 700 (October 1, 2014).

<sup>&</sup>lt;sup>14</sup> See Hayes et al. (2017) at 11. See also 2017 Report Card at 2, 9-13; 5-Year Review at 10-12, 18-20, 22.

<sup>&</sup>lt;sup>15</sup> See IEc, "Analysis of the Impacts of Alternate Management Measures on Vertical Line and Co-Occurrence Scores" presented to the Atlantic Large Whale Take Reduction Team April 2012. Illustrating that risk to whales of entanglement varies with time and area-specific closures and/or other risk-reduction scenarios.

not possible" because "the first sighting of a large whale entanglement does not necessarily equate to the origin of the entanglement." *See id.* at 346 (overall impacts slightly negative to neutral). Also concludes that the OHA2 "may affect" but will not jeopardize the continued existence of any ESA-listed marine mammals because the operation of the fisheries will not change in a significant manner. *Id.* 

- <u>Western Gulf of Maine</u> "gillnet and trap gear pose the greatest risk of serious injury and mortality to large whales" in this sub-region due to a "high incidence" of observed marine mammal interactions with gillnet gear and "high co-occurrence" of trap gear and marine mammals. *See* OHA2 FEIS Vol. IV at 359. In reliance on the same ALTWRP and biological opinions identified above, the FEIS states that quantifying the risk to right whales in the Western GOM is not possible, *id.*, and operation of fisheries in the region "may affect, but will not jeopardize the existence of ESA listed species of marine mammals." *Id.* at 361 (impacts slightly negative to neutral). The impacts of allowing bottom trawl effort to shift into the deeper waters on the modified Eastern edge of the Western Gulf of Maine Closure area—where large whales migrate—is not analyzed at all. *See id.* at 361.
- <u>Georges Bank</u> this sub-region region is an area of "high observed marine mammal bycatch," OHA2 FEIS Vol. IV at 374, and "traps pose the greatest risk to large whales," *id.* at 372. Acknowledging that "trap gear and large whales co-occur in the Georges Bank sub-region, the OHA2 FEIS again states that interaction risks are impossible to quantify. *Id.* However, opening Closed Areas I and II will change patterns of fishing effort and could result in more gear fished/more vessels on Georges Bank. *Id.* at 373. There will be negative impacts if effort shifts from regions with fewer interactions than Georges Bank (any sub-region in the Gulf of Maine or even the Mid-Atlantic region) to take advantage of newly accessible fishing grounds. *Id.* at 373-374. In addition, fixed gear can be used in the proposed Habitat Management Areas with no restrictions, and "trap fishermen could adjust their activity due to the presence of mobile-bottom tending gear." *Id.*
- <u>Great South Channel</u> in this sub-region "traps and gillnets co-occur with large whales" and interaction risks are present. *Id.* at 382. Under the proposal, changes in gillnet and bottom trawl effort are expected. *Id.* at 383. "Gillnets and traps pose the greatest serious injury and mortality risk to large whales" in this region. *Id.* The OHA2 FEIS again states that interaction risks are impossible to quantify. *Id.* If both the existing Nantucket Lightship Closed Area and Habitat Closure Area are removed, as proposed, effort shifts from regions of lower marine mammal interactions "into this sub-region where encounters are more frequent," there will be negative impacts on marine mammals. *Id.*

The OHA2 DEIS discussed the risk of entanglement in the Great South Channel/Southern New England under the proposal in greater detail than the analysis in the FEIS:

If large mesh (e.g. monkfish, skates) gillnet effort shifts into the newly opened areas under any of the action alternatives (2-6) that could create additional interactions and/or shift interactions from the present location near the

western/southwestern border into a new one (e.g., around Nantucket Shoals). Specifically, gillnet effort shifts into the currently closed Nantucket Lightship Closure Areas could result in placing gear in the path of traveling whales. However, it is unknown to what extent effort and gear use would shift, and how that would impact relative risk to large whales.

OHA2 DEIS (October 1, 2014) Vol. 3 at 498. This uncertainty is overlooked in the FEIS in favor of simply assuming the risk would not increase.

# **D.** Biological Opinions Assume Current Closures and Are Not Based on the Best Available Science

The take of a single individual right whale at this point is likely to jeopardize the continued existence of right whales, yet the change in size and management of previously closed areas was not considered under the cited biological opinions, making this analysis obsolete. Because such changes would "modif[y]" the management regime "in a manner that causes an effect to the listed species"—as admitted throughout the OHA2 FEIS—NMFS must reinitiate consultations. *See* 50 C.F.R. § 402.16.

The OHA2 FEIS cites Waring et al. (2014 and 2015), the ALWTRP, and biological opinions for Red Crab (NMFS 2002), Sea Scallop (NMFS 2012), Northeast Multispecies (NMFS 2013), and American Lobster (NMFS 2014) for its conclusions that the amendment "may affect. but will not jeopardize the continued existence of any ESA listed species of marine mammals." See OHA2 FEIS Vol. IV at 340, 346, 361. NMFS simply cannot rely on the analysis in the OHA2 FEIS of fisheries interaction risks for many reason, including that they do not consider the effects of opening previously closed areas to avoid NMFS's legal duty to engage in consultation. See e.g., OHA2 FEIS Vol. IV at 339. For example, the Northeast Multispecies Biological Opinion issued in December 2013 to evaluate the effects of several FMPs on ESA-listed whales assumes that existing management closures will remain in place and acknowledges that existing closures "may benefit ESA-listed species due to elimination of active gear in areas where .... cetaceans are present." See Batched Biological Opinion for 7 FMPs (NER-2012-1956) at 185. The agency further states that "if closures shift effort to areas with a comparable or higher density of ESA-listed marine mammals, sea turtles, or fish then risk of interaction could actually increase." Id. Based on the existing closures and other management measures, NMFS concluded that the FMPs would not jeopardize right whales, humpbacks, or other ESA-listed species. Further, the biological opinion explicitly requires NMFS to reinitiate consultation if "the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this Opinion." Id. at 309.

The OHA2 FEIS also unreasonably relies on the ALWTRP. The ALWTRP and its adjustments<sup>16</sup> similarly do not address the revised boundaries or the potential for increased takes of right whales from gillnet fishing in areas previously closed, even though right whales sustain

<sup>&</sup>lt;sup>16</sup> See Final Rule, 79 FED. REG. 36,586 (Jun. 27, 2014). Recent adjustments include the sinking groundline and vertical line rules. See 80 Fed. Reg. 14,345 (Mar. 19, 2015); 80 FED. REG. 30,367 (May 28, 2015).

mortality and serious injuries at rates much higher than their Potential Biological Removal Level and at least eight right whale entanglement cases were documented between 2010 and 2012 involving gear consistent with gillnets.<sup>17</sup> Although the final Environmental Assessment for the most recent adjustments to the ALWTRP (2015) provides a cursory overview of the OHA2 action, it provides no analysis of risk to right whales from shifts and localized increases in fishing effort caused by the proposal.<sup>18</sup>

In addition, these biological opinions are not based on the best available science because they do not incorporate a large body of new science recently identified including science demonstrating that chronic entanglements have a long-term detrimental effect on right whale health and reproduction and contribute to population decline. *See* 5-Year Review at 11-12, 19-21. This allows the OHA2 FEIS analysis to come to the opposite (and incorrect) conclusion. *See* OHA2 FEIS Vol. I at 465 ("[A]t this time, there is no further evidence to make the conclusion that fishing gear entanglement alone cause[s] a decline in large whale health."). In describing the "growing body of literature [that] has developed analyzing the effect of chronic entanglement on right whale health and reproduction," the 5-Year Review describes studies on declining body condition (Pettis et al. 2017), energetic stressors (van der Hoop et al. 2017, Rolland et al. 2016, Kraus et al. 2016), and low calf production (Hayes et al. 2017, Pace et al. 2017). Only 5 documented calves were born in 2017. *See* 2017 Report Card at 5, tbl.3. New consultations are required on this basis alone.

## E. Risk of Destroying or Adversely Modifying Critical Habitat

The OHA2 FEIS does not address the impacts of increased dredging (scallop and clam) in key foraging areas on Georges Bank and in the Great South Channel that will result from opening currently closed areas, yet it states that "none of the Greater Atlantic Region fisheries<sup>19</sup> are likely to adversely modify or destroy designated critical habitat for right whales." *See* OHA2 FEIS Vol. I at 450. "Critical habitat" is defined as an area occupied by an endangered species containing physical or biological features essential to the conservation of the species which may require "special management considerations or protection." 16 U.S.C. § 1532(5)(A)(1). Further, "destruction or adverse modification of critical habitat" means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. 50

<sup>&</sup>lt;sup>17</sup> See Hayes et al (2017).

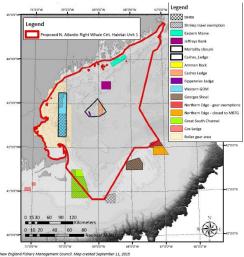
<sup>&</sup>lt;sup>18</sup> See NMFS, MODIFICATIONS TO THE ATLANTIC LARGE WHALE TAKE REDUCTION PLAN, FINAL ENVIRONMENTAL ASSESSMENT 31 (May 2015), , *available at* 

<sup>&</sup>lt;u>https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/docs/final\_ea\_for\_web.pdf</u> ("However, since overall fishing effort is unaffected by this action (only spatial distribution) and given the Team's prioritization of reducing entanglement risk in trap/pot gear, it is unlikely that this action would increase the entanglement risk to large whales. Despite the outcome of the Omnibus Habitat Amendment, the requirements of the Plan agreed upon by the Team will remain in place, including the use of sinking groundline on all fixed gear, vertical line reduction measures, weak link requirements, area closures, etc.").

<sup>&</sup>lt;sup>19</sup> It is hard to know whether this conclusory statement is an attempt to distance NMFS from the American Lobster and surf clam and quahog fisheries managed by the Atlantic States Marine Fisheries Commission, or whether it is a conclusion that none of the fisheries that operate in waters affected by the OHA2 will adversely modify right whale habitat. Regardless, consultations on all relevant fisheries are required.

C.F.R. § 402.02. Such alternations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or preclude or significantly delay development of such features. *Id.* 

A copy of a map developed by Council staff which overlays right whale critical habitat with the OHA2 proposal is provided below.



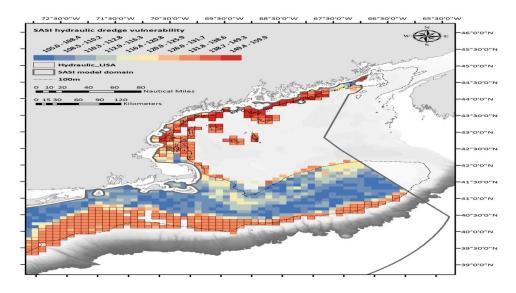
Obtained by personal communications with NEFMC staff Michelle Bachman in an E-mail dated September 11, 2015.

Increased opportunities for scallop and hydraulic clam dredging<sup>20</sup> could also increase turbidity and reduce prey availability, which constitute a threat to right whale habitat. *See e.g.*, 5-Year review at 16 (noting dredging as a threat).

The OHA2 FEIS acknowledges that the "Cape Cod Bay and Great South Channel were designated as critical habitat for North Atlantic right whales due to their importance as spring/summer foraging grounds" and that these two areas are "critical" due to the presence of dense concentrations of copepods. *See* OHA2 FEIS Vol. I at 449. Yet, in making its finding that the OHA2 is not likely to destroy or adversely modify right whale habitat, the OHA2 FEIS states without support that "Council fisheries will not affect the availability of copepods for foraging right whales because copepods are too small to be captured in fishing gear, nor will any of the Council fisheries affect any of the other physical or biological features that were identified as essential for conservation of right whales in these regions." *See id.* at 450. This ignores the fact that dredging could both adversely affect the bottom and increase the sedimentation and turbidity of the water column affecting right whale prey. *See e.g.*, 5-Year review at 16; Baumgartner et al. (2017) (finding that "right whales use the entire water column from surface to sea floor").

<sup>&</sup>lt;sup>20</sup> See OHA2 FEIS App. D at 57. ("Use of this gear in the region is managed under the federal FMP for surf clams and ocean quahogs developed by the [Mid-Atlantic Fishery Management Council]. The gear is also used in state waters in the Mid-Atlantic region.")

A new scientific study demonstrates that hydraulic clam dredging is one of, if not the, most damaging gears to the sea floor.<sup>21</sup> The FEIS provides estimates of seabed habitat vulnerability to the adverse effects from hydraulic clam dredge gears (blue=low vulnerability, red=high vulnerability) with clusters of high vulnerability grids are outlined in red. *See* OHA2 FEIS Vol. 1 at 151. This gear is used throughout right whale critical habitat, and its effects on right whale habitat must be analyzed.



The failure to adequately analyze and consult on the action and its effects on endangered right whales violates Section 7 of the ESA.

## **CONCLUSION**

The OHA2 can reasonably be expected to reduce the likelihood of survival and recovery of endangered North Atlantic right whales. NMFS must meet its duty to insure that this action is not likely to jeopardize the continued existence of right whales or adversely modify their habitat based on the best scientific and commercial data available by immediately initiating formal consultations with those fisheries that interact with right whales (i.e., the Northeast Multispecies fishery, the Atlantic Surf Clam and Ocean Quahog fishery, and the American lobster fishery). If NMFS does not cure its violations of law described above, upon expiration of the sixty days we intend to file suit against NMFS pursuant to the citizen suit provision of the ESA, 16 U.S.C. § 1540(g), and other applicable laws. If you would like to discuss the significant ESA violations described herein and seek a mutually acceptable solution to them, please contact us.

<sup>&</sup>lt;sup>21</sup> Hiddink et al. 2017. Global analysis of depletion and recovery of seabed biota after bottom trawling disturbance. vol. 114 no. 31 Jan Geert Hiddink, 8301–8306 ("Depletion of biota and trawl penetration into the seabed are highly correlated. Otter trawls caused the least depletion, removing 6% of biota per pass and penetrating the seabed on average down to 2.4 cm, whereas hydraulic dredges caused the most depletion, removing 41% of biota and penetrating the seabed on average 16.1 cm.").

Sincerely,

100

Megan M. Herzog, Esq. Peter Shelley, Esq. CONSERVATION LAW FOUNDATION 62 Summer Street Boston, MA 02110 Phone: 617-850-1727 mherzog@clf.org pshelley@clf.org

Erica A. Fuller, Esq. Roger M. Fleming, Esq. EARTHJUSTICE 1625 Massachusetts Avenue, Suite 702 Washington, DC 20036 Phone: 508-400-9080 efuller@earthjustice.org rfleming@earthjustice.org

# Literature Cited

- Baumgartner et al., Mark F., North Atlantic right whale foraging ecology and its role in humancaused mortality, 581 MARINE ECOLOGY PROGRESS SRS. 165 (2017).
- Bort, et al., J., North Atlantic right whale Eubalaena glacialis vocalizations patterns in the central Gulf of Maine from October 2009 through October 2010. 26 ENDANGERED SPECIES RESEARCH 271 (2015).
- Brillant et al., Sean W., *Quantitative estimates of the movement and distribution of North Atlantic right whales along the northeast coast of North America*, 27 ENDANGERED SPECIES RESEARCH 141 (2015).
- Cole et al., Timothy V.N., *Evidence of a North Atlantic right whale* Eubalaena glacialis *mating ground*, 21(1) ENDANGERED SPECIES RESEARCH 55 (2013).
- GREATER ATLANTIC REGIONAL FISHERIES OFF., ENDANGERED SPECIES ACT SECTION 7 CONSULTATION ON THE CONTINUED IMPLEMENTATION OF MANAGEMENT MEASURES FOR THE AMERICAN LOBSTER FISHERY [CONSULTATION NO. NER-2014-11076] (JULY 31, 2014).
- Hayes et al., Sean A., US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments 2016 (NOAA Tech. Memo. 2017).
- Kraus et al., Scott D., *Recent Scientific Publications Cast Doubt on North Atlantic Right Whale Future*, opinion, 3 FRONTIERS IN MARINE SCI. 137 (2016).
- NEW ENGLAND FISHERY MANAGEMENT COUNCIL, OMNIBUS ESSENTIAL FISH HABITAT AMENDMENT 2 PUBLIC HEARING DOCUMENT, *available at* http://s3.amazonaws.com/nefmc.org/NEFMC-Habitat-Doc-Web-1.pdf.
- NMFS, 2017 North Atlantic Right Whale Unusual Mortality Event (Oct. 31, 2017), http://www.nmfs.noaa.gov/pr/health/mmume/2017northatlanticrightwhaleume.html.
- NMFS, Guidance for Carrying Out Endangered Species Act (ESA) Section 7 Consultations with NMFS Greater Atlantic Regional Fisheries Office 6-7, available at https://www.greateratlantic.fisheries.noaa.gov/protected/section7/guidance/consultation/g arfo\_esa\_section\_7\_technical\_guidance\_050216.pdf.
- NMFS, ENDANGERED SPECIES ACT SECTION 7 CONSULTATION BIOLOGICAL OPINION, IMPLEMENTATION OF THE DEEP-SEA RED CRAB, *CHACEON QUINQUEDENS*, FISHERY MANAGEMENT PLAN [CONSULTATION NO. F/NEW/2001/01245] (Feb. 6, 2002).
- NMFS, ENDANGERED SPECIES ACT SECTION 7 CONSULTATION ON THE ATLANTIC SEA SCALLOP FISHERY MANAGEMENT PLAN [CONSULTATION NO. F/NER/2012/01461] (July 12, 2012).
- NMFS, ENDANGERED SPECIES ACT SECTION 7 CONSULTATION ON THE CONTINUED IMPLEMENTATION OF MANAGEMENT MEASURES FOR THE NORTHEAST MULTISPECIES, MONKFISH, SPINY DOGFISH, ATLANTIC BLUEFISH, NORTHEAST SKATE COMPLEX,

MACKEREL/SQUID/BUTTERFISH, AND SUMMER FLOUNDER/SCUP/BLACK SEA BASS FISHERIES [CONSULTATION NO. F/NER/2012/01956] (Dec. 16, 2013).

- NMFS, MODIFICATIONS TO THE ATLANTIC LARGE WHALE TAKE REDUCTION PLAN, FINAL ENVIRONMENTAL ASSESSMENT 31 (May 2015), available at <u>https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/docs/final\_ea\_for\_web.pdf.</u>
- NMFS, NORTH ATLANTIC RIGHT WHALE (*EUBALAENA GLACIALIS*) 5-YEAR REVIEW: SUMMARY AND EVALUATION (Oct. 2017), *available at* <u>http://www.nmfs.noaa.gov/pr/species/Status%20Reviews/final\_narw\_5-</u> year\_review\_2017.pdf [5-Year Review].
- Pace et al., Richard M., State-space mark-recapture estimates reveal a recent decline in abundance of North Atlantic right whales, 7(21) ECOLOGY & EVOLUTION 1 (2017).
- Pettis et al., Heather M., *Body condition changes arising from natural factors and fishing gear entanglements in North Atlantic right whales* Eubalaena glacialis, 32 ENDANGERED SPECIES RESEARCH 237 (2017).
- PETTIS ET AL., HEATHER M., NORTH ATLANTIC RIGHT WHALE CONSORTIUM 2017 ANNUAL REPORT CARD (2017), available at http://www.narwc.org/pdf/2017%20Report%20CardFinal.pdf [2017 Report Card].
- Rolland et al., Rosalind M., *Health of North Atlantic right whales (Eubalaena glacialis) over three decades: From individual health to demographic and population health trends*, 542 MARINE ECOLOGY PROGRESS SRS. 265 (2016).
- van der Hoop et al., Julie M., *Entanglement is a costly life-history stage in large whales*, 7(1) ECOLOGY & EVOLUTION 92 (2017).
- Waring et al., Gordon T., US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments 2015 (NOAA Tech. Memo. 2016).
- Waring et al., Gordon T., US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments 2014 (NOAA Tech. Memo. 2015).