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October 18, 2022

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

Re: Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to the Mayflower Wind Project Offshore of Massachusetts; FR Doc. 2022–22425

Dear Chief Harrison,

We are writing to express concerns regarding impacts to North Atlantic right whales as a result of the Mayflower Wind project. As you are aware, commercial fishermen in the Greater Atlantic Region are held to high standards regarding protection of North Atlantic right whales, with ongoing efforts by NOAA to expand vessel speed restriction zones and require ropeless pot/trap fishing, despite the difficulty and financial and operational constraints and problems that these measures will create.

Mayflower Wind's request for a 5 year Letter of Authorization pursuant to the MMPA, which would allow for vibratory pile driving of 147 WTG monopile foundations with a 3,500 kJ impact hammer, 5 OSP monopile foundations using a 6,600 kJ impact hammer, and detonating 10 UXOs (which is not a conclusive number until actual surveys have been conducted, most likely discovering more UXO than previously estimated, as has been the case with Revolution Wind) does not appear to be consistent with agency objectives of protecting this species. We hereby incorporate our comments on the Revolution Wind DEIS regarding MMPA/ESA and UXO, attached with this comment, by reference. We request that NMFS read those sections, including the detailed references, when conducting analysis.

HRG surveys also contain the potential to significantly and negatively affect North Atlantic right whales, now present in the Mayflower Wind lease area year round,[1] and we request that a full and complete analysis of those impacts be conducted prior to any survey approval by BOEM and prior to LOA authorization. Unfortunately to date, no such comprehensive analysis of HRG survey impacts to marine mammals has been conducted, and BOEM approves developer site assessment plans with only an EA. However, unusual whale mortality events for several whale species, including minke whales, humpback whales, and North Atlantic right whales, have occurred in the Greater Atlantic Region since 2016/2017, coinciding with offshore wind developer site assessment and HRG surveys in the region.[2]

[1] Quintana-Rizzo et al., "Residency, demographics, and movement patterns of North Atlantic right whales *Eubalaena glacialis* in an offshore wind energy development area in southern New England, USA", *Endangered Species Research,* Vol. 45: 251-268, July 29, 2021.

[2] See Minke Whale Unusual Whale Mortality Event and Strandings data at https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2022-minke-whale-unusual-mortality-event-along-atlantic-coast, with most strandings occurring off states with ongoing offshore wind survey activity, particularly MA. See Humpback Whale Unusual Mortality Event and Strandings data at https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2022-humpback-whale-unusual-mortality-

For other offshore wind projects, BOEM has not conducted due diligence for marine mammal analysis beyond the developer's documents when preparing Environmental Impact Statements. Therefore, it is unreasonable to assume that BOEM will do so when analyzing Mayflower Wind. For example, BOEM has continued to ignore peer reviewed data demonstrating the presence of North Atlantic right whales year-round in the MA/RI Wind Energy Area, where the Mayflower Wind leas is located.[3] BOEM has only analyzed developer-prepared documents for impacts to marine mammals from UXO detonation, despite the fact that parameters used by NOAA are much wider in scale than those used by the developer documents.[4] BOEM acknowledges that UXO detonation may result in lung and gastrointestinal tract compression injuries for marine mammals, yet conducts no analysis on these impacts whatsoever.[5]

BOEM has also continued to ignore its own data that mitigation measures proposed by developers/sanctioned by BOEM do not mitigate the effects of construction and UXO detonation on low frequency marine mammals, and North Atlantic right whales in particular. BOEM primarily uses: (1) human lookouts for whales, (2) PAM for whale detection, and (3) bubble curtains while pile driving/detonating UXO, for mitigating noise.

According to the Revolution Wind DEIS, NOAA's cumulative injury threshold distance to assess permanent and temporary hearing threshold shift in marine mammals can be up to 886 square miles of exposure around the sound source.[6] It will be impossible to monitor 886 square miles visually. Even using the developer data, cumulative injury/temporary hearing threshold distance away from a UXO detonation site is 8.3 miles away.[7] It will be impossible for a human lookout to effectively visually monitor an 8.3 mile radius from a UXO detonation site.

PAM will not be an effective tool for detecting North Atlantic mothers and calves, as they exhibit "acoustic crypsis" and exhibit reduced calling rates and amplitudes to avoid predators. We have included two peer reviewed studies on this subject along with these comments.[8] Therefore, the reproductive females and young of the most critically endangered species in the region, which inhabits

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event-along-atlantic-coast, again with most strandings occurring off states with ongoing offshore wind survey activity, particularly MA. See Right Whale Unusual Mortality Event data at https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2022-north-atlantic-right-whale-unusual-mortality-event, and updated numbers at https://www.fisheries.noaa.gov/feature-story/thirty-six-morbidity-cases-added-north-atlantic-right-whale-unusual-mortality-event.

[3] Quintana-Rizzo et al., "Residency, demographics, and movement patterns of North Atlantic right whales *Eubalaena glacialis* in an offshore wind energy development area in southern New England, USA", *Endangered Species Research,* Vol. 45: 251-268, July 29, 2021, attached.

[4] Revolution Wind DEIS, p. 3.15-30 and Table 3.15-7. See also DEIS, p. 3.15-27, footnote #. See also reference in Table 3.15-7 to "LGL (2022)" and corresponding reference on DEIS page B-19, "LGL Ecological Research Associates (LGL). 2022. Petition for Incidental Take Regulations for the Construction and Operation of the Revolution Wind Offshore Wind Farm. Prepared for Revolution Wind LLC, Orsted, and Eversource. Bryan, Texas: LGL Ecological Research Associates."

[5] See page 12 of our attached comments on the Revolution Wind DEIS for full discussion and references on this subject.

[6] Revolution Wind DEIS, p. 3.15-27, footnote #.

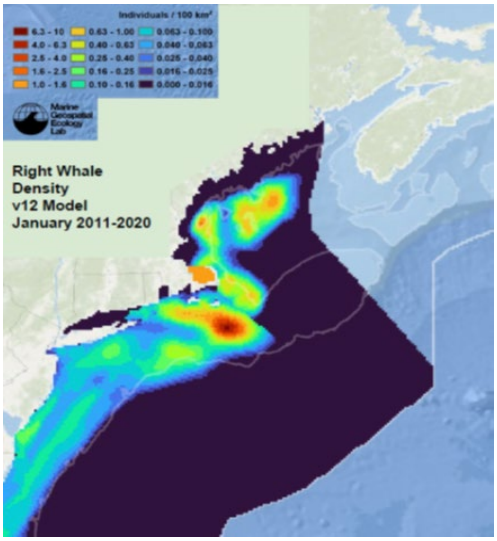
[7] Revolution Wind DEIS, p. 3.15-27; the chart states 44,291 feet, which is 8.3 miles.

[8] See Parks et al., "Acoustic crypsis in communication by North Atlantic right whale mother-calf pairs on calving grounds", *Biology Letters,* 16 September 2019 and Zeh et al., "Preferred shallow water nursery sites provide acoustic crypsis to southern right whale mother-calf pairs", *Royal Society Open Science,* 2022.

the Mayflower Wind lease and surrounding MA/RI lease areas year-round, will most likely go undetected by PAM.

Bubble curtains, while they may be effective for high frequency marine mammals, will not be effective mitigation for low frequency marine mammals whether during pile driving or UXO detonation. Attached with this comment, we have provided a BOEM presentation to the Mid Atlantic Fishery Management Council in February of 2021, which states "Low frequency sound (<200Hz) is not reduced by the bubble curtain."[9] Despite this fact, of which BOEM is clearly aware, there are no other mitigation measures for marine mammal protection during pile driving or UXO detonation, other than "soft start" pile driving methods. There is no such thing as soft start UXO detonation. It is unclear how, without effective mitigation measures specific to North Atlantic right whales and low frequency mammals, BOEM is not putting an ESA listed species in jeopardy by authorizing these activities.

The area of the Mayflower Wind lease and other MA/RI Wind Energy Area leases contains the most density of North Atlantic right whales in the entire Northeast. See the results of the Right Whale Density Model chart below, and included on page 4 of the attached NOAA Fisheries presentation to BOEM's Gulf of Maine Task Force on May 19, 2022:[10]



The Federal Register notice for Mayflower Wind's application for an LOA states "that it is the policy of the United States to organize and deploy the full capacity of its agencies to combat the climate crisis." Yet it is in fact climate change that is being attributed with increasing North Atlantic right whales in the MA/RI Wind Energy Area in southern New England. According to a 2022 study, "Climate change is affecting species distributions in space and time. In the Gulf of Maine, one of the fastest-warming marine regions on Earth, rapid warming has caused prey-related changes in the distribution of the critically endangered North Atlantic right whale (Eubalaena glacialis). Concurrently, right whales have returned to historically important areas such as southern New England shelf waters, an area known to have been a whaling ground…… The recent, year-round detection of right whales in SNE by aerial

[9] See https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/602d7bbd49ee2d06d9db12c4/1613593539206/05a_BOEM+Renewables+Program+Update+2021-02.pdf, p. 21 of 23.

[10] See presentation at https://www.boem.gov/renewable-energy/state-activities/noaa-presentation.

surveys is unique among major right whale habitats. Our analyses and previous studies suggest that SNE represents an increasingly important habitat for the declining right whale population."[11] If climate change is affecting North Atlantic right whale distribution in this manner, then projections would apparently include assumptions of increasing numbers of right whales in this area in the future, as well as increased reliance on the area as reliance on other areas declines. It will also be important to analyze pile driving and UXO impacts on right whale prey sources, as shifts in prey are attributed to shifts in whale presence.[12]

If southern New England waters are an increasingly important habitat for a declining population of critically endangered whales, it is difficult to see how UXO detonation and consecutive years of pile driving by multiple offshore wind projects, including Mayflower Wind and others, can be consistent with the objective of protecting and conserving the species. For example, the Vineyard Wind SEIS estimated noise from pile driving to be produced for 4-6 hours at a time for a 6-10 year period.[13] Additionally, the vessel traffic expected in the area is projected to burgeon to up to 301 offshore wind vessels on a daily basis.[14] With the new introduction of UXO detonation in the mix, it is increasingly unlikely that no right whales will be injured or experience mortality by offshore wind construction activities. We request that NMFS consider the multiple cumulative impacts of offshore wind projects in its analysis for processing the Mayflower Wind LOA application.

Thank you for the opportunity to comment.

Sincerely,
Meghan Lapp
Fisheries Liaison
Seafreeze Shoreside and Seafreeze Ltd.

[11] O'Brien et al, "Repatriation of a historical North Atlantic right whale habitat during an era of rapid climate change", *Scientific Reports,* 2022, p. 1, 7.
[12] Ibid.
[13] Vineyard Wind SEIS, p. SEIS, p. 3-22.
[14] Revolution Wind DEIS, p. 3.16-8.

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

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

Re: Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to the Mayflower Wind Project Offshore of Massachusetts (87 Fed. Reg. 62,793, October 17, 2022)

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 Biden Administration's goal 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 causes dangerous oil spills and perpetuates energy development based on fossil fuels. The United States must shift from fossil fuel-based energy

sources to clean energy. Offshore wind development has the potential to help bridge the transition to our clean energy future.

Oceana is supportive of offshore wind energy if it is responsibly sited, built, and operated throughout its lifespan. The proposals for offshore wind development in areas that the critically endangered NARW may frequent need to consider, avoid, and mitigate effects to protected species, particularly the NARW, to ensure that wind development will not come at the expense of the species. NARWs spend much 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 concern but those areas 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 incidental take regulations (ITRs) and a Letter of Authorization (LOA) for construction of an offshore wind project near Massachusetts. This comment letter includes the following key points:

- The LOA must include use of best available science, cumulative impacts analysis, and project conditions that avoid, minimize, and mitigate adverse environmental impacts.
- The LOA must include a vessel traffic plan to minimize the effects of service vessels on marine wildlife
- The LOA must include requirements to use effective reactive restrictions that are triggered by detection of protected species before or during site characterization activities.

Oceana submits these comments to help ensure that the proposed activities avoid adverse effects on marine mammals. If adverse effects cannot be avoided, then they should be minimized or mitigated. The 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 ITR and LOA 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. Due to the rapidly changing situation for NARWs and the need to react quickly to protect the species, the Fisheries Service should issue five-year ITRs but limit LOAs under this and similar applications to one-year periods instead of the proposed five-year LOA.

1) The role of Letters of Authorization

The MMPA was adopted 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 prohibits the "take" of marine

[1] 16 U.S.C. § 1361(6).

mammals including activities that harass, hunt, capture, or kill, or any 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 prohibition, such as for the incidental, but not intentional, taking of marine mammals for certain activities, which is done via incidental take authorizations.[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]

Under the Fisheries Service's regulations, there are two types of incidental take authorizations: Incidental Harassment Authorizations (IHA) and LOAs. LOAs can only be issued after the Fisheries Service promulgates ITRs for the activity. An IHA is limited to one year, and the action authorized may only have the potential to result in harassment.[7] For actions that could result in any "serious injury"[8] or mortality of a marine mammal, the Fisheries Service's regulations indicate that ITRs must be promulgated after notice and the opportunity to comment.[9] LOAs can be issued pursuant to ITRs for up to five years.[10]

2) Comments on the Contents of an LOA for Construction

ITRs and LOAs for construction of any offshore wind project must ensure that the application meets the requirements set out in the MMPA and its implementing regulations and that the ITRs and LOAs include conditions that will guarantee that construction activities have the least practicable impact on marine mammal species or stocks and their habitats in and around the project site.[11] Given the dire situation of NARWs, the Fisheries Service should make clear in any ITR or LOA for wind projects on the East Coast, that the activities cannot result in any Level A harassment, serious injury, or mortality of NARWs.

[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 walruses. *See* U.S. Fish and Wildlife Service, *Marine Mammals*, https://www.fws.gov/international/animals/marine-mammals.html (last visited May 3, 2021).
[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 ITRs).
[7] 16 U.S.C. § 1371(a)(5)(D)(ii)(I).
[8] The Fisheries Service defines the term "serious injury" as "any injury that will likely result in mortality. 50 C.F.R. § 216.3.
[9] 50 C.F.R. § 216.105(b).
[10] 50 C.F.R. § 216.106(a).
[11] 50 C.F.R. § 216.105(b)(2).

Oceana hopes the comments provided on these important elements will make the construction successful while also considering the adverse effects on marine mammals.

a) Use Best Available Science

The MMPA was the first congressional act to include a "best available science" mandate.[12] 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.[13] Additionally, MMPA implementing regulations require the agency to use the "best scientific information available."[14] The Fisheries Service must therefore comply with the "best available science" mandate in analyzing whether or not to authorize incidental takes.

The NARW is a critically endangered species that has experienced a large decline in the last decade. The most recent population estimate is just 336 remaining whales.[15] This 2020 population estimate is an eight percent decrease from the previous year's estimate. As NOAA considers the LOA application, it must use the most recent population estimate.

In the years since the leasing process was completed for the Wind Energy Area near Massachusetts, NARWs have shifted their aggregation and feeding areas. Because of this shift the region south of Nantucket and Martha's Vineyard is now considered a year-round "core habitat" for foraging NARWs where up to 100 whales have been seen during aerial surveys in recent years.[16,17]

Additionally, new research has demonstrated that since 2017, NARWs have been sighted in wind energy development areas off Massachusetts and Rhode Island nearly every month, with sightings being most common between late winter and spring. Research suggests that around 23% of the entire species is present in these areas between late winter and spring.[18] The importance of this area should not be underestimated. The true importance of the area to NARWs year-round needs

[12] 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).
[13] 16 U.S.C. § 1371(a)(3)(A).
[14] 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.").
[15] New England Aquarium. 2021. Population of North Atlantic right whales continues its downward trajectory, https://www.neaq.org/about-us/news-media/press-kit/press-releases/population-of-north-atlantic-right-whales-continues-its-downward-trajectory/?fbclid=IwAR3VJcauSifygKxU4ZICau0Cd_fo2t4KU6RSJIK7WSmkGRLYLGHpjz1_WkY
[16] 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.
[17] 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.
[18] Quintana-Rizzo, E., Leiter, S., Cole, T.V.N., Hagbloom, M.N., Knowlton, A.R., Nagelkirk, P., Brien, O.O., Khan, C.B., Henry, A.G., Duley, P.A. and Crowe, L.M., 2021. Residency, demographics, and movement patterns of North Atlantic right whales Eubalaena glacialis in an offshore wind energy development in southern New England, USA. Endangered Species Research, 45, pp.251-268.

to be analyzed before an LOA is issued. 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 NARWs.

Chronic stressors are an emerging concern for NARW conservation and recovery, and research suggests that a range of stressors on NARWs have stunted growth rates.[19] Disruptive site characterization or construction activities may not only startle NARWs in this area, but also cause chronic stress to the whales. The whales may seek other feeding areas at great energetic cost, decreasing their fitness, body condition and ability to successfully feed, socialize and mate.

The LOA 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 project area, and a revised discussion of acute and cumulative stress on whales in the region.

b) ***Fully Consider Cumulative Effects***

While an individual activity such as a site characterization may have negligible effects on the marine environment or a negligible number of interactions with protected species, many offshore wind-related activities are being considered in the region. It is important that the Fisheries Service fully consider the discrete effects of each activity and the cumulative effects of the suite of approved, proposed, and potential activities on marine mammals including NARWs and ensure that the cumulative effects are not excessive before issuing an LOA.

c) Project Conditions

Consistent with the requirement to achieve "the least practicable impact on such species or stock and its habitat," the LOA must include conditions for the survey and construction activities that will first avoid adverse effects on NARWs in and around the area 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 achieve site characterization and construction to inform development of the offshore wind projects and which are not critical. If, for example, a lower impact technique or technology will achieve the same goals without adverse effects, that should be permitted while other tools with more frequent, intense, or long-lasting effects should be prohibited.

Pile driving

Offshore wind development will include installation of equipment at the project site and may include both driven piles and piles installed using vibratory techniques. Each of these produce disruptive noise in and around the project area and NMFS should include clear requirements on these activities to minimize the effects of the project. Specifically, the LOA should prohibit pile driving during seasons when protected species are known to be present or migrating in the project area, in addition to any dynamic restrictions due to the presence of NARW or other endangered species.

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

Clearance Zones for all pile driving, including vibratory
If piling installation is permitted to the LOA must require both acoustic and visual clearance zones to ensure protected species are not in the affected area. Oceana suggests that NMFS include an acoustic clearance zone that extends at least 5,000m in all directions from the location of the driven pile, including a visual clearance zone that extend at least 5,000m in all directions from the location of the driven pile and an acoustic exclusion zone of at least 2,000 meters from the location of the driven pile.

These zones should be monitored and enforced via:

Acoustic monitoring
Acoustic monitoring should be undertaken using near real-time PAM, assuming a detection range of at least 10,000m, should be undertaken from a vessel other than the pile driving vessel, or from a stationary unit, to avoid the hydrophone being masked by construction related noise. PAM should be used during impact pile driving, vibratory pile driving installation of the cofferdam, and HRG surveys.

Visual monitoring
Visual monitoring should use PSOs stationed at the pile driving site and on additional vessels, as appropriate, to enable monitoring of the entire clearance zone.

Each vessel should have a minimum of 4 PSOs following a two-on, two-off rotation, each responsible for scanning no more than 180° of the horizon per pile driving locations. Human observation should be supplemented with IR technology and drones, where appropriate.

Timing and Prohibitions on Pile Driving
Acoustic and visual monitoring should begin at least 60 minutes prior to the commencement or resumption of pile driving and should be conducted throughout the duration of pile driving activity. Visual observation of the Visual Clearance Zone should continue until 30 minutes after pile driving.

Because avoidance of protected species is critical, the LOA should include a prohibition on initiating pile driving within 1.5 hours of civil sunset or in times of low visibility when the visual clearance zone cannot be monitored. Oceana understands that in *rare* circumstances pile driving must proceed after dark for safety reasons. If this occurs the project must notify NMFS 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.

3) Vessel traffic associated with Wind Energy Area

Construction activities will increase the vessel traffic in and around the project area. The LOA 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:

a) ***Observers***

All vessels associated with the proposed construction 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 LOA should require service vessels to complement observer coverage with additional monitoring technologies, such as infrared (IR) detection devices for whales and other protected species. Research suggests that a complementary approach combining human and technological tools is most effective for marine mammal detection.[20]

b) Speed

Research suggests that reducing vessel speed can reduce risk of vessel collision mortality by 80-90 percent for large whales like the NARW.[21] Due to the risk of ship strikes to NARWs in the project area, the LOA should limit all vessels of all sizes associated with the proposed construction to speeds less than 10 knots at all times with no exceptions.

c) Separation Distance

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

d) Vessel Transparency

To support oversight and enforcement of the conditions during construction, the LOA should require all vessels to be equipped with and using a Class A Automatic Identification System (AIS) device at all times while on the water. This should apply to all vessels, regardless of size, associated with the project. Class A AIS is a cost-effective technology used in marine industries around the world. AIS provides information including the vessel's identity, location, course, and speed in a format that is compatible with most data collection, storage, and analysis programs.

e) Applicability and Liability

The LOA must require all vessels associated with the project, at all phases of development, follow the vessel plan and rules 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. The LOA

[20] 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.
[21] 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.

must also specify that developers are explicitly liable for behavior of all employees, contractors, subcontractors, consultants, and associated vessels and machinery.

f) ***Transparency and Reporting***

The project will be a private enterprise conducted on shared public waters and as such, the LOA must include a requirement for all phases of construction 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 PSO shift.

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

4) Noise Reduction

Best commercially available technology and methods should be used to minimize sound levels from pile driving coupled with a robust monitoring and reporting program to ensure compliance.

Viable noise reduction technologies include bubble curtains, noise mitigation systems, or sound dampeners. The projects should achieve no less than 10dB (SEL) in combined noise reduction and attenuation, taking as a baseline, projections from prior noise measurements of unmitigated piles from Europe and North America.

Compliance with these requirements is critically important and the LOA should require field measurements to be taken throughout the construction process including on the first pile installed. These compliance measurements should be taken by independent evaluators at intervals established to reduce observer bias and ensure full compliance with noise reduction requirements.

5) **Shutdown Requirements**

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

- A prohibition on initiating pile driving if a North Atlantic right whale or other protected species is detected by visual or acoustic surveys within the acoustic or visual clearance zones described above.
- Condition for resumption of pile driving after the lead Protected Species Observer confirms that no North Atlantic right whale or other protected species have been detected within the acoustical and visual clearance zones.
- 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 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.

6) Conclusion

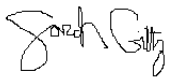
Oceana is supportive of the Biden Administration's focus on development of offshore wind in U.S. waters as part of an effective and responsible response to the climate crisis. As the Administration advances offshore wind development projects, there is an opportunity to advance clean energy goals while protecting biodiversity.

Oceana urges the Fisheries Service to only issue ITRs and LOAs for this construction if it includes a thorough discussion of the new science discussed above and includes the range of conditions that will ensure the construction is completed responsibly with the least practicable impact on marine mammals. And due to the quickly evolving situation for NARWs, Oceana asks that the Fisheries Service limits LOAs associated with this project to one year.

Oceana looks forward to our ongoing engagement in the Mayflower 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,



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Submitted via electronic mail

November 16, 2022

Jolie Harrison
Chief, Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
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Re: Comments on Mayflower Wind, LLC's Request for a Five-Year Incidental Take Regulation and Issuance of a Letter of Authorization for Incidental Take of Marine Mammals from Offshore Wind Construction Activities Related to the Mayflower Wind Project in the designated Lease Area OCS-A-0521

Dear Ms. Harrison,

Conservation Law Foundation (CLF) submits these comments on behalf of CLF, Whale and Dolphin Conservation, and our thousands of members to the National Marine Fisheries Service (NMFS) in response to its announcement of receiving a request to develop and implement incidental take regulations and to issue a five-year (2025-2030) letter of authorization (LOA) under the Marine Mammal Protection Act (MMPA)[1] from Mayflower Wind, LLC (Mayflower Wind), for offshore wind construction activities off the coast of Massachusetts in a designated lease area on the Bureau of Ocean Energy Management's (BOEM) Lease Area Outer Continental Shelf (OCS)-A-0521 (Mayflower Wind Project).[2]

Our organizations support responsibly developed offshore wind as a tremendous opportunity to fight the climate crisis, 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: (1) avoids, minimizes, mitigates, and monitors adverse impacts on marine and coastal habitats and the wildlife that rely on them; (2) minimizes negative impacts on other ocean uses; (3) includes robust consultation with Native American tribes and communities; (4) meaningfully engages state and local governments and stakeholders from the outset; (5) includes comprehensive efforts to avoid negative impacts to environmental justice communities; and (6)

[1] Mayflower Wind is requesting the promulgation of incidental take regulations and issuance of a Letter of Authorization pursuant to section 101(a)(5)(A) of the MMPA for incidental take by Level A and Level B harassment of small numbers of marine mammals during the construction and operations activities described in Sections 1 and 2 in and around the OCS-A 0521 Lease Area and along the proposed ECCs to Falmouth, MA and Somerset, MA.
[2] 87 Fed. Reg. 62,793 (Oct. 17, 2022).

uses the best available scientific and technological data to ensure science-based and stakeholder-informed decision making.

As we establish America's important new offshore wind energy industry to transition us away from harmful fossil fuels, we must protect vulnerable marine mammals, most notably the North Atlantic right whale (*Eubalaena glacialis*), in the process. Mayflower Wind's lease area comprises 127,388 acres (51,552 hectares) located in federal waters off the southern coast of Massachusetts, 26 nautical miles (nm, 48 kilometers [km]) south of Martha's Vineyard and 20 nm (37 km) south of Nantucket, Massachusetts.[3] Mayflower Wind proposes to develop the entire Lease Area as an offshore wind renewable energy project.[4] The lease area and related export cable corridors[5] correlate with the only known persistent, year-round socializing and foraging right whale habitat.[6] As discussed in further detail below, NMFS proposes to issue a LOA to Mayflower Wind in a habitat area of vital significance to right whales, which renders the quality of the mitigation measures required for Mayflower Wind's offshore wind construction activities critical.

The right whale's seriously imperiled status demands implementation of science-based measures to safeguard this species during all stages of offshore wind development, including the construction activities currently proposed by Mayflower Wind. The direct and indirect impacts of noise from pile driving and site characterization surveys, in particular potential habitat displacement from the Mayflower Wind Project Area that may exacerbate existing threats as well as increased risks of vessel collisions, must be fully addressed from the start. Our organizations and our partners developed a suite of recommended mitigation measures based on the best available scientific information to ensure offshore wind advances responsibly.[7] **We therefore urge NMFS to require these measures, or measures that provide stronger protection,[8] as a condition its Incidental Take Regulation for Mayflower Wind as well as other forthcoming projects**. Particularly important recommendations are below.

I. Status of North Atlantic right whales

Despite 50 years of federal protections, the right whale has not recovered. Indeed, it is one of the

[3] LGL Ecological Research Associates, Inc., *Petition for Incidental Take Regulations for the Construction and Operations of the Mayflower Wind Project submitted to NMFS*, MAYFLOWER WIND, 202 of 456 (Sept. 2022), https://media.fisheries noaa.gov/2022-10/MayflowerWindNewEng_2022ITA_App_OPR1.pdf ("Mayflower Wind LOA Application"); Mayflower Wind, *Construction and Operations Plan; Vol. 1*, 3 (Mar. 2022), https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Mayflower%20Wind%20COP%20Volume%20I_0.pdf.
[4] Mayflower Wind LOA Application at 3 of 456.
[5] Mayflower Wind LOA Application at 34 of 456.
[6] Oleson et al., *North Atlantic Right Whale Monitoring and Surveillance: Report and Recommendations of the National Marine Fisheries Service's Expert Working Group*, U.S. Department of Commerce, NOAA Technical Memorandum NMFS-OPR-64, 6, Fig. 1 (June 2020), https://repository.library.noaa.gov/view/noaa/25910; Quintana-Rizzo et al., *Residency, demographics, and movement patterns of North Atlantic right whales Eubalaena glacialis in an offshore wind energy development area in southern New England, USA*, Endangered Species Research, (July 2021), https://doi.org/10.3354/esr01137.
[7] Conservation Law Found. et al., *Strong Mitigation Measures Are Essential to Protect the North Atlantic Right Whale during All Phases of Offshore Wind Energy Development* (Dec. 2021, updated Aug. 2022). (attached).
[8] For example, technological advancements now support a minimum requirement of 15 dB noise reduction and attenuation.

most endangered large whales in the world.[9] In 2020, the International Union for Conservation of Nature changed the species' status from "endangered" to "critically endangered," the last step before "extinct in the wild."[10] This designation means that the right whale is considered at high risk for global extinction. NMFS has designated North Atlantic right whales as one of nine marine species whose extinction is almost certain in the immediate future if existing threats are not dramatically reduced.[11]

The right whale population has been in decline since 2010. Just over the last decade, the right whale population has declined by 30 percent—with about 340 right whales remaining.[12] In an ongoing Unusual Mortality Event (UME) that began in June 2017, NMFS has documented 91 whales that are either dead, seriously injured, or in poor health.[13]

Even more alarming, scientists estimate that there are only about 70 reproductively viable females remaining.[14] NMFS is on record stating that "Every single female North Atlantic right whale and calf are vital to this species' recovery."[15] Moreover, NMFS estimates the population needs *at least* 50 calves per year to allow for recovery.[16] Recent calving rates have been far below that number.[17] And many of the calves that have been born have been killed or seriously injured.[18] This population cannot sustain further anthropogenic mortalities, serious injuries, and morbidities of reproductive females or their calves.

Put simply, right whales cannot withstand further losses or additional stress if the species is to reverse its decline and eventually recover. Mayflower Wind proposes to conduct wind farm construction activities in support of the Mayflower Wind Project that would likely impact marine mammals, including impact and vibratory pile driving, cable installation, unexploded ordnances

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[9] *10 Things You Should Know About North Atlantic Right Whales*, NOAA FISHERIES, https://www.fisheries noaa.gov/feature-story/10-things-you-should-know-about-north-atlantic-right-whales (last updated Dec. 10, 2021).
[10] *The IUCN Red List of Threatened Species 2020—Eubalaena glacialis*, IUCN (2020), https://www.iucnredlist.org/species/41712/178589687.
[11] *Species in the Spotlight—North Atlantic Right Whale*, NOAA FISHERIES, https://www.fisheries noaa.gov/species/north-atlantic-right-whale#spotlight (updated Nov. 7, 2022).
[12] *North Atlantic right whales' downward trend continues as updated population numbers released*, NARWC (Oct. 24, 2022), https://www neaq.org/about-us/news-media/press-kit/press-releases/north-atlantic-right-whales-downward-trend-continues-as-updated-population-numbers-released/.
[13] *2017–2022 North Atlantic Right Whale Unusual Mortality Event*, NOAA FISHERIES, https://www.fisheries noaa.gov/national/marine-life-distress/2017-2022-north-atlantic-right-whale-unusual-mortality-event (last updated Nov. 8, 2022).
[14] Reed et al., *Multi-event modeling of true reproductive states of individual female right whales provides new insights into their decline*. *Frontiers in Marine Science*, Front, Mar. Sci. (2022), https://doi.org/10.3389/fmars.2022.994481.
[15] *North Atlantic Right Whale Calving Season 2022*, NOAA FISHERIES, https://www.fisheries noaa.gov/national/endangered-species-conservation/north-atlantic-right-whale-calving-season-2022 (last updated Oct. 4, 2022).
[16] *Id.*
[17] *Id*.
[18] *North Atlantic Right Whale Morbidity (Sublethally Injured or Ill) Cases; North Atlantic Right Whale Causes of Death for Confirmed Carcasses; North Atlantic Right Whales Initially Determined to be Seriously Injured (Last Seen Alive),* NOAA FISHERIES, https://media.fisheries.noaa.gov/2022-10/North%20Atlantic%20Right%20Whales%20Morbidity%20%28Sublethally%20Injured_Ill%29%20Cases%20Tables.pdf (last accessed Nov. 15, 2022).

(UXO) detonation, and high-resolution geophysical (HRG) site characterization surveys, and vessel use.[19] NMFS even acknowledges that the "proposed action may incidentally expose marine mammals occurring in the vicinity to elevated levels of underwater noise during pile driving, UXO detonation, and HRG surveys, thereby resulting in incidental take, by Level A harassment and/or Level B harassment, of marine mammals."[20]

Further, the Mayflower Wind Project is sited in an area that is critically important to foraging and socializing habitat for right whales' year-round—requiring corresponding year-round protections and critical mitigation measures. It is well documented that right whales have shifted their geographic range due to climate change since 2010,[21] and increasingly whales are documented in southern New England year-round.[22]

Mayflower Wind's own ITR Application identifies an eight-year analysis of right whale sightings within southern New England that (a study area which included the shores of Martha's Vineyard and Nantucket to and covering all the offshore wind lease sites of Massachusetts and Rhode Island) "recorded sightings of [right whales] in almost all months of the year."[23] In additional surveys conducted in the MA and RI/MA Wind Energy Areas, there were 112 sightings of 164 individual right whales between October 2018 and August 2019, with right whales observed in or near the MA and RI/MA Wind Energy Areas during every season.[24] During the most recent surveys conducted in and near the MA and RI/MA Wind Energy Areas between September 2020 and October 2021, right whales were sighted over the Nantucket Shoals during all seasons except for spring.[25]

As such, the seriously imperiled status of the right whale demands the implementation of stringent mitigation measures to safeguard this species during site assessment, construction, operations, and decommissioning of offshore wind energy projects.[26]

II. Mayflower Wind must submit a complete LOA Application

The two major anticipated effects of this Project are acoustic and vessel strike impacts. The potential Level A and Level B takes of both of these anticipated activities must be analyzed.

Mayflower Wind has identified activities that would likely impact marine mammals from the wind farm construction, including impact and vibratory pile driving, cable installation, UXO detonation, and HRG site characterization surveys, and vessel use.[27] However, Mayflower

[19] 87 Fed. Reg. at 62,794.
[20] *Id*.
[21] *NOAA Right Whale Sighting Advisory System*, NOAA Fisheries, https://apps-nefsc.fisheries.noaa.gov/psb/surveys/MapperiframeWithText html (last accessed Oct. 15, 2022); N. Record et al., *Rapid Climate-Driven Circulation Changes Threaten Conservation of Endangered North Atlantic Right Whales*, 32:2 OCEANOGRAPHY 162–69 (2019).
[22] *See e.g.,* Oleson et al. (2020). (A 2020 NOAA Technical Memorandum identifies this area as critical foraging habitat year-round.)
[23] Mayflower Wind LOA Application at 47 of 456.
[24] Mayflower Wind LOA Application at 48 of 456.
[25] *Id.*
[26] Conservation Law Found. et al. (Dec. 2021, updated Aug. 2022).
[27] 87 Fed. Reg. at 62,794.

Wind's LOA Application limits the activities examined as potentially resulting in a take of marine mammals to "pile driving during Wind Turbine Generator (WTG) and Offshore Substation Platform monopile foundation installation and/or WTG and Offshore Substation Platform (OSP) piled jacket foundation installation, HRG surveys, and potential UXO detonation."[28] While these acoustic activities are discussed, there are no estimates of Level A or B takes for vessel strikes for right whales, or any marine mammal.

Further, Mayflower Wind attempts to estimate Level B harassment without considering stress induced responses. Previous research has concluded that human generated noise can induce elevated stress hormone levels in right whales.[29] Chronic stress induced by human generated noise is arguably Level A harassment as elevated stress hormones can impact growth, reproduction, and immune functions, impacting the individual and the population as a result. Without baseline data prior to, and monitoring during the construction and operation of offshore energy facilities, NMFS should not assume that impacts to this species are negligible and authorize an ITR.

Mayflower Wind's analysis of activities resulting in a potential take of marine mammals is incomplete without estimates of take due to vessel strikes. Mayflower must submit a complete LOA Application as necessary and required.

III. NMFS should not issue a 5-year Letter of Authorization concurrent with the ITR

The perilous status of the right whale population necessitates conservation efforts that will ensure the survival and recovery of the species as required by the Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA). Yet, Mayflower Wind has requested that NMFS not only issue a five-year Incidental Take Regulation (ITR) but also simultaneously issue a 5-year LOA.[30] that would begin on April 1, 2025, and be completed in 2030.[31] NMFS's authorization of a five-year LOA beginning three years from now and ending another eight years from now requires the agency to make a speculative determination regarding the future health of right whales and fails to account for species' present and increasing rapid decline. Given the right whale's rapidly changing (and ever worsening) status, NMFS cannot presently make an accurate determination based on the best available science as to whether activities beginning in 2025 and ending in 2030 will have a negligible impact on small numbers of right whales.

Instead, if, following promulgation of a proposed ITR and notice and comment thereon, NMFS determines to issue a final ITR consistent with U.S.C. § 1371(a)(5)(A), it should only issue LOAs on an annual basis thereafter using the best available information, including but not limited to up-to-date stock assessments.[32] A process by which NMFS issues regulations to govern the unintentional taking of marine mammals incidental to offshore wind

[28] Mayflower Wind LOA Application at 29 of 456.
[29] Rolland RM et al., *Evidence that ship noise increases stress in right whales*. Proc Biol Sci. 2012 Jun 22;279(1737):2363-8. doi: 10.1098/rspb.2011.2429.
[30] 87 Fed. Reg. at 62,794.
[31] Mayflower Wind LOA Application at 33 of 456.
[32] *See e.g.*, 50 CFR Part 217 Subpart Q; Incidental Take Authorization: Hilcorp Alaska LLC Oil and Gas Activities in Cook Inlet Alaska, NOAA Fisheries (Jul. 30, 2019), https://www fisheries.noaa.gov/action/incidental-take-authorization-hilcorp-alaska-llc-oil-and-gas-activities-cook-inlet-alaska (NMFS's issuance of ITR and annual LOAs to Hilcorp Alaska LLC to take marine mammals incidental to oil and gas activities in Cook Inlet, Alaska.)

construction activities in the Mayflower Wind Project Area over the course of 2025-2030 would then allow for the issuance of LOAs for the incidental take of marine mammals during the described activities and specified timeframes, prescribe the permissible methods of taking and other means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat, as well as requirements pertaining to the monitoring and reporting of such taking.[33]

Further, the issuance of annual LOAs will allow NMFS to consider new information from different sources to determine (with input from Mayflower Wind regarding practicability) on an annual basis if mitigation or monitoring measures should be modified. The use of adaptive management will allow NMFS to consider annual stock assessments, results from monitoring, current science and best practices, and the right whales observed and recorded shifting habitat and declining population.

An adaptive management approach will also allow NMFS to consider any information which reveals that a marine mammal may have been taken in a manner, extent, or number not authorized by the issued regulations or subsequent LOAs. Modeling cannot definitively ascertain that a Level A harassment will not occur throughout the duration of the Mayflower Wind project. However, for example, given that right whales are foraging and socializing in southern New England year-round, in most months the vessel strike risk is above zero.[34] The right whale's status demands the implementation of the most stringent measures to safeguard this species including shifting to the utilization of ITR supplemented by annual LOAs which will achieve a risk averse, conservative approach.

Further, if issued on an annual basis, NMFS will have the flexibility to withdraw or suspend an LOA if taking(s) are found to have more than a negligible impact on the species or stock(s). A negligible impact finding is based on the lack of likely adverse effects on *annual* rates of recruitment or survival (*i.e.,* population-level effects), 50 CFR 216.103. The current potential biological removal (PBR)[35] for the right whale is 0.7, indicating that *any* mortality or serious injury is significant for recovery of the species.[36] For the last two decades, human-caused right whale mortalities have consistently exceeded the PBR. **The gravity of the right whale's health and population status necessitates the implementation of flexible protections which could be enabled through the annual issuance of LOAs.**

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[33] *Id*.

[34] Garrison et al., *Assessing the risk of vessel strike mortality in North Atlantic right whales along the U.S. East Coast*, U.S. Department of Commerce, NOAA Technical Memorandum NMFS-SEFSC-757 (2022).

[35] PBR "means the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population [(OSP)]." 16 U.S.C. § 1362(20). OSP "means, with respect to any population stock, the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element." *Id*. § 1362(9).

[36] Meaning that not even a single individual can be lost to human activities each year if the species is to avoid extinction. *See*, *e.g.*, Sean A. Hayes et al., *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments–2021*, NMFS, 23 (May 2022), https://media.fisheries noaa.gov/2022-08/U.S.%20Atlantic%20and%20Gulf%20of%20Mexico%202021%20Stock%20Assessment%20Report.pdf.

IV. NMFS should require monitoring mitigation measures in the Mayflower Wind Project Area year-round

The severity of the right whale's status demands strengthened conservation measures to reduce the risk from offshore wind construction activities related to the Mayflower Wind Project to the maximum extent possible. As discussed above, available data demonstrate the need for year-round, not seasonal, mitigation measures in southern New England as the impacts of habitat displacement could have species-wide implications. Increasingly, right whales have been documented in the southern New England area in the months not covered by Mayflower Wind's proposed monitoring mitigation measures.[37]

If a near real-time monitoring system and mitigation protocol for right whales and other large whale species is developed and scientifically validated, **the system and protocol may be used to manage the timing of all activities to ensure those activities are undertaken during times of lowest risk for all relevant large whale species.**[38]

In southern New England, where there is scientific evidence of the area's year-round importance to foraging and socializing right whales, seasonal mitigation measures leave a gap in protections during the rest of the year. **NMFS should require monitoring mitigation measures in the Mayflower Wind Project lease area year-round to account for the importance of this area which is the only known location where foraging behavior occurs year-round.**

V. NMFS should require additional vessel strike avoidance measures year-round

As discussed in our previous comments submitted to NMFS,[39] vessel strikes are one of two leading threats to right whales, inhibiting the species' recovery and threatening its continued existence. While all large whale species are susceptible to collisions with vessels, right whales are more vulnerable to such events than other large whale species[40] because they spend 67 to 98 percent of their time in the upper 10 meters of the water column throughout much of their range.[41] This is particularly true while migrating through the mid-Atlantic where right whales are exposed to the highest densities of vessel traffic.[42] The same is true in foraging habitats, such as Cape Cod Bay, where right whales generally forage at or just below the surface.[43] Females[44] and

[37] Mayflower Wind LOA Application at 132, 133, 141 of 456. (For example, Mayflower Wind's proposed seasonal mitigation measures include monitoring the NMFS right whale reporting systems from November 1 to May 30.)
[38] Conservation Law Found. et al. (Dec. 2021, updated Aug. 2022).
[39] *See* Conservation Law Foundation's comments submitted to NMFS via regulations.gov re *Comments on the Proposed Amendments to the North Atlantic Whale Vessel Strike Reduction Rule* (NOAA-NMFS-2022-0022) (Oct. 31, 2022).
[40] Vanderlaan and Taggart, *Vessel Collisions with Whales: The Probability of Lethal Injury Based on Vessel Speed.* Marine Mammal Science 23(1):144-156 (2007).
[41] Garrison et al. (2022) at 15.
[42] *Id.*
[43] *North Atlantic right whale (Eubalaena glacialis) Vessel Speed Rule Assessment*, NOAA FISHERIES, OFFICE OF PROTECTED RESOURCES, 3, 23 (June 2020), https://media.fisheries noaa.gov/2021-01/FINAL NARW Vessel Speed Rule Report Jun 2020.pdf?null.
[44] Van der Hoop et al., *Assessment of management to mitigate anthropogenic effects on large whales*, Conserv Biol. (Feb. 2013), doi: 10.1111/j.1523-1739.2012.01934.x.

sub-adult[45] right whales are even more likely to be struck because cow-calf pairs spend the most time near the surface. Studies have found that calves in Cape Cod Bay spend 70 percent of their time resting at the surface or just below the surface.[46]

The amount of vessel activity associated with the proposed activity is *significant*. Mayflower Wind's LOA Application anticipates *thousands* of trips to, from, and within the Lease Area across the five years of authorization, involving vessels of various types and sizes.[47] Vessel strikes also pose a significant risk to other large whale species—known to occur in the Lease Area and surrounding waters[48]—currently experiencing UMEs, such as humpback whales and minke whales,[49] as well as endangered fin whales, blue whales, sperm whales, and sei whales. Reducing vessel speeds to no more than 10 knots is the most effective way to prevent serious injury and mortality to large whales from vessel strikes. Analyses estimate that limiting vessel speeds to 10-knots reduced the risk of a right whale fatality by 80 to 90 percent.[50] Further, the probability of a mortality following a strike event substantially increases with vessel speed;[51] for every 1-knot increase in vessel speed, the likelihood of a vessel strike results in the death or serious injury of a right whale increases 1.5 times (*e.g.*, the probability of a fatal strike event increased from 20 percent at 9 knots to 80 percent at 15 knots).[52]

The vessel strike avoidance measures set forth in Mayflower Wind's LOA Application are grossly insufficient. **NMFS must implement a *year-round* 10-knot speed restriction on *all* vessels, regardless of size, associated with the Mayflower Wind project to prevent any further vessel strikes of North Atlantic right whales and other vulnerable species.**[53]

A. NMFS should refuse to grant any requested exemption for Crew Transfer Vessels (CTVs) from generally applicable Vessel Speed Rule requirements or project-specific mitigation requirements

Given new information on serious injuries and mortalities to right whales caused by smaller vessels, NMFS should reject Mayflower Wind's request to exempt CTVs from the proposed

[45] Knowlton and Kraus, *Mortality and serious injury of northern right whales (Eubalaena glacialis) in the western North Atlantic Ocean* (Jan. 2001), DOI:10.47536/jcrm.vi.288.
[46] *Speed Rule Assessment*, NOAA FISHERIES, OFFICE OF PROTECTED RESOURCES at 23.
[47] Mayflower Wind LOA Application at 29 of 456.
[48] Mayflower Wind LOA Application at 34 of 456.
[49] NMFS, *2017–2022 Minke Whale Unusual Mortality Event along the Atlantic Coast*, https://www.fisheries noaa.gov/national/marine-life-distress/2017-2022-minke-whale-unusual-mortality-event-along-atlantic-coast (last updated June 3, 2022); NMFS, *2016–2022 Humpback Whale Unusual Mortality Event Along the Atlantic Coast https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2022-humpback-whale-unusual-mortality-event-along-atlantic-coast* (last updated June 3, 2022).
[50] Silber GK, Adams JD, Fonnesbeck CJ, *Compliance with vessel speed restrictions to protect North Atlantic right whales*. PeerJ 2: e399. (2014), 10.7717/peerj.399; Conn PB and Silber GK, *Vessel speed restrictions reduce risk of collision-related mortality for North Atlantic right whales*. Ecosphere 4(4):43 (2013), http://dx.doi.org/10.1890/ES13-00004.1.
[51] Vanderlaan and Taggart (2007); *see also* Researchers have found that the majority of large whale vessel strike mortalities involve vessels transiting at speeds greater than approximately 10-knots. (Laist et al., *Collisions between ships and whales*. Marine Mammal Science (17):35-75) (Jan. 2001); Jensen, A.S. and Silber, G.K., *Large Whale Ship Strike Database*, U.S. DEPARTMENT OF COMMERCE, NOAA Technical Memorandum NMFS-OPR-25, 12–37 (Jan. 2004); Vanderlaan and Taggart 2007; Conn, P.B., and G.K. Silber (2013)).
[52] Vanderlaan and Taggart (2007).
[53] Conservation Law Found. et al. (Dec. 2021, updated Aug. 2022).

vessel strike avoidance measures as described in Mayflower Wind's LOA Application or from generally applicable regulations established by the Vessel Speed Rule, 50 C.F.R. § 224.105.[54] We specifically emphasize that under both the current and proposed versions of the North Atlantic Right Whale Vessel Strike Reduction Rule, the navigational safety exemption is sufficient to allow any necessary deviations from applicable speed restrictions to ensure safe navigation in challenging conditions based on the professional judgment of vessel masters or pilots.[55]

Further, the application provides no basis for NMFS to justify granting through the ITR process an exemption from the generally applicable provisions of the Vessel Speed Rule (VSR). Neither the 2008 VSR nor the 2022 proposed revisions establish a regulatory process for applicants to receive project-specific exemptions from the requirements of the VSR. Should NMFS move forward with granting such exemption through the ITR process, it would raise significant legal concerns under the Administrative Procedure Act and undermine the basis of the amended VSR itself for failing to notify the public that the agency contemplates such project-specific exemptions through individual rulemakings and raise serious concerns as to whether the agency has fully considered whether the agency has made a rational connection between the facts found and the decision made under the amended VSR.

Nor should CTVs engaging in general transit be exempt from the speed limits. There is no reason that these vessels should receive special exemptions from proposed speed limits when they are posing known risk to right whales yet engaging in general transit that is not mission critical. **All Project-associated vessels should adhere to a 10-knot speed restriction at all times except for reasons of safety, and in all places except in limited circumstances where the best available scientific information demonstrates that whales do not occur in the area.**[56]

B. NMFS should require year-round vessel strike avoidance measures

Under neither the current and proposed versions of the North Atlantic Right Whale Vessel Strike Reduction Rule, will the Mayflower Wind Project Area have year-round speed restrictions.[57] Thus, right whales are left under-protected from lethal vessel strikes during a significant portion of the activity proposed by Mayflower Wind.[58] We note that NMFS has proposed an Atlantic Seasonal Speed Zone (SSZ) which would completely cover Mayflower Wind's Project Area from November 1-May 30, as part of a Proposed Rule to amend the Vessel Speed Rule.[59] We support much of NMFS's Proposed Rule because it potentially addresses 90 percent of known vessel strike risk to right whales from all industries.[60] However, there is no guarantee it will be finalized as written, and as proposed the Atlantic SSZ still leaves right whales at risk of lethal vessel strikes outside of the November 1-May 30 season. Moreover, year-round, mandatory vessel speed restrictions in such a region will enable the protection of reproductively viable

[54] Mayflower Wind LOA Application at 132 of 456.
[55] 73 Fed. Reg. 60,173 (Oct. 10, 2008); 87 Fed. Reg. 46,921 (Aug. 1, 2022).
[56] Conservation Law Found. et al. (Dec. 2021, updated Aug. 2022).
[57] 73 Fed. Reg. 60,173 (Oct. 10, 2008); 87 Fed. Reg. 46,921 (Aug. 1, 2022) (The proposed Atlantic SSZ would run from November 1 to May 30.)
[58] Mayflower has proposed construction activities from May 1 through December 31.
[59] 87 Fed. Reg. 46,921 (Aug. 1, 2022)
[60] *Id.*

females, some of which are not seen any further north than southern England, and whose protection must be one of NMFS's top priorities. Therefore, **we urge the agency to implement a year-round 10-knot speed restriction on all project vessels** so that the additional risk posed by offshore wind development is adequately mitigated.

VI. Seasonal restrictions on pile driving must be based on the best available science

NMFS should use the best available scientific information on presence and abundance of right whales when it considers seasonal restrictions to in the Mayflower Wind project area. Mayflower Wind proposes a four-month seasonal restriction on impact pile driving from January 1 through April 30 to minimize impacts to right whales.[61] However, as discussed above, these dates do not reflect the best available scientific information in southern New England where right whales are detected year-round, and outside of this time period.

Given that available data[62] demonstrate the need for year-round, not seasonal, mitigation measures to protect right whales from offshore wind construction activities related to the Mayflower Wind Project in southern New England, **we urge NMFS to reevaluate the science around seasonal right whale presence and risk in southern New England and consider prohibiting pile driving activities when large aggregations of right whales or cow/calf pairs are present.**

Further, while NMFS must minimize existing and potential stressors to the right whale, the agency must also address potential impacts to other protected large whale and small cetacean species. It is therefore imperative that NMFS fully account for the consequences of any proposed right whale seasonal restriction on other protected species and evaluate alternative risk reduction strategies sufficiently protective of multiple species. Requiring a robust and scientifically proven near real-time monitoring and mitigation system for right whales and other endangered and protected species for use during impact pile driving and potentially other noise-generating activities would support the development of alternatives.

VII. Commencement of impact pile driving during periods of darkness or poor visibility should be prohibited

Mayflower Wind requests authorization to commence impact pile driving after dark to "complete installation within as few years as possible."[63] We are *extremely* concerned by this request. As the acoustic models for the project demonstrate, impact pile driving generates levels of noise harmful to marine mammals over large distances. Based on the limitations of currently available monitoring methods and technologies, the detection probability of right whales and other protected species during darkness and periods of poor visibility (*i.e.*, rain, fog, etc.) will be reduced relative to clear visibility conditions. It is imperative that no right whale, or other marine mammal species, is present in the applicable Clearance Zone when pile driving starts.

Therefore, NMFS must require Mayflower Wind to commence impact pile driving only during periods of good visibility (*i.e.*, daylight and clear weather conditions). Pile driving must not be initiated within 1.5 hours of civil sunset or in times of low visibility when the visual

[61] Mayflower Wind LOA Application at 13 of 456.
[62] *See* supra at § I.
[63] Mayflower Wind LOA Application at 13 of 456.

"clearance zone" and "shutdown zone" (as hereinafter defined) cannot be visually monitored, as determined by the lead PSO on duty.[64] Pile driving may continue after dark only if the activity commenced during daylight hours and must proceed for human safety or installation feasibility reasons, and if required night-time monitoring protocols are followed.[65]

VIII. NMFS should require adequately protective clearance and shutdown zones

Even with seasonal and temporal restrictions in place, the year-round presence of right whales in southern New England waters means there is no time of "low risk" off the coast of Massachusetts. The population size is now so small that even individual-level impact is cause for concern. Moreover, changes in oceanographic conditions driven by climate change are rapidly impacting the habitat use and seasonal distribution of the species. Therefore, we recommend that robust and effective clearance and shutdown zone protocols are in place to protect this species throughout the year.

NMFS's reliance on a 160 dB (re 1 µPa2s) threshold for behavioral harassment in establishing its zones is not supported by the best available scientific information and such reliance grossly underestimates Level B take.[66] As previously noted, behavioral disturbance of right whales must be minimized to the greatest extent possible if the species is to be adequately protected. For impact pile driving with a minimum noise reduction/attenuation level of 10-12 dB (re 1 µPa2s), the following minimum Clearance and Shutdown Zone distances[67] should be required for the Mayflower Wind project for pile-driven foundations:

1. A visual Clearance Zone and Shutdown Zone must extend at minimum 5,000 m in all directions from the location of the driven pile.
2. An acoustic Clearance Zone must extend at minimum 5,000 m in all directions from the location of the driven pile.
3. An acoustic Shutdown Zone must extend at minimum 2,000 m in all directions from the location of the driven pile.

In addition, Clearance and Shutdown Zone distances for other large whale species must be designed in a manner that eliminates Level A take and minimizes behavioral harassment to the fullest extent possible.

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[64] Conservation Law Found. et al. (Dec. 2021, updated Aug. 2022).
[65] Conservation Law Found. et al. (Dec. 2021, updated Aug. 2022).
[66] *See*, *e.g.*, Gomez, C., Lawson, J.W., Wright, A.J., Buren, A.D., Tollit, D. and Lesage, V. "A systematic review on the behavioural responses of wild marine mammals to noise: the disparity between science and policy," *Canadian Journal of Zoology*, vol. 94, pp. 801-819 (2016); Tyack, P.L., and Thomas, L. "Using dose-response functions to improve calculations of the impact of anthropogenic noise," *Aquatic Conservation: Marine and Freshwater Ecosystems*, vol. 29, pp. 242-253 (2019). *See*, *also*, Letter from the Marine Mammal Commission to Ms. Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, regarding the IHA requested by Orsted Wind LLC. (June 13, 2018). https://www mmc.gov/wp-content/uploads/18-06-13-Harrison-Orsted-Bay-State-IHA.pdf. The Marine Mammal Commission "…remains concerned that NMFS's current behavior thresholds do not reflect the current state of understanding regarding the temporal and spectral characteristics of various sound sources and their impacts on marine mammals."
[67] The minimum Clearance Zone and Shutdown Zone distances are designed to offer North Atlantic right whales additional protection from behavioral harassment given the under-protective nature of the 160 dB re 1 µPa2s threshold for impulsive sources, while also being of a size that is feasible to monitor using a combination of visual and acoustic detection methods.

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IX. NMFS should analyze the cumulative impacts in proceeding with permitting the Mayflower Wind Project

Finally, we remain extremely concerned about the cumulative impacts of multiple phases of offshore wind energy development on right whales and other marine mammal species in southern New England waters. Based on Mayflower Wind's own acoustic and impact analysis, marine mammals will experience *dozens* of potential exposures to Level A harassment and *tens of thousands* of potential exposures to Level B harassment during activities related to the Mayflower Wind Project.[68] Of particular concern, Mayflower is requesting permission for hundreds of Level B harassment of right whales per year from 2025-2030, affecting more than 63 percent of the remaining population.[69] And as noted above, although not analyzed or authorized in the LOA process, vessel strike risk is a significant concern.

Furthermore, the Mayflower Wind Project is one of nine offshore wind projects currently being permitted in the RI/MA Wind Energy Area. NMFS must not avoid the responsibility of assessing cumulative impacts to right whales and other marine mammal species posed by these multiple projects and leasing phases, and factoring considerations of those cumulative impacts into the requirements for individual projects. Requirements that avoid and minimize risks at the outset, such as foundation types that can be installed without pile driving, ambitious noise reduction and attenuation targets, and blanket vessel speeds of 10 knots or less, will help ensure the industry can advance responsibly at the scale and pace needed to meet the ambitious and necessary clean energy goals set forth by the Biden-Harris Administration.

* * *

We support the contribution that the Mayflower Wind Project will make in providing clean energy for Massachusetts and the Northeast Region. Marine mammal health and habitat will continue to be threatened by changes in the ocean environment brought on by climate change, further underscoring the need to transition to clean energy. However, NMFS should condition any five-year Incidental Take Regulation on the above recommendations to ensure that that the proposed activity proceeds in a manner that is protective of vulnerable marine wildlife, particularly the critically endangered right whale.

Sincerely,

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Regina Asmutis-Silvia
Whale and Dolphin Conservation

[68] Mayflower Wind LOA Application at Tables 48-49, 108-109 of 456.
[69] *Id*.