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July 6, 2021

Submitted via electronic mail to ITP.Davis@noaa.gov.

Jolie Harrison, Chief, Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service

Re: Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Off of Massachusetts and Rhode Island (86 Fed. Reg. 30266. June 7, 2021)

Dear Jolie Harrison:

Oceana is the largest international ocean conservation organization solely focused on protecting the world's oceans, with more than 1.2 million members and supporters in the United States, including over 340,000 members and supporters on the U.S. Atlantic seaboard. For nearly twenty years, Oceana has campaigned to win strategic, directed campaigns that achieve measurable outcomes to help make our oceans more biodiverse and abundant.

Addressing climate change is important for oceans, wildlife and our future. By shifting from fossil fuel energy to clean, renewable energy sources, the United States can help address this crisis. Oceana was pleased to see the recent announcement from the Biden Administration to deploy 30 GW of offshore wind power by 2030 while protecting biodiversity and cultural resources, including imperiled marine life such as the critically endangered North Atlantic right whale (NARW).

Oceana has engaged as a stakeholder in the management of U.S. fisheries and interactions with endangered species, with a particular interest in effective bycatch minimization and reduction, if not elimination, of fishing gear entanglement-related death, injury, and harm to protected species, including the NARW. In addition, Oceana is interested in seeing the reduction, if not elimination, of vessel strike-related death, injury, and harm to NARWs. For these reasons, in 2019, Oceana launched a binational campaign in the United States and Canada to urge the respective governments to effectively enforce environmental laws to protect this critically endangered species and Oceana is currently campaigning to protect these whales from their two biggest threats—entanglement in fishing gear and vessel strikes.

For almost 15 years, Oceana has been campaigning to oppose expanded offshore oil and gas exploration and development. Offshore drilling can cause dangerous oil spills, but also continues to perpetuate energy development based on fossil fuels. The United States must shift from fossil fuel-based energy sources to clean energy. Offshore wind has the potential to help bridge the transition to our clean energy future.

Oceana is supportive of offshore wind if it is responsibly sited, built and operated throughout its lifespan. Because the immediate proposals for offshore wind development are along the Atlantic seaboard in the areas that the critically endangered NARW may frequent, offshore wind needs to consider, avoid, and mitigate effects to protected species, particularly the critically endangered NARW to ensure that wind development will not come at the expense of the species. NARWs spend the majority of the year in the waters of New England and Eastern Canada with mothers migrating south to have calves in the U.S. Southeast region. Wind development in persistent aggregation habitats and calving grounds pose particular issues with wind development but those where NARWs migrate are likely more appropriate because of the reduced frequency, intensity and duration of interactions with these areas. As offshore wind is developed along the eastern seaboard, strong measures are needed to protect this critically endangered species.

Oceana thanks you for the opportunity to submit comments as your agency considers an application for an Incidental Harassment Authorization to support the site characterization of the Vineyard Wind project south of Massachusetts. Oceana submits these comments to help ensure that the proposed activities avoid adverse effects on marine mammals and if adverse effects cannot be avoided, minimize or mitigate effects. The National Marine Fisheries Service (Fisheries Service) is the steward of the remaining NARWs that swim along our coasts and, as the agency responsible for their recovery, should ensure that the authorization of Vineyard Wind site characterization is based on the Best Scientific Information Available and that strong protections are in place before approving this or any proposed activity that may take, harass, or cause stress to NARWs.

The role of Incidental Harassment Authorizations

As you know, the Marine Mammal Protection Act (MMPA) was adopted nearly fifty years ago with the goal of protecting and promoting the growth of marine mammal populations “to the greatest extent feasible commensurate with sound policies of resource management” in order to “maintain the health and stability of the marine ecosystem.”¹ To protect marine mammals from human activities, the MMPA establishes a moratorium on the “take” of marine mammals including activities that may harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.² In limited circumstances, the Fisheries Service, the agency responsible for protecting most marine mammal species,³ may grant exceptions to the take moratorium, such

¹ 16 U.S.C. § 1361(6).

² 16 U.S.C. §§ 1361(2), 1371.

³ The Fish and Wildlife Service, within the Department of the Interior, is responsible for dugongs, manatees, polar bears, sea otters and walrus. See U.S. Fish and Wildlife Service, *Marine Mammals*, <https://www.fws.gov/international/animals/marine-mammals.html> (last visited May 3, 2021).

as for the incidental, but not intentional, taking of marine mammals for certain activities, which is done via an incidental take authorization.⁴

The Fisheries Service can only grant an incidental take authorization if the take request is for “small numbers of marine mammals of a species or stock” and will have only “negligible impact.”⁵ It is important to note that when granting an incidental take authorization, the Fisheries Service must require mitigation measures that achieve “the least practicable impact on such [marine mammal] species or stock and its habitat.”⁶

There are two types of incidental take authorizations: Letters of Authorization (“LOAs”) and Incidental Harassment Authorizations (“IHAs”). An IHA is limited to one year, and the action authorized may only have the potential to result in “harassment.” Therefore, an IHA cannot be issued if an action leads to “serious injury” or mortality of a marine mammal; instead, an LOA is required. Importantly, the Fisheries Service’s 2012 Policy Directive defines “serious injury” as “any injury that is ‘more likely than not’ to result in mortality, or any injury that presents a greater than 50 percent chance of death to a marine mammal.”⁷

Marine Mammal Protection Act Requirement to use Best Available Science

The MMPA was the first congressional act to include a “best available science” mandate.⁸ The statute requires use of “best scientific evidence available” in determining any waiver of the moratorium on the taking and importation of marine mammals and marine mammal products.⁹ Additionally, MMPA implementing regulations require the agency to use the “best scientific information available.”¹⁰ The Fisheries Service must therefore comply with the “best available science” mandate in analyzing whether or not to authorize incidental takes.

Comments on the Contents of an IHA for Vineyard Wind Site Characterization

In order to issue an IHA for Vineyard Wind site characterization or any offshore wind project, the Fisheries Service must ensure that the application meets the requirements for an IHA and that the IHA includes conditions that will guarantee the site characterization surveys have the least practicable impact on marine mammal species or stocks and their habitats in and around the project site. Oceana hopes the comments provided on these important elements will make the

⁴ 16 U.S.C. § 1371(a); *Incidental Take Authorizations under the Marine Mammal Protection Act*, NOAA FISHERIES <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act> (last visited May 3, 2021) (listing renewable energy activities as activities for which incidental take authorizations have been issued).

⁵ 16 U.S.C. § 1371(a)(5)(A), (D).

⁶ 16 U.S.C. § 1371(a)(5)(D)(ii)(I) (for IHAs); 16 U.S.C. § 1371(a)(5)(A)(i)(II)(a) (for LOAs).

⁷ Fisheries Service, *Policy Directive PD 02-238: Process for Distinguishing Serious from Non-Serious Injury of Marine Mammals 2* (2012), <https://media.fisheries.noaa.gov/dam-migration/02-238.pdf>.

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

⁹ 16 U.S.C. § 1371(a)(3)(A).

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

Vineyard Wind site characterization successful while also considering the adverse effects on marine mammals.

Use Best Available Science

The NARW is a critically endangered species that has experienced significant declines in the last decade with the most recent population estimate of just 356 remaining NARWs.¹¹ This new population estimate was released in 2020 and is nearly 14 percent lower than the estimate that is used in the analysis to support previous IHAs for Vineyard Wind. As NOAA considers the IHA application, it must use the most recent population estimate.

NARWs are known to feed, socialize and breed in the U.S. northeast and eastern Canada before mothers migrate south to calve and then return to the Northeast, and this needs to be fully explored and analyzed before an IHA is issued for this project. Specifically, the Fisheries Service should fully consider both the use of the area and the effects of chronic stressors on the health and fitness of North Atlantic right whales.

The importance of the area is discussed in a federal expert panel report finding that this area is year-round core habitat for North Atlantic right whales with up to 100 NARWs in the vicinity of the project at times in recent years.^{12,13}

Chronic stressors are an emerging concern for NARW conservation and recovery and a recent peer-reviewed study suggests that a range of stresses on NARWs have stunted growth rates.¹⁴ Disruptive site characterization activities may do more than startle or spook NARWs in this area and may cause chronic stress to the whales or cause the whales to seek other feeding areas at great energetic cost, decreasing their fitness, body condition and ability to successfully feed, socialize and mate.

The IHA must be sure to use the most recent and best available science for this critically endangered species, including updated population estimates, recent habitat usage patterns for the study area, and a revised discussion of acute and cumulative stress on whales in the region.

Fully Consider Cumulative Effects

While an individual activity such as a site characterization project may have negligible effects on the marine environment or a negligible number of interactions with protected species, because of the large number of offshore wind-related activities being considered in the NE region, it is important that the Fisheries Service fully consider the discrete effects of each activity and the

¹¹ H.M. Pettis et al., North Atlantic Right Whale Consortium 2020 Annual Report Card, https://www.narwc.org/uploads/1/1/6/6/116623219/2020narwcreport_cardfinal.pdf (last visited May 4, 2021).

¹² Erin M. Oleson, Jason Baker, Jay Barlow, Jeff E. Moore, Paul Wade. 2020. North Atlantic Right Whale Monitoring and Surveillance: Report and Recommendations of the National Marine Fisheries Service's Expert Working Group. NOAA Tech. Memo. NMFS-F/OPR-64, 47 p.

¹³ Leiter, et al. 2017. North Atlantic right whale *Eubalaena glacialis* occurrence in offshore wind energy areas near Massachusetts and Rhode Island, USA. *Endangered Species Research* July 2017, 45-59.

¹⁴ Stewart, et al. 2021. Decreasing body lengths in North Atlantic right whales. *Current Biology* 2021, 31, 1-6.

cumulative effects of the suite of approved, proposed and potential activities on marine mammals and North Atlantic right whales in particular and ensure that the cumulative effects are not excessive before issuing an IHA.

Project Conditions

The IHA notice includes a wide range of techniques and technologies that could be used to collect necessary information to characterize the project site. Consistent with the requirement to achieve “the least practicable impact on such species or stock and its habitat,” the IHA must include conditions for the survey activities that will first avoid adverse effects on NARWs in and around the survey site and then minimize and mitigate the effects that cannot be avoided. This should include a full assessment of which activities, technologies and strategies are truly necessary to provide information to inform development of Vineyard Wind and which are not critical. If, for example, a lower impact technique or technology will provide necessary information about the site without adverse effects, that should be permitted while other tools with more frequent, intense or long-lasting effects should be prohibited.

Vessel traffic plan, restrictions, and transparency

Expanded survey activities in and around the project area will undoubtedly increase the amount of vessel traffic in the area. The IHA must include a vessel traffic plan to minimize the effects of service vessels on marine wildlife including requirements for all vessels associated with the project, regardless of function, ownership or operator to meet the following:

Observers

All vessels associated with the proposed Vineyard Wind site characterization should be required to carry and use protected species observers (PSOs) at all times when under way. Because visual sighting of whales, including NARWs is difficult, particularly in low light conditions, the IHA should require service vessels to complement observer coverage with additional monitoring technologies, such as infrared (IR) detection devices for whales and other protected species when under way. Recent research has suggested that a complementary approach combining human and technological tools is most effective in capturing the most detections.¹⁵

Speed

Research suggests that reducing vessel speed can reduce risk of vessel collision mortality by 80-90 percent for large whales like the NARW.¹⁶ Due to the risk of ship strikes to NARWs in the project area, the IHA should limit all vessels of all sizes associated with the proposed site characterization to speeds less than 10 knots at all times with no exemptions or exceptions.

Separation Distance

¹⁵ Smith, et al. 2020. A field comparison of marine mammal detections via visual, acoustic, and infrared (IR) imaging methods offshore Atlantic Canada. *Marine Pollution Bulletin*. 154 (2020) 111026.

¹⁶ Conn and Silber. 2013. Vessel speed restrictions reduce risk of collision-related mortality for North Atlantic right whales. *Ecosphere* (4)4. April, 2013. 1-16.

Consistent with Fisheries Service regulations under the Endangered Species Act for all vessels and aircrafts, the IHA must include requirements for all vessels to maintain a separation distance of at least 500 meters from NARWs at all times.

Vessel Transparency

To support oversight and enforcement of the conditions on the HRG survey, the IHA should require all vessels supporting site characterization to be equipped with and using a Class A Automatic Identification System (AIS) devices at all times while on the water. This should apply to all vessels, regardless of size, associated with the project.

Applicability and Liability

The IHA must include requirements to hold all vessels associated with site characterization surveys accountable to the IHA requirements, including vessels owned by the developer, contractors, employees, and others regardless of ownership, operator, contract. Exceptions and exemptions will create enforcement uncertainty and incentives to evade regulations through reclassification and redesignation. The Fisheries Service can simplify this by requiring all vessels to abide by the same requirements, regardless of size, ownership, function, contract or other specifics.

Transparency and Reporting

The project will be a private enterprise conducted on shared public waters and as such, the IHA must include a requirement for all phases of the Vineyard Wind site characterization to subscribe to the highest level of transparency, including frequent reporting to federal agencies, requirements to report all visual and acoustic detections of NARWs and any dead, injured, or entangled marine mammals to the Fisheries Service or the Coast Guard as soon as possible and no later than the end of the Protected Species Observer shift.

To foster stakeholder relationships and allow public engagement and oversight of the permitting, the IHA should require all reports and data to be accessible on a publicly available website.

Shutdown Requirements

Despite the best information informing seasonal restriction on site characterization activities, it is likely interactions with NARWs will occur in and around the project site. The IHA must include requirements to use effective reactive restrictions on survey activities that are triggered by visual or acoustic presence or other means of detection for protected species before or during piling installation. Key conditions should include:

- Creation of clearance zones for NARWs that extend at least 1,000 meters with requirements for HRG survey vessels to use PSOs and Passive Acoustic Monitoring (PAM) to establish and monitor these zones with requirements to cease surveys if a NARW enters the clearance zone.
- A shutdown requirement if a NARW or other protected species is detected in the clearance zones noted above, unless necessary for human safety. If and when this exemption occurs the project must immediately notify the Fisheries Service with reasons and explanation for

exemption and a summary of the frequency of these exceptions must be publicly available to ensure that these are the exception rather than the norm for the project.

- When safe to resume, HRG surveys should be required to use a soft start, ramp-up procedure to encourage any nearby marine life to leave the area.

Conclusion

Oceana is enthusiastic about the Biden administration focus on development of offshore wind in U.S. waters as part of an effective and responsible response to the climate crisis. The potential for development of offshore wind in U.S. waters is significant and should be pursued without delay. As the Administration advances offshore wind development projects like Vineyard Wind site characterization, there is an opportunity to both advance clean energy goals while protecting biodiversity. Oceana recognizes the necessity of site characterization in the wind development process and urges the Fisheries Service to only issue an IHA for this survey if it includes a thorough discussion of the new science discussed above and includes the range of conditions that will ensure the site characterization surveys in and around the Vineyard Wind project site are conducted responsibly with the least practicable impact on marine mammals.

Oceana looks forward to our ongoing engagement in the Vineyard Wind project and offshore wind more generally and appreciates the opportunity to provide these comments. These comments have been carefully developed and we consider these to be substantial comments deserving a response from the agency.

We look forward to working with you to advance responsibly developed offshore wind to meet this Administration's ambitious clean energy goals while protecting biodiversity, including the critically endangered North Atlantic right whale.

Thank you,



Beth Lowell
Deputy Vice President, US Campaigns
Oceana
Washington, DC

By Electronic Mail

July 7, 2021

Ms. Jolie Harrison
Chief, Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
ITP.Davis@noaa.gov

RE: Proposed Incidental Harassment Authorization for Marine Site Characterization Surveys for the 501 North Wind Energy Project (Lease Area OCS-A 0501) and Along the Offshore Export Cable Corridor (OECC) Off the Coasts of Massachusetts and Rhode Island, as requested by Vineyard Wind 1, LLC.

Dear Ms. Harrison,

On behalf of our nineteen organizations, and our millions of members, we respectfully submit our recommendations for the National Marine Fisheries Service's ("NMFS") proposal to issue an incidental harassment authorization ("Proposed IHA") and authorize Vineyard Wind 1, LLC ("Vineyard Wind 1") to conduct marine site characterization surveys for the 501 North Wind Energy Project off the coasts of Massachusetts and Rhode Island in the area of the Commercial Leases of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS-A 0501) ("Lease Area") and along the associated Offshore Export Cable Corridor ("OECC") (collectively termed the "Project Area"). *See* 86 Fed. Reg. 30,266 (Jun. 7, 2021).

The Biden-Harris Administration has set forth an ambitious and necessary goal for the nation to have net-zero global greenhouse gas emissions by mid-century or before. Our organizations are united in support of responsibly developed offshore wind energy as a critically needed climate change solution, and we have long advocated for policies and actions needed to bring it to scale in an environmentally protective manner. Responsible development of offshore wind energy avoids, minimizes, and mitigates impacts to ocean wildlife and habitat and traditional ocean uses, meaningfully engages stakeholders from the start, and uses best available science and data to ensure science-based and stakeholder-informed decision making.

The rapid transition to a clean energy economy is of paramount importance to wildlife and the environment that face unprecedented impacts from climate change. It is imperative, however, that all offshore wind energy development activities move forward with strong protections in place for coastal and marine habitats and wildlife. We can and must develop this resource thoughtfully and responsibly, using science-based measures to avoid, minimize, mitigate, and monitor impacts on valuable and vulnerable wildlife. This must include a specific focus on ensuring sufficient measures are in place to protect our most vulnerable threatened and endangered species and a robust plan for pre, during, and post construction monitoring that can enable effective adaptive management strategies. The duty to advance

offshore wind energy development in a manner protective of wildlife and the environment extends to site characterization surveys that occur prior to, and during, offshore wind energy construction.

The following comments are intended to support Vineyard Wind 1 in achieving its goal to advance offshore wind in a sustainable manner, while also expressing our concerns regarding NMFS' negligible impact analysis and the avoidance, minimization, mitigation, and monitoring requirements necessary to ensure adequate mitigation measures in the Project Area. Because it is our view that NMFS' analysis likely underestimates the impact of these activities on the reproductive success and survivorship of the North Atlantic right whale,¹ we strongly recommend that the Final IHA require the following measures, many of which offer protections to other endangered and protected species and stocks.

- A seasonal restrictions on site assessment and characterization activities in the Project Area with the potential to injure or harass the North Atlantic right whale (*i.e.*, source level >180 dB re 1 μ Pa (SPL) at 1-meter at frequencies between 7 Hz and 35 kHz) from 1 December 2021 through 30 April 2022;
- A prohibition on the commencement of geophysical surveys at night and during periods of low visibility to maximize the probability that marine mammals are detected and confirmed clear of the exclusion zone;
- A requirement to monitor an exclusion zone for the North Atlantic right whale of 1,000 meters ("m") around each sound source conducting survey activities with noise levels that could result in injury or harassment to this species;
- A requirement that a combination of visual monitoring by Protected Species Observers ("PSOs") and passive acoustic monitoring is implemented at all times that survey work is underway;
- A requirement that four PSOs adhere to a two-on/two-off shift schedule to ensure no individual PSO is responsible for visually monitoring more than 180° of the exclusion zone at any one time;
- A requirement that the developer selects sub-bottom profiling systems, and operates those systems at power settings, that achieve the lowest practicable source level for the objective; and
- A requirement that all project vessels transiting to and from and operating within the Project Area, regardless of size, observe a mandatory 10 knot speed restriction during the entire survey period.

As we have in the past, we object to NMFS' proposed process to consider extending any one-year IHA with a truncated 15-day comment period as contrary to the MMPA.

¹ The best available science on other low- to mid-frequency sources (*e.g.*, Nowacek et al. 2004, Kastelein et al. 2012, 2015; Gomes et al. 2016) indicates that Level B takes will occur with near certainty at exposure levels well below the 160 dB threshold that NMFS applies to behavioral impacts.

I. The Marine Mammal Protection Act

Congress enacted the MMPA because “certain species and population stocks of marine mammals are, or may be, in danger of extinction or depletion as a result of man’s activities.”² The statute seeks to ensure that species and population stocks are not “permitted to diminish beyond the point at which they cease to be a significant functioning element of the ecosystem of which they are a part,” and do not “diminish below their optimum sustainable population.”³ Congress intended for NMFS to act conservatively in the face of uncertainty when authorizing activities harmful to marine species.⁴ This careful approach to management was deemed necessary because of the vulnerable status of many species and because it is difficult to measure the impacts of human activities on marine mammals in the wild.⁵

At the heart of the MMPA is its “take” prohibition, which establishes a moratorium on the capture, harassing, hunting, or killing of marine mammals, and generally prohibits any person or vessel subject to the jurisdiction of the United States from taking a marine mammal on the high seas or in waters or on land under the jurisdiction of the United States.⁶ Harassment is any act that “has the potential to injure a marine mammal or marine mammal stock in the wild” or to “disturb a marine mammal . . . by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.”⁷

NMFS may grant exceptions to the take prohibition. As relevant here, the agency may authorize, for not more than a one-year period, the incidental, but not intentional, “taking by harassment of small numbers of marine mammals of a species or population stock” if the agency determines that such take would have only “a negligible impact on such species or stock.”⁸ The agency must prescribe permissible methods of taking to ensure that the activity has “the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.”⁹ NMFS must also establish monitoring and reporting requirements.¹⁰ No later than 45 days after receiving an application for an IHA, NMFS must publish a proposed authorization and open a 30-day comment period.¹¹

II. The Status of Marine Mammals in the Northwestern Atlantic

In addition to rich wind resources, the waters in the Project Area support a diversity of marine life, including at least 14 species of marine mammals, including six large whale species, six small cetacean

² 16 U.S.C. § 1361(1).

³ *Id.* § 1361(2); see also *Conservation Council for Hawaii v. NMFS*, 97 F. Supp. 3d 1210, 1216 (D. Haw. 2015).

⁴ H.R. Rep. No. 92-707 (Dec. 4, 1971), as reprinted in 1972 U.S.C.C.A.N. 4144, 4148.

1. ⁵ 16 U.S.C. § 1361(1), (3).

⁶ *Id.* § 1362(13), 1371(a).

⁷ *Id.* § 1362(18)(A).

⁸ *Id.* § 1371(a)(5)(D)(i).

⁹ *Id.* § 1371(a)(5)(D)(ii)(I).

¹⁰ *Id.* § 1371(a)(5)(D)(iii).

¹¹ *Id.* § 1371(a)(5)(D)(iii).

species, and two pinnipeds.¹² Of the six large whale species, four (North Atlantic right whale, fin whale, sei whale, and sperm whale) are listed as endangered under the Endangered Species Act (“ESA”) and North Atlantic right whales, fin whales, and sei whales are considered to be depleted under the MMPA. The four ESA-listed whale species and stocks found within the Project Area and the Gulf of Maine stock of humpback whales are also listed as strategic stocks under the MMPA.¹³ Moreover, the Gulf of Maine stock of humpback whales, the Canadian East Coast stock of minke whales, and the North Atlantic right whale are currently experiencing Unusual Mortality Events (“UMEs”) as designated by NMFS.¹⁴ Of the small cetaceans, harbor porpoises require special attention during offshore wind energy development because of their extreme sensitivity to noise.¹⁵

A. North Atlantic right whales

The survival of the North Atlantic right whale rests on a knife-edge. The best population estimate for the beginning of 2019 is just 368 individuals¹⁶ and 14 animals have since been reported to have died.¹⁷ Moreover, the best population estimate for the beginning of 2018 has been revised down from 412 individuals¹⁸ to 383 individuals.¹⁹ The new 2019 and revised 2018 estimate a significant decrease in survival during the last three years as a result of the ongoing UME. Additionally, scientists from the New England Aquarium now believe that “low birth rates coupled with whale deaths means there could be no females left in the next 10 to 20 years.”²⁰ The decline of the species over the past decade is also deeply disturbing. Based on the best population estimate for the species as well as recently documented deaths, approximately 127 animals have been killed since 2011.²¹ Further, documented serious injuries and deaths

¹² 86 Fed. Reg. at 30,270, Table 2.

¹³ *Id.*

¹⁴ NMFS, “2016-2021 Humpback whale Unusual Mortality Event along the Atlantic Coast.” Available at: <https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2021-humpback-whale-unusual-mortality-event-along-atlantic-coast>; NMFS, “2017-2021 Minke whale Unusual Mortality Event along the Atlantic Coast.” Available at: <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2021-minke-whale-unusual-mortality-event-along-atlantic-coast>; NMFS, “2017-2021 North Atlantic right whale Unusual Mortality Event.” Available at: <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2021-minke-whale-unusual-mortality-event-along-atlantic-coast>.

¹⁵ Lucke, K., Siebert, U., Lepper, P.A., and Blanchet, M.A., “Temporary shift in masked hearing thresholds in a harbor porpoise (*Phocoena phocoena*) after exposure to seismic airgun stimuli.” *Journal of the Acoustical Society of America*, vol. 125, pp 4060-4070 (2019).

¹⁶ Pace, R.M., “Revisions and further evaluations of the right whale abundance model: Improvements for hypothesis testing.” NOAA Technical Memorandum NMFS-NE-269. April 2021. Available at: https://apps-nefsc.fisheries.noaa.gov/rcb/publications/tm269.pdf?utm_medium=email&utm_source=govdelivery.

¹⁷ NMFS, “2017-2021 North Atlantic right whale Unusual Mortality Event,” *supra*.

¹⁸ Pettis, H.M., Pace III, R. M., and Hamilton, P.K., “North Atlantic Right Whale Consortium 2019 Annual Report Card,” Report to the North Atlantic Right Whale Consortium (2019). Available at: <https://www.narwc.org/uploads/1/1/6/6/116623219/2019reportfinal.pdf>.

¹⁹ Pettis, H.M., Pace III, R. M., and Hamilton, P.K., “North Atlantic Right Whale Consortium 2020 Annual Report Card,” Report to the North Atlantic Right Whale Consortium (2020). Available at: https://www.narwc.org/uploads/1/1/6/6/116623219/2020narwcreport_cardfinal.pdf.

²⁰ Davie, E., “New population estimate suggests only 356 North Atlantic right whales left,” CBC News (Oct. 29, 2020). Available at: <https://www.cbc.ca/news/canada/nova-scotia/356-north-atlantic-right-whales-left-2020-population-1.5779931>.

²¹ Pettis, H.M., *et al.*, “North Atlantic Right Whale Consortium 2020 Annual Report Card,” *supra*.; Pace, R.M., “Revisions and further evaluations of the right whale abundance model: Improvements for hypothesis testing,” *supra*; NMFS, “2017-2021 North Atlantic right whale Unusual Mortality Event,” *supra*.

only represent a small fraction of whales that are injured or killed by human activities.²² A recently published scientific study concludes only 29 percent (2 standard error = 2.8 percent) of North Atlantic right whale carcasses were detected from 2010 to 2017.²³ Females are more negatively affected than males by the lethal and sublethal effects of human activity, now surviving to only 30-40 years of age with an extended inter-calf interval of approximately ten years.²⁴ Calf survival is also severely diminished. Three calves born during the last two calving seasons are already either confirmed or likely dead due to vessel strikes.²⁵ One of the calves' mothers has been declared seriously injured due to the strike that killed her calf, one mother has not been resighted, and the third has been seriously injured from entanglement in fishing gear.²⁶ A fourth calf was found to have died of natural causes.²⁷ In 2019, North Atlantic right whales were listed as a NOAA "Species in the Spotlight" indicating that they are one of nine marine species to be at greatest risk of extinction in the United States.²⁸ In July 2020, the International Union for Conservation of Nature ("IUCN") reclassified the North Atlantic right whale from "endangered" to "critically endangered" on the IUCN Red List of Threatened Species, one step away from "extinction."²⁹

As NMFS acknowledges in the Proposed IHA, the Project Area coincides directly with year-round "core" North Atlantic right whale foraging habitat.³⁰ Protection of North Atlantic right whales during foraging, and the protection of their foraging habitat, must be one of NMFS' highest priorities. Foraging areas with suitable prey density are limited relative to the overall distribution of North Atlantic right whales, and a decreasing amount of habitat is available for resting, pregnant and lactating females.³¹ This means that unrestricted and undisturbed access to suitable areas, when they exist, is extremely important for the

²² Sharp, S.M., McLellan, W.A., Rotstein, D.S., Costidis, A.M., Barco, S.G., Durham, K., Pitchford, T.D., Jackson, K.A., Daoust, P.-Y., Wimmer, T., Couture, E.L., Bourque, L., Frasier, T., Frasier, B., Fauquier, D., Rowles, T., Hamilton, P.K., Pettis, H., and Moore, M.J., "Gross and histopathologic diagnoses from North Atlantic right whale *Eubalaena glacialis*, mortalities between 2003 and 2018," *Diseases of Aquatic Organisms*, vol. 135, pp. 1-31 (2019); Pace III, R. M., Williams, R., Kraus, S. D., Knowlton, A. R. and Pettis, H. M., "Cryptic mortality of North Atlantic right whales," *Conservation Science and Practice*, art. e346 (2021).

²³ Pace III, R. M., *et al.*, *id.*

²⁴ Corkeron, P., Hamilton, P., Bannister, J., Best, P., Charlton, C., Groch, K.R., Findlay, K., Rowntree, V., Vermeulen, E., and Pace, R.M., "The recovery of North Atlantic right whales, *Eubalaena glacialis*, has been constrained by human-caused mortality," *Royal Society Open Science*, vol 5, art. 180892 (2018).

²⁵ NMFS, "2017-2021 North Atlantic right whale Unusual Mortality Event," *supra*.

²⁶ *Id.*

²⁷ *Id.*

²⁸ NMFS, "North Atlantic right whale – In the Spotlight." Available at: <https://www.fisheries.noaa.gov/national/endangered-species-conservation/species-spotlight-action-plan-accomplishments>.

²⁹ Cooke, J.G., "Eubalaena glacialis," *The IUCN Red List of Threatened Species*, e.T41712A162001243 (2020). Available at: <https://dx.doi.org/10.2305/IUCN.UK.2020-2.RLTS.T41712A162001243.en>.

³⁰ 86 Fed. Reg. at 30,271.

³¹ Van der Hoop, J., Nousek-McGregor, A.E., Nowacek, D.P., Parks, S.E., Tyack, P., and Madsen, P., "Foraging rates of ram-filtering North Atlantic right whales," *Functional Ecology*, vol. 33, pp. 1290-1306 (2019); Plourde, S., Lehoux, C., Johnson, C. L., Perrin, G., and Lesage, V. "North Atlantic right whale (*Eubalaena glacialis*) and its food: (I) a spatial climatology of Calanus biomass and potential foraging habitats in Canadian waters," *Journal of Plankton Research*, vol. 41, pp. 667-685 (2019); Lehoux, C., Plourde S., and Lesage, V., "Significance of dominant zooplankton species to the North Atlantic Right Whale potential foraging habitats in the Gulf of St. Lawrence: a bioenergetic approach," DFO Canadian Science Advisory Secretariat (CSAS) Research Document 2020/033 (2020). Gavrilchuk, K., Lesage, V., Fortune, S., Trites, A.W., and Plourde, S., "A mechanistic approach to predicting suitable foraging habitat for reproductively mature North Atlantic right whales in the Gulf of St. Lawrence," DFO Canadian Science Advisory Secretariat (CSAS) Research Document 2020/034 (2020).

species to maintain its energy budget.³² Scientific information on North Atlantic right whale functional ecology also shows that the species employs a “high-drag” foraging strategy that enables them to selectively target high-density prey patches, but is energetically expensive.³³ Thus, if access to prey is limited in any way, the ability of the whale to offset its energy expenditure during foraging is jeopardized. In fact, researchers have concluded: “[R]ight whales acquire their energy in a relatively short period of intense foraging; even moderate changes in their feeding behavior or their prey energy density are likely to negatively impact their yearly energy budgets and therefore reduce fitness substantially.”³⁴ North Atlantic right whales are already experiencing significant food-stress: juveniles, adults, and lactating females have significantly poorer body condition relative to southern right whales and the poor condition of lactating females may cause a reduction in calf growth rates.³⁵ Indeed, North Atlantic right whale body lengths have been decreasing since 1981, a change associated with entanglements in fishing gear as well as other cumulative stressors.³⁶ NMFS must ensure undisturbed access to foraging habitat to adequately protect the species.

B. Other large whale species

Ongoing UMEs exist for other large whales.³⁷ Alarming, 107 minke whales have stranded between Maine and South Carolina from January 2017 to June 2021 (data through 16 June 2021).³⁸ Elevated numbers of humpback whales have also been found stranded along the Atlantic Coast since January 2016 and, in a little over five years, 150 humpback whale mortalities have been recorded (data through 16 June 2021), with strandings occurring in every state along the East Coast.³⁹ Partial or full necropsy examinations have been conducted on approximately half of the stranded animals and a significant portion showed evidence of pre-mortem vessel strikes. NMFS recently designated the Gulf of Maine humpback whale stock as a strategic stock under the MMPA, based on the total estimated human-caused average annual mortality and serious injury to this stock, including from vessel strikes.⁴⁰

The declaration of these UMEs by NMFS in the past few years for three large whale species for which anthropogenic impacts are a significant cause of mortality, and the recent classification of humpback

³² *Id.*

³³ Van der Hoop, J., *et al.*, *id.*

³⁴ *Id.*

³⁵ Christiansen, F., Dawson, S.M., Durban, J.W., Fearnbach, H., Miller, C.A., Bejder, L., Uhart, M., Sironi, M., Corkeron, P., Rayment, W., Leunissen, E., Haria, E., Ward, R., Warick, H.A., Kerr, I., Lynn, M.S., Pettis, H.M., & Moore, M.J., “Population comparison of right whale body condition reveals poor state of the North Atlantic right whale,” *Marine Ecology Progress Series*, vol. 640, pp. 1-16 (2020).

³⁶ Stewart, J.D., Durban, J.W., Knowlton, A.R., Lynn, M.S., Fearnbach, H., Barbaro, J., Perryman, W.L., Miller, C.A., and Moore, M.J., “Decreasing body lengths in North Atlantic right whales,” *Current Biology*, published online (3 June 2021). Available at: [https://www.cell.com/current-biology/fulltext/S0960-9822\(21\)00614-X](https://www.cell.com/current-biology/fulltext/S0960-9822(21)00614-X).

³⁷ NMFS, “2016-2021 Humpback whale Unusual Mortality Event along the Atlantic Coast,” *supra*; NMFS, “2017-2021 Minke whale Unusual Mortality Event along the Atlantic Coast,” *supra*.

³⁸ NMFS, “2017-2021 Minke whale Unusual Mortality Event along the Atlantic Coast,” *id.*

³⁹ NMFS, “2016-2021 Humpback whale Unusual Mortality Event along the Atlantic Coast,” *supra*.

⁴⁰ NMFS, “Draft U.S. Atlantic and Gulf of Mexico marine mammal stock assessments – 2020” (2020). Available at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports>.

whales as a strategic stock by the agency, demonstrates an increasing risk to whales from human activities along the East Coast.

C. Other marine mammals

Harbor porpoises also require special attention during offshore wind energy development because of their extreme sensitivity to noise. Harbor porpoises are substantially more susceptible to temporary threshold shift (i.e., hearing loss) from low-frequency pulsed sound than are other cetacean species that have thus far been tested.⁴¹ Both captive and wild animal studies show harbor porpoises abandoning habitat in response to various types of pulsed sounds at well below 120 dB (re 1 uPa (RMS))⁴² and, in fact, evidence of the acoustic sensitivity of the harbor porpoise has led scientists to call for a revision to the NMFS acoustic exposure criteria for behavioral response.⁴³ Impacts to harbor porpoises must, therefore, also be minimized and mitigated to the full extent practicable during offshore wind siting and development in the waters off the coasts of Massachusetts and Rhode Island where this species regularly occurs.

D. NMFS permitting standards

NMFS is obligated under both the ESA and the MMPA to protect the North Atlantic right whale from additional harmful impacts of human activities and required by the MMPA to consider the full range of potential impacts on all marine mammal species, including endangered fin and sei whales, the strategic stock of humpback whales, minke whales, and strategic stocks of small cetaceans, that are known to utilize the proposed survey area(s) and surrounding regions before issuing an IHA with appropriate avoidance, minimization, mitigation, and monitoring measures. NMFS must use the best available scientific information on marine mammal presence and density, as required by law.⁴⁴ Considering the elevated threat to federally protected species and stocks in the Atlantic, and that climate-driven changes in oceanographic conditions, and resulting shifts in prey distribution, are rapidly changing the spatial and temporal patterns of habitat use by North Atlantic right whales and other large whale species,⁴⁵ NMFS

⁴¹ Lucke, K., *et al.*, “Temporary shift in masked hearing thresholds in a harbor porpoise (*Phocoena phocoena*) after exposure to seismic airgun stimuli,” *supra*.

⁴² See, e.g., Bain, D.E., and Williams, R., “Long-range effects of airgun noise on marine mammals: responses as a function of received sound level and distance” Report by Sea Mammal Research Unity (SMRU), 2006.; Kastelein, R.A., Verboom, W.C., Jennings, N., de Haan, D., “Behavioral avoidance threshold level of a harbor porpoise (*Phocoena phocoena*) for a continuous 50 kHz pure tone.” *Journal of the Acoustical Society of America*, vol. 123 (2008): 1858-1861.; Kastelein, R.A., Verboom, W.C., Muijsers, M., Jennings, N.V., van der Heul, S., “The influence of acoustic emissions for underwater data transmission on the behavior of harbour porpoises (*Phocoena phocoena*) in a floating pen.” *Mar. Environ. Res.* Vol. 59 (2005): 287-307; Olesiuk, P.F., Nichol, L.M., Sowden, M.J., and Ford, J.K.B., “Effect of the sound generated by an acoustic harassment device on the relative abundance and distribution of harbor porpoises (*Phocoena phocoena*) in Retreat Passage, British Columbia.” *Marine Mammal Science*, vol. 18 (2002): 843-862.

⁴³ Tougaard, J., Wright, A. J., and Madsen, P.T., “Cetacean noise criteria revisited in the light of proposed exposure limits for harbor porpoises,” *Marine Pollution Bulletin*. vol. 90 (2015): 196-208.

⁴⁴ 16 U.S.C. § 1362(19), § 1362(27).

⁴⁵ See, e.g., Davis, G.E., Baumgartner, M.F., Bonnell, J.M., Bell, J., Berchick, C., Bort Thornton, J., Brault, S., Buchanan, G., Charif, R.A., Cholewiak, D., *et al.*, “Long-term passive acoustic recordings track the changing distribution of North Atlantic right whales (*Eubalaena glacialis*) from 2004 to 2014,” *Scientific Reports*, vol. 7, p. 13460 (2017); Davis, G.E., Baumgartner, M.F., Corkeron, P.J., Bell, J., Berchok, C., Bonnell, J.M., Thornton, J.B., Brault, S., Buchanan, G.A., Cholewiak, D.M. and Clark, C.W., “Exploring movement patterns and changing distributions of baleen whales in the western North Atlantic using

must ensure that any potential stressors posed by the proposed surveys, and the cumulative impacts of surveys across multiple projects, are mitigated to effectuate the least practicable impact on affected species and stocks.⁴⁶

III. Inconsistencies Between the Proposed IHA Renewal and the Marine Mammal Protection Act

A. NMFS must incorporate additional data sources into calculations of marine mammal density and take

NMFS must base its IHA analysis on the best available scientific information to comply with statutory requirements of the MMPA.⁴⁷ In determining the proportion of marine mammal species and stocks taken by the proposed activities—a calculation that lies at the heart of the agency’s “small numbers” analysis—NMFS relies on estimates of marine mammal densities derived from the habitat-based density model produced by the Duke University Marine Geospatial Ecology Laboratory (Roberts et al. 2016, 2017, 2018).⁴⁸ The updated model for North Atlantic right whales (Roberts et al. 2020) is also qualitatively referenced; NMFS notes that the 2020 model only resulted in changed take estimate predictions for Cape Cod Bay and therefore it was not used to estimate take for the Project Area.⁴⁹ The Roberts *et al.* models exclude data obtained through additional sightings databases, passive acoustic monitoring, and satellite telemetry. As such, it remains our view that the density maps produced by these models do not fully reflect the abundance, distribution, and density of marine mammals for the U.S. East Coast and therefore should not be the only information source relied upon when estimating take. **NMFS must require that all available data are used to ensure that any potential shifts in habitat usage by endangered and protected species and stocks are reflected in estimations of marine mammal density and take.**

NMFS takes an initial step to address this need in the Proposed IHA for common dolphins. Here, NMFS proposes to increase the number of Level B takes of common dolphins based on the daily rate of observations of this species during surveys conducted under Vineyard Wind’s previous IHA.⁵⁰ NMFS undertook a similar approach in the Modified Proposed IHA for Mayflower Wind, LLC.⁵¹ For

a decade of passive acoustic data,” *Global change biology*, vol. 26, p.4812 (2020); Guilpin, M., Lesage, V., McQuinn, I., Brosset, P., Doniol-Valcroze, T., Jeanniard-du-Dot, T. and Winkler, G., “Repeated Vessel Interactions and Climate-or Fishery-Driven Changes in Prey Density Limit Energy Acquisition by Foraging Blue Whales,” *Frontiers in Marine Science*, vol. 7, p.626 (2020); Record, N., Runge, J., Pendleton, D., Balch, W., Davies, K., Pershing, A., Johnson, C., Stamieszkin, K., Ji, R., Feng, Z. and Kraus, S., “Rapid Climate-Driven Circulation Changes Threaten Conservation of Endangered North Atlantic Right Whales,” *Oceanography*, vol. 32, pp. 162-169 (2019); Santora, J.A., Mantua, N.J., Schroeder, I.D., Field, J.C., Hazen, E.L., Bograd, S.J., Sydeman, W.J., Wells, B.K., Calambokidis, J., Saez, L. and Lawson, D., “Habitat compression and ecosystem shifts as potential links between marine heatwave and record whale entanglements,” *Nature Communications*, vol. 11, pp.1-12 (2020); Silber, G.K., Lettrich, M.D., Thomas, P.O., Baker, J.D., Baumgartner, M., Becker, E.A., Boveng, P., Dick, D.M., Fiechter, J., Forcada, J. and Forney, K.A., “Projecting marine mammal distribution in a changing climate,” *Frontiers in Marine Science*, vol. 4, p.413 (2017).

⁴⁶ 16 U.S.C. § 1371(a)(5)(D)(ii)(I).

⁴⁷ 16 U.S.C. §§ 1362(19), §§ 1362(27).

⁴⁸ 86 Fed. Reg. at 30,278.

⁴⁹ *Id.*

⁵⁰ 86 Fed. Reg. at 30,278.

⁵¹ 86 Fed. Reg. 27,393 (May 20, 2021).

comparison purposes and to account for local variation not captured by the predicted densities provided by the Roberts models, PSO sightings data from Mayflower's 2020 high resolution geophysical ("HRG") surveys were analyzed to assess the appropriateness of the density-based take calculations.⁵² Density estimates derived from the Mayflower PSO survey data were compared with those derived from the Roberts models and the larger of the take estimates was used by the agency as the basis for the proposed number of takes.⁵³ While there are constraints with relying on PSO data (e.g., inconsistent availability and detectability of animals), we find this type of comparative analysis helpful in determining the most conservative take estimate for authorization. Rather than relying solely on observations previously recorded by the specific project for which authorization is currently being sought, **we encourage NMFS to collectively examine PSO data from survey activities by multiple offshore wind energy projects being conducted in regional proximity (e.g., off the coasts of Rhode Island and Massachusetts), as available, to inform the most conservative take estimate for each species and stock.**

Additional data can be obtained from sightings databases (e.g., WHALEMAP;⁵⁴ NEFSC Monthly DMA analysis⁵⁵) and passive acoustic monitoring efforts (e.g., Robots4Whales detections;⁵⁶ NEFSC Acoustic Indicators of Right Whale Occurrence⁵⁷). Further, from October 2018 through August 2019 and March 2020 through July 2021, monthly standardized marine mammal aerial surveys were flown in the Massachusetts and Rhode Island and Massachusetts Wind Energy Areas by the New England Aquarium.⁵⁸ A study funded by the Bureau of Offshore Energy Management ("BOEM") using an autonomous vehicle for real-time monitoring of marine mammals from December 2019 through March 2020⁵⁹ and again from December 2020 through February 2021⁶⁰ on Cox Ledge acoustically detected right whales in all months of the study.⁶¹ NMFS should take immediate steps to collate and integrate these and more recent data sets to more accurately reflect marine mammal presence for future IHAs and other work.

⁵² 86 Fed. Reg. at 27,401.

⁵³ 86 Fed. Reg. at 27,403.

⁵⁴ See, <https://whalemap.org/#map>; Johnson, H., Morrison, D., and Taggart, C., "WhaleMap: a tool to collate and display whale survey results in near real-time." *Journal of Open Source Software*, 6(62), 3094 (2021).

⁵⁵ NOAA Fisheries, "Interactive DMA Analyses." Northeast Fisheries Science Center, updated September 2019. Available at: <https://apps-nefsc.fisheries.noaa.gov/psb/surveys/interactive-monthly-dma-analyses/>.

⁵⁶ Woods Hole Oceanographic Institution, "Robots4Whales." Available at: <http://dcs.whoi.edu/>; See, also, WCS/WHOI, "Autonomous real-time marine mammal detections, New York Bight buoy." Available at: http://dcs.whoi.edu/nyb0218/nyb0218_buoy.shtml; WCS/WHOI, "Autonomous real-time marine mammal detections, New York Bight buoy NW." Available at: http://dcs.whoi.edu/nybnw0120/nybnw0120_buoy.shtml; WCS/WHOI, "Autonomous real-time marine mammal detections, New York Bight buoy SE." Available at: http://dcs.whoi.edu/nybse0120/nybse0120_buoy.shtml.

⁵⁷ Northeast Fisheries Science Center, "Acoustic Indicators of Right Whale Occurrence" (April 2019). Available at: <https://apps-nefsc.fisheries.noaa.gov/psb/surveys/interactive-monthly-dma-analyses/>.

⁵⁸ Campaign reports available at: <https://www.masscec.com/marine-mammal-and-sea-turtle-surveys>.

⁵⁹ Woods Hole Oceanographic Institution, "Autonomous Real Team Marine Mammal Detections: Cox Ledge, Winter 2019-2020," Available at: http://dcs.whoi.edu/cox1219/cox1219_we16.shtml.

⁶⁰ Woods Hole Oceanographic Institution, "Autonomous Real Team Marine Mammal Detections: Cox Ledge, Winter 2020-2021," Available at: http://dcs.whoi.edu/cox1120/cox1120_we16.shtml.

⁶¹ The autonomous vehicle was redeployed in Spring 2021 and is currently on active mission. Available at: http://dcs.whoi.edu/cox0321/cox0321_we15.shtml.

B. NMFS must account for elevated seasonal densities of North Atlantic right whales in its estimation of take

NMFS proposes to estimate take based on annual mean density estimates for each species and stock.⁶² By averaging monthly density estimates across the entire year, the nuances of North Atlantic right whale migration, including the elevated density expected during the winter and spring months off Rhode Island and Massachusetts, remain unaccounted for. This approach will likely lead to inaccurate take estimates. It also runs counter to how NMFS has approached calculating take in other recent authorizations. For example, in the Modified Proposed IHA for Mayflower Wind, LLC, the potential number of monthly takes were calculated by multiplying the month density for each species by the ensonified survey area for the corresponding month, and then summed to produce the total density-based calculated take.⁶³ This approach more accurately captures variation in density across the year. **We ask NMFS to recalculate Level B take in the Proposed IHA to reflect the sum of monthly take estimates for the North Atlantic right whale, as well as other species. Further, we reiterate the requests our groups have previously made that NMFS standardize its approach to take estimation and mitigation requirements across all authorizations related to offshore wind energy.**

C. NMFS must acknowledge that vessel strikes can result in Level A take

Vessel strikes are a leading cause of large whale injury and mortality and have been implicated as one of the major causes of death underlying the UMEs for North Atlantic right whales, humpback whales, and minke whales,⁶⁴ with North Atlantic right whales being particularly vulnerable.⁶⁵ Given the demonstrated vulnerability of large whales to vessel collisions off the East Coast, it is remiss of the agency to overlook vessel collisions as a source of potential take. The localized elevation in vessel activity occurring during marine site characterization surveys (up to eight survey vessels may operate concurrently to undertake the surveys described in the Proposed IHA⁶⁶) naturally increases the vessel collision risk for large whales in the area. **NMFS must explicitly analyze the potential for Level A take resulting from vessel collisions in its take analysis for Vineyard Wind 1.**

IV. Recommendations for Improved Mitigation and Monitoring

In authorizing “take” by incidental harassment under the general authorization provision of the MMPA, NMFS must prescribe “methods” and “means of effecting the least practicable adverse impact” on marine mammals and set additional “requirements pertaining to the monitoring and reporting of such taking.”⁶⁷

⁶² 86 Fed. Reg. at 30,278.

⁶³ 86 Fed. Reg. at 27,402.

⁶⁴ NMFS, “2017-2021 North Atlantic right whale Unusual Mortality Event,” *supra*; NMFS, “2016-2021 Humpback whale Unusual Mortality Event along the Atlantic Coast,” *supra*; NMFS, “2017-2021 Minke whale Unusual Mortality Event along the Atlantic Coast,” *supra*.

⁶⁵ Nowacek, D.P., *et al.*, “North Atlantic right whales (*Eubalaena glacialis*) ignore ships but respond to alerting stimuli.” *Proceedings of the Royal Society B*, vol. 271 (2004); Cusano, D.A., *et al.*, “Implementing conservation measures for the North Atlantic right whale: considering the behavioral ontogeny of mother-calf pairs,” *supra*.

⁶⁶ 86 Fed. Reg. at 30,268.

⁶⁷ 16 U.S.C. § 1371(a)(5)(D)(vi).

Knowing the cumulative risks posed to the North Atlantic right whale and other endangered and protected species and stocks by increased site assessment and characterization activities, NMFS has an obligation to impose robust mitigation requirements to protect these species to the maximum extent practicable. NMFS acknowledges that marine mammals may be temporarily displaced from feeding areas during survey activities but that this displacement is not expected to cause significant or long-term consequences for individual marine mammals or their populations, given the temporary nature of the activities.⁶⁸ However, the best available scientific information shows that the North Atlantic right whale cannot withstand any additional stressors and that *any* potential interruption of foraging behavior may lead to population-level effects and is of critical concern.⁶⁹

The following site assessment and characterization mitigation measures would help ensure adequate protections for the North Atlantic right whale and many offer protections to other endangered and protected species and stocks.

A. Seasonal and diel restrictions

Vineyard Wind 1 proposes to begin its survey in summer 2021, upon receipt of the IHA, and continue for up to one year, although the actual duration is expected to be shorter. The IHA would be effective for a period of one year from the date of issuance.⁷⁰ Surveys are proposed to be conducted 24-hours per day by up to eight survey vessels, for an estimated total of 170 survey days (each day that a survey vessel is operating counts as a single survey day).⁷¹

It is most protective to avoid and reduce impacts in the first instance by separating harmful activities from the species potentially affected. NMFS should prohibit site assessment and characterization activities involving equipment with noise levels that could cause injury or harassment to North Atlantic right whales (based on the best available science, we consider source levels greater than 180 dB re 1 μ Pa (SPL) at 1-meter at frequencies between 7 Hz and 35 kHz to be potentially harmful to low-frequency cetaceans) during periods of highest risk to right whales. These periods are defined as times of highest relative density of animals during their migration, and times when mother-calf pairs, pregnant females, surface active groups (indicative of breeding or social behavior), or aggregations of three or more whales (indicative of feeding or social behavior) are, or are expected to be, present, as supported by review of the best available scientific information at the time of the activity.

The Proposed IHA requires the following seasonal restriction: Vineyard Wind 1 will not operate more than three concurrent HRG survey vessels, with HRG equipment operating below 200 kHz, from January through April within the Lease Area or OECC, not including coastal or bay waters.

⁶⁸ 85 Fed. Reg. at 30,283.

⁶⁹ See, e.g., Van der Hoop, J., *et al.*, *supra*; Christiansen, F., *et al.*, *supra*.

⁷⁰ 86 Fed. Reg. at 30,268.

⁷¹ 86 Fed. Reg. at 30,267-30,268.

These restrictions are not protective enough. Based on the best available scientific information on North Atlantic right whale habitat use within and proximate to the Project Area, **NMFS should require a complete restriction on site assessment and characterization activities involving equipment with noise levels that could cause injury or harassment to North Atlantic right whales from 1 December 2021 through 30 April 2022.** We reiterate that North Atlantic right whales are expected to be present in the Project Area across the entire year and that strong mitigation measures should be required to protect the species year-round.

Further, while NMFS must minimize existing and potential stressors to the North Atlantic right whale to promote the survival and recovery of the species, the agency must also address potential impacts to other protected whale species, particularly in light of the UMEs declared for the strategic stock of humpback whales and minke whales, as well as the several other strategic stocks that populate the Atlantic seaboard. It is therefore imperative that NMFS fully account for the consequences of the proposed North Atlantic right whale seasonal restriction on other protected species. NMFS should also advance a robust and effective near real-time monitoring and mitigation system for North Atlantic right whales and other endangered and protected species that will be more responsive to the ongoing dynamic species distributional shifts resulting from climate change, as well as provide more flexibility to developers.

In addition, when geophysical survey equipment with the potential to injure or harass protected species and stocks is deployed, **NMFS should require that work commence, with ramp up, only during daylight hours and periods of good visibility to maximize the probability that marine mammals are detected and confirmed clear of the exclusion zone before activities begin.** The activity can then continue into periods of darkness and low visibility. If the activity is halted or delayed because of documented or suspected North Atlantic right whale presence in the area, NMFS should require Vineyard Wind 1 to wait until daylight hours and good visibility conditions to recommence survey activities.

B. Exclusion zone size and monitoring requirements

The Proposed IHA Renewal requires a 500-m exclusion zone for North Atlantic right whales for impulsive acoustic sources (*e.g.*, boomers and/or sparkers) and certain non-impulsive acoustic sources (non-parametric sub-bottom profilers) and a 100-m exclusion zone for all other marine mammals, with certain exceptions, during use of impulsive acoustic sources (*e.g.*, boomers and/or sparkers).⁷² An immediate shutdown of the HRG survey equipment would be required if a marine mammal is sighting entering or within its respective exclusion zone.⁷³

The 160 dB threshold for behavioral harassment is not supported by best available scientific information and grossly underestimates Level B take. **For the North Atlantic right whale, NMFS should establish an exclusion zone of 1,000 meters around each acoustic source with noise levels that could result in injury or harassment to this species. NMFS should also establish a minimum exclusion zone of 500**

⁷² 86 Fed. Reg. at 30,279-30,280.

⁷³ *Id.*

meters for all other large whale species occurring within the Project Area. In general, the exclusion zones should apply to all acoustic sources operating below 180 kHz that may have the potential to cause acoustic harassment of marine mammals. We note that the Proposed IHA does not require monitoring of a “buffer zone” or “monitoring zone” that were required by NMFS in the recent Proposed IHA Renewal for Vineyard Wind 1.⁷⁴ **NMFS should explain why the requirements are inconsistent and why less stringent monitoring is required in the Proposed IHA.**

NMFS states that shutdown, pre-start clearance, and ramp-up procedures are not required during HRG survey operations using only non-impulsive sources (*e.g.*, USBL and parametric sub-bottom profilers) other than non-parametric sub-bottom profilers (*e.g.*, CHIRPs), and also that pre-clearance and ramp-up, but not shutdown, are required when using non-impulsive, non-parametric sub-bottom profilers.⁷⁵ **NMFS should provide a detailed rationale for these requirements in the Proposed IHA so they can be more easily understood and evaluated by the public.**

The Proposed IHA requires a minimum of one NMFS-approved PSO be on duty and conducting visual observations at all times on active survey vessels when HRG equipment is operating at or below 200 kHz, including both daytime and nighttime operations.⁷⁶ Visual monitoring would begin no less than 60 minutes prior to initiation of HRG survey equipment (Vineyard Wind 1 has proposed a 60-minute clearance period for North Atlantic right whales; NMFS requires a 30-minute clearance period for all other species) and would continue until 30 minutes after use of the acoustic source ceases.⁷⁷ PSOs must use night-vision technology during nighttime surveys when the sources are active.⁷⁸

Vineyard Wind 1 has also proposed to employ trained passive acoustic monitoring operators to monitor for acoustic detections of marine mammals during nighttime HRG survey activities. PAM operators will communicate nighttime detections to the lead PSO on duty who will ensure the implementation of the appropriate mitigation measure. If PAM is not used or is deemed non-functional at any time during the survey, the survey will be shut down until PAM is restored.⁷⁹ NMFS notes that the agency “does not concur that PAM is an effective technique for detecting mysticetes in order to implement mitigation measures during HRG surveys, given masking that would occur from vessel noise and flow noise. Therefore, NMFS has not included it as a requirement in this proposed IHA.”⁸⁰

We strongly support Vineyard Wind 1’s proposal to use passive acoustic monitoring during nighttime HRG surveys and appreciate the constraint raised by Vineyard Wind 1 that a requirement to employ two PSOs during all nighttime survey operations is impracticable, given the limited availability of berths on the survey vessels and additional personnel required to conduct PAM.⁸¹ **In general, however, it is our**

⁷⁴ 86 Fed. Reg. at 30,439.

⁷⁵ 86 Fed. Reg. at 30,280.

⁷⁶ 86 Fed. Reg. at 30,281.

⁷⁷ 86 Fed. Reg. at 30,282.

⁷⁸ *Id.*

⁷⁹ 86 Fed. Reg. at 30,281.

⁸⁰ *Id.*

⁸¹ *Id.*

view that NMFS must require a minimum of four PSOs following a two-on, two-off rotation, each responsible for scanning no more than 180° of the horizon. Making this requirement clear to IHA applicants will allow any logistical considerations to be addressed early in the survey planning process. In addition, **we recommend NMFS specifically require the use of infrared equipment to support visual monitoring by PSOs during periods of darkness⁸² and recommend this technology is also used during daylight hours to help maximize probability of detection.⁸³**

Visual observations are not enough, and we agree with the decision made by Vineyard Wind 1 to deploy passive acoustic monitoring at night. Studies suggest that North Atlantic right whales exhibit behaviors that reduce their likelihood of detection by PSOs. These behavioral responses may be heightened when whales are in the proximity of the acoustic disturbance from geophysical surveys, meaning that animals may be less detectable by observers during the survey period relative to other times.⁸⁴ Other endangered and protected large whales pose similar monitoring challenges. There are also sighting condition limitations. For even the most conspicuous large whale species, estimates of relative detection probability for a Beaufort Sea State of 6 is less than half that for a Beaufort Sea State of 0.⁸⁵ Based on data collected by the National Buoy Data Center,⁸⁶ a monthly average Beaufort Sea State of at least 3 or 4 can be expected in lease areas situated along the East Coast, year-round. Given these data, observers alone are certain to underestimate the total number of large whales in the mitigation area based on sea state.

⁸² Lathlean, J. and Seuront, L., "Infra-red thermography in marine ecology: methods, previous applications and future challenges," *Marine Ecology Progress Series*, vol. 514, p. 263-277 (2014); Smith, H.R., Zitterbart, D.P., Norris, T.F., Flau, M., Ferguson, E.L., Jones, C.G., Boebel, O. and Moulton, V.D., "A field comparison of marine mammal detections via visual, acoustic, and infrared (IR) imaging methods offshore Atlantic Canada," *Marine Pollution Bulletin*, vol. 154, p.111026 (2020); Zitterbart, D.P., Smith, H.R., Flau, M., Richter, S., Burkhardt, E., Beland, J., Bennett, L., Cammareri, A., Davis, A., Holst, M. and Lanfredi, C., "Scaling the Laws of Thermal Imaging-Based Whale Detection," *Journal of Atmospheric and Oceanic Technology*, vol. 37, pp.807-824 (2020). In addition, NMFS must consider the limitations of the infrared system proposed and ensure that the detection of marine mammals is possible at distances out to and beyond the exclusion zones, in the geographic region in question, and for all relevant endangered and protected species. These technologies have not been well tested for detection of North Atlantic right whales, and may be relatively ineffective for detecting minke whales, both species of concern in light of the current UMEs declared for the Atlantic coast. Further, NMFS should encourage developers to partner with scientists and collect data that increases our understanding of the effectiveness of infrared technologies, with a view towards greater reliance on these technologies to commence surveys during nighttime hours in the future.

⁸³ Smith, H.R., *et al.*, *id.*

⁸⁴ Robertson, F.C., Koski, W.R., Thomas, T.A., Richardson, W.J., Würsig, B., and Trites, A.W., "Seismic operations have variable effects on dive-cycle behavior of bowhead whales," *Endangered Species Research*, vol. 21, p. 143-160 (2013).

⁸⁵ Barlow, J., "Inferring trackline detection probabilities, $g(0)$, for cetaceans from apparent densities in different survey conditions," *Marine Mammal Science*, vol. 31, p. 923-943 (2015); Baumgartner, M.F., Cole, T.V.N., Clapham, P.J., and Mate, B.R., "North Atlantic right whale habitat in the lower Bay of Fundy and on the SW Scotian Shelf during 1999-2001," *Marine Ecology Progress Series*, vol. 264, p. 137-154 (2003). Sea state has been demonstrated to have a direct effect on the sighting probability of North Atlantic right whales in the Lower Bay of Fundy and in Roseway Basin of the Southwest Scotian Shelf (Baumgartner et al. 2003). In line with Barlow (2015), the probability of sighting a North Atlantic right whale in this area changed by a factor of 0.628 (95% CI: 0.428-0.921) for every unit increase in sea state. These studies indicate the effect of increasing Beaufort Sea State in reducing the probability of detection of large whales, including the North Atlantic right whale. From the findings of Baumgartner et al. (2003), a reduction in detection probability of North Atlantic right whales by up to 84.5 percent based on an average Beaufort Sea State of 4 would be expected, relative to ideal sighting conditions (*i.e.*, Beaufort sea state = 0). Notably, the detectability of North Atlantic right whales even under ideal sighting conditions is likely to be significantly less than 100 percent given availability and perception biases other than those involving sea state.

⁸⁶ NOAA-NWS, "National Data Buoy Center." Available at: <http://www.ndbc.noaa.gov/>.

The concern NMFS raises regarding passive acoustic monitoring that relates to the masking that would occur from vessel noise and flow noise are entirely surmountable. **The passive acoustic protocol can and should be designed so the hydrophone is not masked by vessel or survey noise and NMFS should make this explicit in the Final IHA for Vineyard Wind 1.**

NMFS' failure to require passive acoustic monitoring at any time during geophysical surveys is extremely concerning. **NMFS should require passive acoustic monitoring at all times to maximize the probability of detection for North Atlantic right whales and, ideally, other endangered and protected species and stocks**, including during periods of fog, precipitation, and high sea states, when PSOs and infrared technologies are less effective. It should be noted that passive acoustic monitoring without visual observers would also be insufficient as individuals may not continually vocalize. At minimum, NMFS should always require a combination of agency-approved PSOs to visually detect whales and passive acoustic monitoring to detect vocalizations in near-real time when noise levels that could result in injury or harassment to the species are being conducted.

The passive acoustic monitors for this and future wind development projects should be part of a migratory corridor-wide network of passive acoustic monitors organized by NOAA and BOEM in collaboration with state governments as well as private, academic, and non-profit partners.

C. Reduction of underwater noise

The Proposed IHA sets no requirement to minimize the impacts of underwater noise through the use of best available technology and other methods to minimize sound levels from geophysical surveys.

According to NOAA's "Ocean Noise Strategy Roadmap:"

“[W]here noise is concerned, mitigation should be broadly designed to do one of two things: (1) reduce the temporal or spatial overlap of ensonified areas with marine taxa (or acoustic habitat) in particular times, places or circumstances, and/or (2) reduce the sound level at the source (which may include replacing the source with a different type of source capable of the same function).”⁸⁷

In addition, simulation studies comparing the level of risk reduction associated with technologies that allow for reduced source levels and current exclusion zone mitigation practices indicate that there will be very few instances where mitigation using visual observers can achieve a greater risk reduction than would be achieved by a reduction in source level.⁸⁸ Thus, reducing sound emissions at the source is one the most effective means of mitigating the impacts of noise on protected species.

⁸⁷ Gedamke, J., *et al.*, "Ocean Noise Strategy Roadmap," NOAA Fisheries, (2016), at 23. Available at: https://cetsound.noaa.gov/Assets/cetsound/documents/Roadmap/ONS_Roadmap_Final_Complete.pdf.

⁸⁸ Leaper, R., Calderan, S., and Cooke, J., "A simulation framework to evaluate the efficiency of using visual observers to reduce the risk of injury from loud sound sources," *Aquatic Mammals*, vol. 41, pp. 375-387 (2015).

NMFS should require that Vineyard Wind 1 select sub-bottom profiling systems, and operate those systems at power settings, that achieve the lowest practicable source level for the objective. In general, NMFS must require that all IHA applicants minimize the impacts of underwater noise to the fullest extent feasible, including through the use of best available technology and methods to minimize sound levels from geophysical surveys.

D. Vessel speed restrictions

According to the Proposed IHA, up to eight HRG survey vessels may operate concurrently to undertake the survey activities proposed.⁸⁹ On effort surveying vessel speed will be approximately 4 knots.⁹⁰ No information is provided on off-effort vessel speeds in the Proposed IHA.

Vessel strikes are a leading cause of large whale injury and mortality and have been implicated as one of the major causes of death underlying the UMEs for North Atlantic right whales, humpback whales, and minke whales,⁹¹ with North Atlantic right whales being particularly vulnerable.⁹² Moreover, the number of recorded vessel collisions of large whales each year is likely a gross underestimate of the actual number of animals struck, as animals struck but not recovered, or not thoroughly examined, cannot be accounted for.⁹³ In fact, observed carcasses of North Atlantic right whales from all causes of death may have only accounted for 36 percent of all estimated death during 1990-2017, with detection rates dropping to 29 percent for the period of 2010-2017.⁹⁴ Detection rates may be similarly low for other large whale species, and even lower for species that receive relatively less surveillance effort.

Serious injury or mortality can occur from a vessel traveling above ten knots, irrespective of length⁹⁵ and vessels of any length travelling below this speed still pose a serious risk.⁹⁶ The NOAA Fisheries Large Whale Ship Strike Database reveals that blood was seen in the water in at least half of the cases where a

⁸⁹ 86 Fed. Reg. at 30,268.

⁹⁰ *Id.*

⁹¹ NMFS, “2017-2021 North Atlantic right whale Unusual Mortality Event,” *supra*; NMFS, “2016-2021 Humpback whale Unusual Mortality Event along the Atlantic Coast,” *supra*; NMFS, “2017-2021 Minke whale Unusual Mortality Event along the Atlantic Coast,” *supra*.

⁹² Nowacek, D.P., *et al.*, “North Atlantic right whales (*Eubalaena glacialis*) ignore ships but respond to alerting stimuli.” *Proceedings of the Royal Society B*, vol. 271 (2004); Cusano, D.A., *et al.*, “Implementing conservation measures for the North Atlantic right whale: considering the behavioral ontogeny of mother-calf pairs,” *supra*.

⁹³ Reeves, R.R., Read, A.J., Lowry, L., Katona, S.K., and Boness, D.J., “Report of the North Atlantic Right Whale Program Review.” 13–17 March 2006, Woods Hole, Massachusetts, prepared for the Marine Mammals Commission, (2007); Parks, S.E., Warren, J.D., Stamieszkin, K., Mayo, C.A., and Wiley, D., “Dangerous dining: surface foraging of North Atlantic right whales increases risk of vessel collisions,” *Biology Letters*, vol. 8, p. 57-60 (2011).

⁹⁴ Pace III, R. M., Williams, R., Kraus, S. D., Knowlton, A. R. and Pettis, H. M., “Cryptic mortality of North Atlantic right whales,” *Conservation Science and Practice*, e346 (2021).

⁹⁵ NMFS, “Reducing vessel strikes to North Atlantic right whales.” Available at: <https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales#:~:text=March%2026%2C%202021.,Vessel%20Speed%20Restrictions,endangered%20North%20Atlantic%20right%20whales>. To reflect the risk posed by vessels of any length, the Commonwealth of Massachusetts established a mandatory vessel speed restriction for all vessels (including under 20 meters) in the Cape Cod Bay SMA.

⁹⁶ Kelley, D.E., Vlastic, J.P. and Brilliant, S.W., “Assessing the lethality if ship strikes on whales using simple biophysical models,” *Marine Mammal Science*, vol. 37, pp. 251-267 (2020).

vessel known to be less than 65 feet in length struck a whale, evidencing potential serious injury or mortality.⁹⁷ As small vessel collisions with whales are under-reported they may comprise a greater proportion of strikes than reflected in the NOAA database.⁹⁸ The recent report of the death of a month-old North Atlantic right whale calf after it was struck by a 54-foot sportfishing boat, and the serious injury of its mother by the same or second vessel, is a clear demonstration that smaller vessels pose an unacceptable risk.⁹⁹ Small vessels striking whales also pose a risk to human safety. Small vessels involved in whale strikes have suffered cracked hulls, damage to propellers and rudders, and blown engines.¹⁰⁰ Passengers have been knocked off their feet or thrown from the boat upon impact with a whale.¹⁰¹ In carrying out its own analysis on the effectiveness of the right whale vessel speed rule, NMFS determined that “the number of documented and reported small vessel collisions with whales necessitates further action both as it relates to potential regulations and outreach to this sector of the mariner community.”¹⁰²

Vessel strikes are one of the main factors driving the North Atlantic right whale to extinction. Since 2017, just over half of the known or suspected causes of mortality for the species have been attributed to vessel strikes.¹⁰³ Mothers and calves are extremely vulnerable. Three North Atlantic right whale calves born during the last two calving seasons have been killed as a result of vessel strikes. On January 8, 2020, the newborn calf of right whale #2360 was seriously injured by a passing vessel off the coast of Georgia.¹⁰⁴ The prognosis for survival was determined to be poor, and neither the calf nor its mother have been seen since January 16.¹⁰⁵ A second calf born last season was found dead on June 25, 2020 off the coast of New Jersey.¹⁰⁶ The examination of the carcass indicated that this calf had been struck twice; a non-fatal strike occurred several weeks before the collision killing the whale.¹⁰⁷ Given the close association between mothers and calves, adverse impacts to the mothers from vessel strike events cannot be ruled out.¹⁰⁸ As previously discussed, a one-month old calf was found stranded in Florida in February 13, 2021 with fatal injuries. The calf’s mother, “Infinity” #3230, was documented with serious injuries suggestive of a vessel

⁹⁷ Jensen, A.S. and Silber, G.K., “*Large Whale Ship Strike Database*,” U.S. Department of Commerce, NOAA Technical Memorandum NMFS-OPR-25 (Jan. 2004) at 12–37.

⁹⁸ Hill, A.N., Kamiski, C., Robbins, J., Pitchford, T., Todd, S., and Asmutis-Silvia, R., “Vessel collision injuries on live humpback whales, *Megaptera novaeangliae*, in the southern Gulf of Maine,” *Marine Mammal Science*, vol. 33, pp. 558–573 (2017).

⁹⁹ NMFS, “2017-2021 North Atlantic right whale Unusual Mortality Event,” *supra*; *see, also*, <https://www.miamiherald.com/news/local/environment/article249313950.html>.

¹⁰⁰ Jensen, A.S. and Silber, G.K., “*Large Whale Ship Strike Database*,” *supra*.

¹⁰¹ Bigfish123, Comment to *Collision at Sea*, The Hull Truth (May 1, 2009, 5:44 am). Available at: <http://www.thehulltruth.com/boating-forum/222026-collision-sea.html>.

¹⁰² NMFS, “North Atlantic Right Whale (*Eubalaena glacialis*) Vessel Speed Rule Assessment” (2020). Available at: https://media.fisheries.noaa.gov/2021-01/FINAL_NARW_Vessel_Speed_Rule_Report_Jun_2020.pdf?null.

¹⁰³ NMFS, “2017-2021 North Atlantic right whale Unusual Mortality Event,” *supra*.

¹⁰⁴ NMFS, “North Atlantic Right Whale Calf Injured by Vessel Strike” (Jan. 13, 2020). Available at: <https://www.fisheries.noaa.gov/feature-story/north-atlantic-right-whale-calf-injured-vessel-strike>.

¹⁰⁵ *Id.*

¹⁰⁶ NMFS, “Dead North Atlantic Right Whale Sighted off New Jersey” (Jun. 29, 2020). Available at: <https://www.fisheries.noaa.gov/feature-story/dead-north-atlantic-right-whale-sighted-new-jersey>.

¹⁰⁷ *Id.*

¹⁰⁸ NMFS, “North Atlantic Right Whale Calf Stranded Dead in Florida” (Feb. 14, 2021), <https://www.fisheries.noaa.gov/feature-story/north-atlantic-right-whale-calf-stranded-dead-florida>.

strike on February 16, 2021. This species cannot sustain further anthropogenic mortalities of reproductive females or their calves.

North Atlantic right whales are particularly prone to vessel strike given their slow speeds, their occupation of waters near shipping lanes, and the extended time they spend at or near the water's surface.¹⁰⁹ Some types of anthropogenic noise have been shown to induce sub-surface positioning in North Atlantic right whales, increasing the risk of vessel strike at relatively moderate levels of exposure.¹¹⁰ NMFS itself notes that noise can induce flight responses, behavioral disturbances, and habitat avoidance.¹¹¹ Because of the noise associated with geophysical surveys, site assessment and characterization activities could cause horizontal displacement¹¹² and push a North Atlantic right whale out of a speed restriction zone (SMA or DMA) into an area where vessels are traveling at greater speed, presenting an even greater danger of vessel collision. NMFS' analysis must also account for habitat displacement producing an indirect vessel strike.

NMFS should therefore act conservatively and implement mitigation measures to prevent any further vessel strikes for North Atlantic right whales or other species of large whale currently experiencing a UME (*i.e.*, humpback whales and minke whales), as well as species such as fin and sei whales. The broad distributional shifts observed for multiple species, as well as mixed species feeding aggregations observed in the regions where site assessment and characterization will be undertaken, pose an increased risk of vessel strike for large whales. This may potentially exacerbate current UMEs or increase the risk of additional species experiencing a UME in the future.

In the Proposed IHA, NMFS implicitly authorizes survey vessels (and any additional project-related vessels such as crew transfer vessels) to travel at speeds greater than 10 knots, unless a right whale is observed within 500 meters or an SMA or DMA is in place.¹¹³ The required measures are wholly insufficient. *First*, any interaction between a vessel and whale poses a risk of serious injury or mortality. This is true irrespective of the number of other vessels operating in the same location. An addition of even a single vessel traveling at speeds over 10 knots pose an unacceptable risk. *Second*, the dire conservation status of the North Atlantic right whale means that even a single vessel strike will have population-level consequences. *Third*, NMFS' own analysis shows that mariner compliance with voluntary speed reduction measures (*i.e.*, DMAs) is extremely low (approximately 35 to 47 percent)¹¹⁴ indicating mandatory speed reduction requirements are necessary to provide protection.

Vessel strikes pose an unacceptable risk. NMFS must require all offshore wind energy related project vessels operating within or transiting to and from survey areas, regardless of size, to

¹⁰⁹ NMFS, "Recovery plan for the North Atlantic right whale (*Eubalaena glacialis*) Revision" prepared by the Office of Protected Resources, National Marine Fisheries Service" (August 2004).

¹¹⁰ Nowacek, D.P., *et al.*, "North Atlantic right whales (*Eubalaena glacialis*) ignore ships but respond to alerting stimuli," *supra*.

¹¹¹ *See, e.g.*, 85 Fed. Reg. at 37,860-37,862 (Jun. 24, 2020).

¹¹² *E.g.*, Castellote, M., Clark, C.W., and Lammers, M.O., "Acoustic and behavioural changes by fin whales (*Balaenoptera physalus*) in response to shipping and airgun noise," *Biological Conservation*, vol. 147, pp. 115-122 (2012).

¹¹³ 86 Fed. Reg. at 30,280-30,281.

¹¹⁴ NMFS, "North Atlantic Right Whale (*Eubalaena glacialis*) Vessel Speed Rule Assessment," *supra*.

observe a 10-knot speed restriction during the entire survey period.¹¹⁵ An exception may be made in limited circumstances where the best available scientific information demonstrates that whales do not use the area at any time.

V. Extensions of Any One-Year Authorizations Through a Truncated 15-Day Comment Period Must be Prohibited

On March 7, 2019, NMFS began issuing notice of a new reauthorization process for a multitude of permits. Specifically, NMFS requests comment on the potential one-year renewal of authorizations on a case-by-case basis for identical or nearly identical activities, with only an additional 15 days for public comment, should various criteria be met. As we describe below, this appears to be a misinterpretation of the law by the previous Administration that could be easily remedied to comply with the process and provide adequate opportunity for public input.

For several reasons, our organizations have repeatedly opposed this process as contrary to law. First, NMFS' proposal to provide one-year renewals does not comport with the plain language of the MMPA. Section 101(a)(D)(i) unambiguously states that incidental harassment authorizations are valid for periods of not more than one year.¹¹⁶ Second, the statute is clear on its face that a 30-day comment period is required in all instances.¹¹⁷ The legislative history of the 1972 Act demonstrates that Congress viewed a robust notice and comment process as central to the agency's implementation of the IHA process: "As approved by the Committee, the [MMPA] involves a number of basic concepts," one being that "the public is invited and encouraged to participate fully in the agency decision-making process."¹¹⁸ When NMFS adheres to this process, "the public is assured of the right to be informed of actions taken or proposed."¹¹⁹ Third, the legislative history removes any doubt that this 30-day comment period applies even in cases where a new application extends the IHA for another year without change.¹²⁰

The agency lacks discretionary authority to interpret the statute otherwise, whether by regulation, by policy, or on a permit-by-permit basis as it purports to do here.¹²¹ Moreover, NMFS has not supplied a sufficient explanation for why it might assert that the statutory language of Sec. 101(a)(5)(D)(iii) is ambiguous, such that the agency might appropriately exercise its congressionally-delegated gap-filling authority to set forth a permissible interpretation of the statute that comports with the statute's objectives.¹²²

¹¹⁵ NMFS need not wait to finalize a new rulemaking on the North Atlantic right whale vessel speed rule to impose these restrictions as conditions of offshore wind permitting.

¹¹⁶ 16 U.S.C. § 1371(a)(5)(D)(i).

¹¹⁷ *Id.* § 1371(a)(5)(D)(iii).

¹¹⁸ H.R. Rep. No. 92-707, at 4151 (1972), *reprinted in* 1972 U.S.C.C.A.N. 4144, 4151.

¹¹⁹ *Id.* at 4146.

¹²⁰ H.R. Rep. No. 103-439, at 29 (1994).

¹²¹ *See Chevron, U.S.A., Inc. v. NRDC*, 467 U.S. 837, 842-43 (1984) ("If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.").

¹²² *See Northpoint Tech. Ltd. v. FCC*, 412 F.3d 145, 151 (D.C. Cir. 2005) (a "'reasonable' explanation of how an agency's interpretation serves the statute's objectives is the stuff of which a 'permissible' construction is made").

Should the agency wish to establish its new IHA renewal process as a reasonable interpretation of an ambiguous statutory provision, it should do so through notice-and-comment rulemaking or comparable process with the appropriate indicia of formality. In so doing, NMFS must also explain why applicants whose activities may result in the incidental harassment of marine mammals over more than one year should not be required to apply for authorization to do so through the incidental take regulation procedure established by Sec. 101(a)(5)(A)(i), which provides for authorizing incidental take during periods of “not more than five consecutive years each.”¹²³ Where Congress established clear and distinct statutory processes for authorizing incidental take via harassment for one-year periods versus periods extending more than one year and up to five years, NMFS must justify how its proposed unlawful hybrid administrative extension process, with a curtailed comment period, is consistent with both statutorily-established processes.

NMFS’ statement regarding Incidental Harassment Authorization Renewals on its website¹²⁴ fails to provide a clear and legally adequate justification for its purported new reauthorization process especially in light of the burden the foreshortened comment period places on interested members of the public to review and formulate comments, all within 15 calendar days. As NMFS apparently intends the new reauthorization process to become the rule rather than the exception, it is incumbent on the agency to set forth, via proposed regulation or policy document, its rationale for this new process and to allow public comment.

VI. Conclusion

Thank you for considering our comments. For the reasons stated above, our organizations urge NMFS to revise its analysis and require additional measures in the Final IHA to comply with its statutory obligations.

Sincerely,

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¹²³ 16 U.S.C. § 1371(a)(5)(A)(i) (emphasis added). *See also id.* at § 1371(a)(5)(A)(i)(I) (negligible impact finding must evaluate total of such taking “during each five-year (*or less*) period concerned”) (emphasis added).

¹²⁴ *See, e.g., NOAA Fisheries*, “Incidental Take Authorizations under Marine Mammal Protection Act,” last updated June 24, 2020, <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act>.

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