

***Submitted electronically at Docket BOEM-2022-0066***

December 2, 2022

Ms. Amanda Lefton  
Director  
Bureau of Ocean Energy Management  
1849 C Street, NW  
Washington, DC 20240

Ms. Janet Coit  
Assistant Administrator  
NOAA Fisheries  
1315 East-West Highway  
Silver Spring, MD 20910

**Re: Draft North Atlantic Right Whale and Offshore Wind Strategy**

Dear Director Lefton and Assistant Administrator Coit,

On behalf of our organizations' several million members and online activists, we respectfully submit our recommendations in response to the Bureau of Ocean Energy Management (BOEM) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service's (NOAA Fisheries or NMFS) request for public comment on the *Draft North Atlantic Right Whale and Offshore Wind Strategy* (Draft Strategy).<sup>1</sup>

Thank you and your agencies for leading this important initiative to “protect and promote the recovery of North Atlantic right whales while responsibly developing offshore wind energy.”<sup>2</sup> The Draft Strategy accurately reflects the urgent need to act now to protect the critically endangered North Atlantic right whale (also, right whale or NARW) from emerging threats associated with offshore wind and a commitment to advance this new industry responsibly. As discussed below, the Draft Strategy's compelling case for action underscores the need for the Final Strategy to incorporate stronger protections for right whales, particularly from the adverse impacts of underwater noise and vessel strikes, and for adequate funding and staffing to be made available to implement the smart proposals advanced in the Draft Strategy.

Our organizations are united in support of responsibly developed offshore wind. Offshore wind provides a tremendous opportunity to fight climate change, reduce local and regional air pollution, and grow a new industry that will support thousands of well-paying jobs. The Biden Administration's ambitious agenda to deploy 30 gigawatts (GW) of offshore wind by 2030,<sup>3</sup> launch an additional 15 GW of offshore wind by 2035,<sup>4</sup> and meet these objectives while also protecting biodiversity and promoting ocean co-use<sup>5</sup> will help

---

<sup>1</sup> BOEM press release. “BOEM and NOAA Fisheries Announce Draft North Atlantic Right Whale and Offshore Wind Strategy.” October 21, 2022. <https://www.boem.gov/newsroom/press-releases/boem-and-noaa-fisheries-announce-draft-north-atlantic-right-whale-and>.

<sup>2</sup> *Id.*

<sup>3</sup> <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/>.

<sup>4</sup> <https://www.whitehouse.gov/briefing-room/statements-releases/2022/09/15/fact-sheet-biden-harris-administration-announces-new-actions-to-expand-u-s-offshore-wind-energy/>.

<sup>5</sup> Proclamation No. 14008, 86 Fed. Reg. 7619 (EO 14008).

unlock its stated goal of net-zero global greenhouse gas emissions by mid-century or before,<sup>6</sup> with a reduction of net greenhouse gas emissions by 50-52 percent below 2005 levels in 2030.<sup>7</sup>

This clean energy revolution is required to avoid the worst impacts of the climate crisis, one which threatens all life on this planet. Yet as we fight climate change, we must avoid, minimize, and mitigate threats to ocean life in whatever ways we can. Ocean life that we rely on for food, jobs, and recreation is struggling to adapt to climate change—while being stressed from decades of overfishing, pollution, and habitat destruction. We need to launch the new offshore wind industry in a smart way that protects our valuable and vulnerable ocean life.

Among the most vulnerable marine mammals is the North Atlantic right whale. Best available scientific information estimates that the species totaled only 340 individuals in 2021,<sup>8</sup> including fewer than 70 reproductive females.<sup>9</sup> The species' rapid decline stems primarily from vessel strikes and fishing gear entanglements, but the species faces a multitude of additional threats, including underwater noise pollution and malnourishment, all while fighting to adapt to climate change.<sup>10</sup> With the species simply unable to withstand further loss or disturbance,<sup>11</sup> the right whale crisis is not a problem caused by the offshore wind industry, but it is one the industry must face.

The urgency and need to protect right whales from all current and future potential impacts cannot be overstated. We appreciate the Draft Strategy's clear-eyed depiction of risks stemming from offshore wind development, including noise, entanglement, vessel strikes, and habitat changes, that may impact right whales and their prey. BOEM's requirement to address and adaptively manage these threats is succinctly stated in the draft:

If new information becomes available indicating that activities previously authorized by BOEM through a plan approval ... are now resulting in an imminent threat of serious or irreparable harm or damage to NARWs, BOEM has the authority to suspend operations. Likewise, BOEM may require the lessee to submit a plan revision if activities previously authorized by BOEM are inadequate to protect NARWs under the relevant legal standards. The plan revision would detail new measures that will be taken to increase protection of NARWs impacted by the activities authorized under the plan approval. BOEM will determine if the new measures are adequate and, if warranted, could then reinitiate section 7(a)(2) consultation under the ESA prior to approving any plan revision. BOEM will also use any new information to inform future project decisions

---

<sup>6</sup> *Id.*

<sup>7</sup> <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/United%20States%20of%20America%20First/United%20States%20NDC%20April%202021%202021%20Final.pdf>.

<sup>8</sup> <https://www.neaq.org/about-us/news-media/press-kit/press-releases/north-atlantic-right-whales-downward-trend-continues-as-updated-population-numbers-released/>.

<sup>9</sup> <https://www.fisheries.noaa.gov/national/endangered-species-conservation/north-atlantic-right-whale-calving-season-2022>.

<sup>10</sup> <https://www.fisheries.noaa.gov/species/north-atlantic-right-whale>.

<sup>11</sup> NMFS recently confirmed that the potential biological removal (PBR) level—or the number of North Atlantic right whales that can be killed or seriously injured each year as a result of human causes—is only 0.7 individuals. As such, not even a single death or serious injury from vessel strike, or entanglement, or other human-related stressor can occur if the species is to ever recover. NMFS, “North Atlantic right whale (*Eubalaena glacialis*): Western Atlantic Stock.” Stock Assessment Report (May 2022) at 17. [https://media.fisheries.noaa.gov/2022-08/N%20Atl%20Right%20Whale-West%20Atl%20Stock\\_SAR%202021.pdf](https://media.fisheries.noaa.gov/2022-08/N%20Atl%20Right%20Whale-West%20Atl%20Stock_SAR%202021.pdf).

and mitigation strategies. In addition, reinitiation under Section 7 of the ESA is required when certain conditions are met (50 CFR § 402.16), during which time operations may be suspended.<sup>12</sup>

With a clear mandate to avoid and mitigate risks to the right whale, it is important that your agencies incorporate stronger regulatory requirements at the start of industry development, to avoid future conflicts and provide clarity to the industry. While BOEM and NOAA Fisheries pledge to work in tandem to “minimize development that may impact [NARW] habitat and areas, and require measures to avoid and minimize impacts to NARW and their habitat from construction and operation such that the required permits and authorizations can be issued,”<sup>13</sup> the resulting measures are not requirements. Rather, the actions offered comprise a list of measures lacking the teeth essential for developers to prioritize protections from the start. We also strongly recommend that your agencies define objective and transparent thresholds to trigger adaptive management decisions and the scope of potential adaptations (*i.e.*, suspension of operations, reinitiation of ESA section 7(a)(2) consultation), to ensure that agency staff, developers, and the public have a clear understanding of when these actions must occur and what they might entail.<sup>14</sup> Without this clarity, adaptive management will either be impractical or project finance will be prohibitively expensive.

The Final Strategy must commit to advancing programmatic regulations that *require* the proactive mitigation measures outlined in the document to be incorporated into permits issued under the Marine Mammal Protection Act (MMPA), Endangered Species Act (ESA), and the National Environmental Policy Act (NEPA), in order to meaningfully address the presented threats. Presently, the mitigation measures outlined in Incidental Harassment Authorizations (IHAs) and Records of Decision that have been issued to date could be more protective of right whales to reflect the best available science outlined in the Draft Strategy, as exemplified below, and it is difficult to see how the Draft Strategy prevents such a pattern from continuing. Setting a baseline of precautionary actions that are required, not merely recommended, will level-set industry expectations, and allow the best available science highlighted in this document to tangibly guide development of this major new ocean industry. We will need significant further growth of offshore wind to reach our climate goals and, therefore, this industry must proceed in a manner that is protective of the environment.

Further, agencies – and developers – should actively seek opportunities to retroactively layer additional protections into existing projects in ways that don’t undermine the viability of these projects. The document states, “none of the measures included here supersede measures developed during project-specific environmental review approvals or other regulatory actions (*e.g.*, vessel speed rule).”<sup>15</sup> Yet agencies should look for mechanisms to apply further protections to projects that have already been permitted, to help ensure the species’ health while securing the success of projects and the larger industry.

Additionally, the agencies’ announcement of work to set a quieting performance standard for construction activities falls flat on recognition that the funding resources for the strategy, and all of the needed rigorous

---

<sup>12</sup> Draft Strategy at 39.

<sup>13</sup> Draft Strategy at 38.

<sup>14</sup> See Letter from Atlantic Scientific Review Group (ASRG) to Ms. Amanda Lefton and Ms. Janet Coit re: comments on the Draft Strategy (Nov. 15, 2022).

<sup>15</sup> Draft Strategy at 16.

regional and project-level monitoring studies, is undetermined. Other nations have ocean noise caps, and BOEM and NOAA's pursuit of one tailored to protect U.S. species of concern could be a game-changer in wisely reducing offshore wind's overall noise footprint. We are concerned that crowdsourcing the required elements will take precious time away from jumpstarting this effort to help advance this industry in a smart way for wildlife. We recognize the effort each agency has invested in development of this Draft Strategy, and you should identify the necessary funding streams to ensure this work proceeds expeditiously and advises the first utility-scale offshore wind facilities.

We appreciate BOEM and NOAA Fisheries' encouragement for public comment on this Draft Strategy. It is challenging for the public to follow the various threads of project development, including Draft Environmental Impact Statements, IHAs, and, now, proposed five-year Incidental Take Regulations and Letters of Authorization. Right whale protections can be strewn across various documents, resulting in inconsistent protections and making it difficult to see the complete picture. Presenting the right whale/offshore wind narrative in one combined strategy, and following up with specific programmatic regulatory requirements designed to address these threats simplifies review, and presents a window through which the public and other stakeholders can more clearly appreciate the actions underway.

Thank you for this report and comment opportunity. We stress the importance of baking meaningful mitigation requirements, including through advancing programmatic rulemaking, into the Final Strategy and of prioritizing funding for this work, in order to solidify the Biden Administration's commitment to expand this new American industry the right way.

## **Goal 1 – Mitigation and Decision Support Tools**

### **1. Overarching comments on industry-wide avoidance and minimization measures**

#### **A. Avoidance**

Responsible offshore wind development adheres to the mitigation hierarchy, where impacts are to be avoided in the first instance, then minimized, and subsequently mitigated as a last resort. Impact avoidance is all the more critical for North Atlantic right whales, which are unable to withstand any additional impacts or stressors if the species is to survive. We are therefore highly supportive of BOEM and NOAA Fisheries' intention to prioritize impact avoidance as the primary goal in the Draft Strategy, followed by impact minimization.<sup>16</sup>

Siting offshore wind projects in areas that avoid sensitive habitats and biologically important areas is the crucial first step to protecting marine life. We are pleased to see BOEM and NOAA Fisheries pursuing this goal in the Draft Strategy:

Developers should avoid proposing development in areas that may impact high-value habitat and/or high-density/use areas used for important life history functions such as NARW foraging,

---

<sup>16</sup> Draft Strategy at 15.

migrating, mating, or calving. If avoidance is not possible, include measures to avoid and minimize impacts to NARW and their habitat.<sup>17</sup>

We recommend that further detail be provided in the Final Strategy to explain circumstances that may fall under the clause “If avoidance is not possible.”<sup>18</sup> Clear, transparent, and objective criteria for siting offshore wind development areas away from important North Atlantic right whale habitat, developed by your agencies and incorporated into the Final Strategy, would improve confidence in the offshore wind siting process and the interest to protect endangered species on an equal footing with realizing our offshore wind development goals.<sup>19</sup>

As you know, there are areas of outsized habitat importance for North Atlantic right whales that are currently slated for offshore wind construction, such as the year-round foraging area and migratory route located off Southern New England. This area is key for the survival of the species, yet permitting for construction of future offshore wind in this area is well underway for eight separate leases, some comprising multiple projects,<sup>20</sup> in part because scientific evidence confirming the importance of the habitat area became available after the leasing process was completed several years ago.<sup>21</sup> Offshore wind development off Southern New England will test the practicality of the adaptive management procedures proposed in the Draft Strategy,<sup>22</sup> and can highlight your agencies’ commitment to requiring measures that effectively avoid and minimize impacts in these areas (e.g., 10 knot vessel speed requirements and foundation installation using alternative methods to pile driving).<sup>23</sup>

## **B. Vessel strike risk reduction**

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 ongoing Unusual Mortality Event (UME) for North Atlantic right whales.<sup>24</sup> Of the 34 deaths and 20 serious injuries documented by NOAA Fisheries since 2017 as part of the UME, 11 deaths and two serious injuries have been attributed to vessel strikes (another 13 deaths are of unknown origin).<sup>25</sup> The number of recorded vessel collisions of large whales each year is

---

<sup>17</sup> Draft Strategy at 39.

<sup>18</sup> *Id.*

<sup>19</sup> BOEM’s avoidance of siting Draft Wind Energy Areas in Rice’s whale habitat in the Gulf of Mexico is an example of how the industry can be advanced responsibly.

<sup>20</sup> <https://www.boem.gov/renewable-energy/state-activities/massachusetts-activities>.

<sup>21</sup> E.g., O’Brien, O., et al. "Repatriation of a historical North Atlantic right whale habitat during an era of rapid climate change." *Scientific Reports* 12.1 (2022): 1-10. We note that the Roberts et al. model outputs used in the Draft Strategy do not reflect the latest updates to the model and therefore underestimate the density of right whales in the area off Southern New England. These figures should be updated in the Final Strategy to reflect the most recent modeling results. In addition, it would be helpful to be able to see the density values within the offshore wind planning areas and lease areas in the figures (i.e., use a transparent polygon rather than a grey-filled polygon).

<sup>22</sup> Draft Strategy at 39.

<sup>23</sup> See, also, Letter from Sean A. Hayes, Chief of Protected Species, NOAA NEFSC, to Brian R. Hooker, Lead Biologist, BOEM re: risks of offshore wind development on North Atlantic right whales off Southern New England (May 13, 2022).

<sup>24</sup> NMFS, “2017-2022 North Atlantic right whale Unusual Mortality Event.” <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2022-north-atlantic-right-whale-unusual-mortality-event>.

<sup>25</sup> *Id.*

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. In fact, observed carcasses of North Atlantic right whales from all causes of death may have only accounted for 29 percent of all estimated deaths during 2010-2017,<sup>26</sup> meaning that the actual number of deaths may be approximately three times higher than the number observed.

Vessel strikes pose an unacceptable risk to the species, and particularly reproductive females and their calves. Any interaction between a vessel and a whale poses a risk of serious injury and mortality, particularly for vessels travelling at speeds greater than 10 knots. The dire conservation status of the North Atlantic right whale means that even a single vessel strike poses an unacceptable risk as it will have population-level consequences.<sup>27</sup> To halt the species' decline and promote its recovery, BOEM and NOAA Fisheries must require of all boats management measures that reduce the risk of vessel strike to a level approaching zero.

We acknowledge, however, that reducing risk of vessel strike to a level approaching zero is extremely challenging. Our groups spoke in strong support of the proposed amendments to the Vessel Speed Rule put forth by NOAA fisheries<sup>28</sup> and believe these measures—with certain improvements, as detailed in our letters<sup>29</sup>—would significantly reduce the risk of mortality and injury of North Atlantic right whales from vessel strike.

To ensure our national offshore wind industry begins on a firm footing, we urge BOEM and NOAA Fisheries to require a mandatory 10-knot speed restriction for all project-associated vessels at all times, except in limited circumstances where the best available scientific information demonstrates that whales do not use an area. Project proponents may develop, in consultation with NOAA Fisheries, an “Adaptive Plan” that modifies these vessel speed restrictions. However, the adaptive monitoring methods that inform the Adaptive Plan must be proven effective using vessels traveling 10 knots or less and following a scientific study design. If the resulting Adaptive Plan is scientifically proven (*i.e.*, *via* peer-reviewed scientific study) to be equally or more effective than a 10-knot speed restriction, the Adaptive Plan could be used as an alternative to a 10-knot speed restriction.

We agree it could be useful for the agency to investigate options for modeling vessel strike risk from offshore wind development, beyond what would be minimized by the finalized vessel speed rule modifications, in order to “inform whether additional mitigation measures are necessary in project-specific approvals to further reduce the risk of vessel strike from OSW traffic.”<sup>30</sup> However, such analysis should not delay your agencies in acting with the utmost caution and requiring a 10-knot speed restriction until such time a vessel strike risk model is completed and peer-reviewed, and a full scientific exploration of risk reduction alternatives equal in effectiveness to a 10-knot speed restriction has been completed.

---

<sup>26</sup> 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).

<sup>27</sup> NMFS Stock Assessment Report at 17.

<sup>28</sup> 87 Fed. Reg. 46,921 (Aug. 1, 2022).

<sup>29</sup> *E.g.*, Dynamic Speed Zones should be triggered following the confirmed detection of a single North Atlantic right whale.

<sup>30</sup> Draft Strategy at 33, Action 1.3.6.

Finally, we urge you and your sister agency, the Department of Energy, to develop and fund a program to support development and testing of adaptive monitoring and avoidance technologies to minimize the risk of vessel strikes. This is a problem facing all boats in our oceans and the offshore wind industry should contribute to, but not be solely responsible for, developing and testing alternatives to a 10-knot speed restriction. A scientifically tested solution would allow all boats to go faster without risking the life of whales and thus would create a significant economic benefit, one worthy of public investment.

### **C. Noise reduction**

Underwater noise pollution has deleterious consequences for most marine life and represents a significant stressor to marine mammals, including North Atlantic right whales. Without sufficient avoidance and minimization measures in place, potentially harmful levels of noise pollution may be generated at each stage of offshore wind development, including pre-construction site assessment and characterization, during construction, and long-term operations. Cumulative noise impacts may also be considerable, particularly in areas where pile driving is taking place simultaneously across adjacent lease areas—a possibility that is increasing in likelihood as projects experience delays and construction windows for different projects overlap—and during operations, where expansive areas of the ocean may experience elevated noise levels that exceed the harassment threshold for right whales and other low-frequency hearing cetaceans.<sup>31</sup>

It is incumbent on BOEM and NOAA Fisheries under the MMPA to ensure that noise impacts to marine mammals, including right whales, are negligible and that industrial activities have the least practical adverse impact on these species. We therefore consider Action 1.2 “Prioritize research, development, and implementation of mitigation on quieting technology and methods for OSW”<sup>32</sup> to be of utmost importance.

We are highly supportive of BOEM and NOAA Fisheries working to develop and implement quieting performance standards for construction activities, such as pile driving and UXO detonation. A thoughtfully developed noise performance standard akin to those required in Europe could be a watershed moment in risk reduction for the offshore wind industry in the United States and serve as a driving force for home-grown innovation in noise mitigation technologies. Given that underwater noise pollution negatively affects species across frequency hearing groups, in the pursuance of this standard we encourage BOEM and NOAA Fisheries to consider a hybrid approach, where risk is reduced for low-, mid-, and high frequencies, rather than solely at the low frequencies at which right whales are most vulnerable. A hybrid approach would help support overall marine ecosystem health rather than prioritize a single species or species group (i.e., low-frequency hearing cetaceans). As noted above, sufficient funding should be identified to support this effort. Given the scale of offshore wind development planned off the East Coast, we further recommend that the development of a cumulative noise cap be explored, which could limit the amount of noise produced within a specific region on an annual basis.

---

<sup>31</sup> Stöber, U. & Thomsen, F. How could operation sound from future offshore wind turbines impact marine life? *J. Acoustical Soc’y Am.* (Mar. 15, 2021); Carduner, J. 2022. Characterizing the operational soundscape of floating offshore wind parks: Implications for environmental risk assessment and wildlife. Presentation at the State of the Science Workshop on Wildlife and Offshore Wind Energy. New York, USA. July 28, 2022.

<sup>32</sup> Draft Strategy at 15.

Notwithstanding our support of a noise performance standard in cases where pile driving cannot be avoided, we emphasize that installing quieter foundation types is by far the most effective way to minimize noise impacts during construction. We urge that the Final Strategy incorporate measures to encourage advancement of quieter foundation types and request that BOEM and NOAA Fisheries include more specificity and detail on this vital component of responsible offshore wind as part of Action 1.2.2 of the Final Strategy.<sup>33</sup> The forthcoming noise performance standard may be one means of encouraging developers to opt for quieter foundations, but other strategies could include supply chain development, and/or cost reduction strategies for quieter foundation technology. Coordination with other agencies, and particularly the Department of Energy for which this topic is a stated interest<sup>34</sup> may be beneficial.

We support the Draft Strategy's recommendation of conducting acoustic monitoring of operational noise and substrate vibrations "with the goal of developing a robust database of construction and operational noise to inform the development of mitigation measures,"<sup>35</sup> but stress that action can be taken in the meantime. A wealth of research exists which details the impacts of continuous noise on marine life, and the importance of reducing this impact. Best available scientific information indicates that operating turbines may generate noise audible and potentially impactful to large whales and other marine species over significant distances.<sup>36</sup> Research indicates there is a positive correlation between the capacity of the wind turbine generator (WTG) and level of operational noise generated, indicating that increased investment in larger capacity WTGs will further exacerbate this stressor.<sup>37</sup> The Final Strategy should include an action item to model the operational noise expected from individual projects, and cumulatively throughout right whale habitat, and assess the extent of potential impact to the species (the assessment should include, but not be limited to, an estimate of Level B take, energetic consequences of habitat displacement from operating wind areas, and an estimation of impacts on right whale prey abundance, quality, and distribution). Pending further study, we recommend the use of direct-drive turbines as opposed to turbines with a gear box, as direct-drive turbines may emit lower noise levels<sup>38</sup> and reduce risk of behavioral disturbance or habitat displacement of right whales and other marine mammal species, and also impacts to key marine mammal prey species, during the operation phase of development.

Furthermore, previous research has concluded that human generated noise can induce elevated stress hormone levels in right whales.<sup>39</sup> Chronic stress can impact growth, reproduction, and immune functions, impacting the individual and the population as a result. Without baseline data collection on stress levels (*e.g.*, *via* hormone analyses) prior to, and monitoring during the construction and operation of offshore wind energy facilities, impacts to this species should not be assumed by your agencies to be negligible.

---

<sup>33</sup> We support your agencies intention to "Develop standards for determining where it would be preferred to use foundation designs that do not rely on pile driving (*e.g.*, gravity-based foundations)" (Draft Strategy at 41) but ask that you go further to advance the use of quieter foundations.

<sup>34</sup> As discussed at the Department of Energy Offshore Wind Strategy Workshop, May 24-25, 2022.

<sup>35</sup> Draft Strategy at 43.

<sup>36</sup> Stöber, U. & Thomsen, F. How could operation sound from future offshore wind turbines impact marine life? *Supra*.

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> Rolland, RM, SE Parks, KE Hunt, M Castellote, PJ Corkeron, DP Nowacek, SK Wasser, and SD Kraus. 2012. Evidence that ship noise increases stress in right whales. *Proc. Biol. Sci.* 279(1737):2363-8. DOI: 10.1098/rspb.2011.2429.



Our groups also support including in Goal 1 a focus on integrating quieting technologies into new and existing offshore wind vessels, but believe Action 1.2.3 implementing this goal must be more ambitious.

Given that underwater noise from vessels has been shown to contribute to chronic stress and acoustic masking in right whales,<sup>40</sup> your agencies should work to reduce noise levels produced by vessels from all industries under your purview, including, but not limited to, the offshore wind industry. As noted earlier, in the Draft Strategy BOEM has committed to “pursue development of a quieting performance standard for impact pile driving to set a common goal for providing additional environmental protection, promoting predictability, and driving technological innovation,”<sup>41</sup> Our groups urge BOEM and NOAA Fisheries to likewise develop a quieting performance standard for offshore wind vessels, and consider how that standard could be applied in other industries.

Such a standard could be formulated as an underwater noise limit or “target” set by vessel class. Existing “Quiet Ship notations,” presently offered by at least six ship classification societies globally, could inform efficient development of a quiet vessel performance standard.<sup>42</sup> Also of relevance, Canada is actively developing quantitative targets to reduce underwater noise from individual vessels, with expert recommendations expected next year.<sup>43</sup> In addition to establishing targets, BOEM and NOAA Fisheries could work with the Department of Energy, the Maritime Administration, and others, as already envisioned, to develop off-the-shelf quiet ship designs for offshore wind vessels, as it is likely that—consistent with Jones Act requirements—many new vessels will be built in the coming years to support this new industry.<sup>44</sup>

In short, given the importance of this issue and the opportunity for innovation, we strongly encourage Action 1.2.3 to do more than just “promote” integration of quiet vessel technologies, and instead provide performance standards for developers to aim for, particularly for new builds.

The Draft Strategy also offers in Action 1.2.3 the possibility of engaging with ports and port authorities to set vessel quieting goals. This suggestion likely builds on positive work led by ports in other parts of the world (*e.g.*, Vancouver Frasier Port Authority and Port of Prince Rupert Port Authority) to offer incentives to commercial vessels that integrate quieting technologies or attain a Quiet Ship notation. However, it is less obvious how such an approach could work on a sector-specific basis. Nor should the burden for quieting vessels be shifted to ports, who would need to secure funding to resource such incentive programs. While we encourage innovative thinking, in this instance our groups suggest that the most efficient route to quieter vessels is to set quantitative noise targets for offshore wind vessels and, to

---

<sup>40</sup> *Id.*

<sup>41</sup> Draft Strategy at 16.

<sup>42</sup> These include the American Bureau of Shipping – Underwater noise notation; Bureau Veritas – Underwater Radiated Noise (URN) notation; DNV-GL- SILENT Environmental notation; Korean Register – Underwater Radiated Noise Notation; Lloyd’s Register – Underwater Radiated Noise (UWN-L) notation; and Registro Italiano Navale (RINA) – DOLPHIN notation.

<sup>43</sup> *Pers. Comm.* Michael Jasny, Director, Marine Mammal Protection Project, Natural Resources Defense Council.

<sup>44</sup> *E.g.*, “In the budding U.S. offshore wind segment, a shipbuilding boom is just starting...with an expected market size of 200-plus vessels of all sizes...”, in Hybrid Propulsion Solutions Leading the Way to a Zero-Carbon Future, *The Maritime Executive*, Aug. 13, 2021. Accessed 11.28.2022 at <https://www.maritime-executive.com/magazine/hybrid-propulsion-solutions-leading-the-way-to-a-zero-carbon-future>.

the extent possible, vessels from other industries, to achieve, and to work with aligned agencies to support developers and other maritime users in acquiring vessels that meet those targets.

#### D. Entanglement

Entanglement in vertical buoy lines associated with pot and trap fishing gear is the leading cause of death, serious injuries, sublethal impacts, and overall decline of North Atlantic right whales.<sup>45</sup> Entanglement is also a serious animal welfare concern.<sup>46</sup> Entanglement of North Atlantic right whales in fishing gear is a conservation issue largely out of the offshore wind industry’s control—a fact that should be better clarified in the Final Strategy—and requires an aggressive federal strategy to lower the risk of entanglement ocean wide. However, any risk of entanglement of a right whale in offshore wind infrastructure must be effectively mitigated so that it does not place the species in further jeopardy.<sup>47</sup>

The mooring lines and dynamic array cables between the turbines of floating offshore wind platforms—an emerging technology under consideration for the East Coast—pose a potential entanglement concern for North Atlantic right whales.<sup>48</sup> To advance floating offshore wind responsibly, the adverse impacts unique to this technology require proactive monitoring and management action.<sup>49</sup>

We were pleased to see that the Draft Strategy considers reducing entanglement risk as a priority even at this early stage of floating offshore wind development and has proposed two specific action items to better understand and address that risk (Action 1.3.7 and 1.3.8). For Action 1.3.7, we underscore the need to develop practical approaches to reduce entanglement risk (i.e., methods and technologies to monitor for and detect entanglements) now, at the very outset of floating wind development. Several science-based solutions and new technologies that can help monitor for and minimize the risk of secondary entanglement are now available or are on the horizon. The construction of floating offshore wind in the U.S. is approximately five years away,<sup>50</sup> which provides the time necessary to undertake research and

---

<sup>45</sup> <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2022-north-atlantic-right-whale-unusual-mortality-event>.

<sup>46</sup> As illustrated by the harrowing story of Snow Cone, the right whale mom who miraculously gave birth while severely entangled only to be seen several months later emaciated, covered in lice, dragging even more gear, and sadly without her calf. Snow Cone will undoubtedly succumb to her injuries. <https://www.neaq.org/about-us/news-media/press-kit/press-releases/north-atlantic-right-whale-snow-cone-sighted-entangled-in-new-fishing-gear-and-in-extremely-poor-health/>.

<sup>47</sup> We are conscious of the pressure that fixed-gear pot/trap fisheries are under to reduce the risk of entanglement to legal levels and stress the importance of BOEM and NOAA Fisheries to invest in proactive risk reduction actions for floating offshore wind, some prospective locations for which juxtapose fishery areas for the same pot/trap fisheries currently subject to new regulations.

<sup>48</sup> Maxwell, Sara M., et al. "Potential impacts of floating wind turbine technology for marine species and habitats." *Journal of Environmental Management* 307 (2022): 114577. <https://doi.org/10.1016/j.jenvman.2022.114577>. "Secondary" entanglement is presumed to be the main entanglement-related concern for multiple species. This form of entanglement could occur if marine debris became ensnared around mooring lines and/or mid-water (i.e., inter-array) cables, or other infrastructure, and subsequently entangled marine wildlife. "Primary" entanglement, where an animal becomes directly entangled in the lines and cables, and "tertiary" entanglement, where marine debris or active fishing gear already entangling an animal becomes ensnared on the infrastructure and anchors the animal, are additional potential concerns that warrant monitoring as floating offshore wind development proceeds.

<sup>49</sup> The risk to other marine species susceptible to entanglement, including marine mammals, sea turtles, sharks, and diving or plunging marine birds, should be avoided and minimized to the fullest extent possible.

<sup>50</sup> BOEM. Offshore Wind Leasing Path Forward 2021-2025. <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/OSW-Proposed-Leasing-Schedule.pdf#:~:text=Our%20path%20forward%20will%20help,would%20create%20nearly%2080%2C000%20jobs>.

development into the most effective and appropriate monitoring and mitigation systems and identify necessary cost efficiencies. This work can be undertaken in parallel but should not be dependent on the outcomes of risk assessments, which currently would lack empirical data from operational floating wind projects and have wide confidence intervals. There is zero room for error when protecting right whales from entanglement. The success of the offshore wind industry is also dependent on avoidance of right whale entanglements. Action 1.3.8 aims to understand how changes in fishing effort resulting from offshore wind development changes the risk profile for NARW entanglement in fishing gear. Any monitoring and risk assessment activities associated with this Action should ideally be supported by federal funding and incorporated into the broader federal strategy to mitigate entanglement risk for North Atlantic right whales.

Several of our groups recently published a suite of recommended monitoring and mitigation measures (*see* Attachment 1)<sup>51</sup> that reduce the potential risk of entanglements of marine mammals, sea turtles, diving and plunging birds, and sharks caused by floating offshore wind's extensive underwater mooring and cable system. The recommended measures are based on the most up-to-date scientific and technological information available. They include examples of the types of technologies (existing or currently in development) that may be useful to monitor and mitigate for secondary entanglement risk.<sup>52</sup> We urge BOEM and NOAA Fisheries to incorporate the recommended measures as requirements for developers of floating offshore wind, as appropriate, and help to advance methods and technologies that will improve cost efficiencies for industry.

#### **E. Decision-support tools**

Offshore wind is a new industry in the United States; there remain many unknowns in terms of potential risks. We appreciate the value of the suite of decision-support tools proposed under Action Item 1.3, however we also note that the development of such tools can require significant resources and, when conducted in the absence of empirical data from field observations and measurements, the uncertainty in the results can be large, open to interpretation, and of limited effectiveness in directly informing management. We therefore encourage the agencies to direct resources primarily towards proactive reduction of potential impacts to North Atlantic right whales in the first instance (*e.g.*, by reducing underwater noise to the full extent possible using available methods, requiring 10-knot vessel speed restrictions, and frequently monitoring and removing marine debris from floating wind cables and mooring lines). As noted by the Atlantic Scientific Review Group, "Empirical data collected during construction and operations of the first offshore wind projects can be used to inform and improve the reliability of future risk assessments to inform adaptive management."<sup>53</sup> It may also be a useful next step to evaluate what the most useful risk model(s) may be at this stage (*i.e.*, those for which adequate empirical data is available to populate the parameters) and select a sub-set to move forward with in the near-term.

---

<sup>51</sup> <https://www.nrdc.org/resources/recommendations-reduce-potential-risk-entanglement-marine-life-during-floating-offshore>.

<sup>52</sup> However, the recommendations may change as new scientific and/or technological advancements occur and are validated, and as empirical data on the risk of secondary entanglement and the effectiveness of monitoring and mitigation measures becomes available and informs adaptive management (*e.g.*, monitoring frequency may increase or decrease).

<sup>53</sup> Letter from Atlantic Scientific Review Group (ASRG), *supra*, at 4.

## 2. Comments on project-specific avoidance and minimization measures

### A. Site characterization and UXO surveys

We are deeply concerned that existing protections for right whales during site assessment and characterization activities fall short of what is needed to achieve the goal of advancing offshore wind development in a manner protective of the species. Site assessment and characterization activities to support offshore wind development are spatially and temporally extensive and affect significant numbers of right whales and other marine mammals. Since June 2017, NOAA Fisheries has permitted or is considering permitting 108 vessels to conduct geophysical survey activities over more than 10,000 survey days, resulting in more than 113,000 instances of harassment (i.e., Level B takes) of marine mammals. Of those takes, 402 represent North Atlantic right whales—a number now greater than the population size of the species,<sup>54</sup> and a serious concern given that right whales are unable to withstand additional disturbance, particularly while foraging. Our groups have communicated concerns regarding this issue to your agencies for several years and hope to see the Final Strategy address the cumulative nature of potential impacts posed by this activity and require stronger protective measures.

In its reference to mitigation measures that developers may employ to reduce the risk of harm from underwater noise from site assessment and characterization, the Draft Strategy advises to “implement project design criteria and best management practices such as those outlined in NOAA Fisheries ESA programmatic consultation (issued June 2021, as amended September 2021) (Anderson 2021) ...”<sup>55</sup> We are extremely concerned to see your agencies, and the Draft Strategy, continue to defer to this document. As several of our groups conveyed to you in January 2022, the programmatic consultation fails to rely on the best available scientific data, as required by the ESA, particularly with respect to the North Atlantic right whale (*see* Attachment 2). Consultation must immediately be reinitiated and, in doing so, require avoidance, minimization, and mitigation measures that are sufficiently protective to ensure that site characterization and assessment activities are truly not likely to adversely affect right whales. Pending completion of a new consultation, strong mitigation measures as described in our best management practices for site assessment (*see* Attachment 3)<sup>56</sup> should be implemented on a project-specific basis to help ensure the survival and recovery of the species.

### B. Construction and operation

We have several specific observations and recommendations for select avoidance and minimization measures proposed for construction and operations (Draft Strategy, Appendix B).<sup>57</sup>

---

<sup>54</sup> Our analyses also revealed the following number of take authorizations for other endangered or noise-vulnerable marine mammal species: fin whale: 647; sei whale: 53; humpback whale: 494; minke whale: 329; sperm whale: 93; harbor porpoise: 12,493.

<sup>55</sup> Draft Strategy at 39; citing [https://media.fisheries.noaa.gov/2021-12/OSW%20surveys\\_NLAA%20programmatic\\_rev%201\\_2021-09-30%20%28508%29.pdf](https://media.fisheries.noaa.gov/2021-12/OSW%20surveys_NLAA%20programmatic_rev%201_2021-09-30%20%28508%29.pdf).

<sup>56</sup> <https://www.nrdc.org/resources/essential-mitigation-measures-protect-right-whales-during-all-phases-offshore-wind>.

<sup>57</sup> Draft Strategy at 40-41.

- i. *Foundation Installation Restrictions*: Separating an industrial activity from an animal or habitat in time and/or space represents one of the most effective means of achieving risk avoidance and reduction. We therefore support the proposal to:

“Develop and implement project schedules that avoid pile driving and high-vessel use activities during the time of year when NARWs are most likely to occur in the lease areas and along vessel routes. Avoid foundation installation, including, but not limited to, impact and vibratory pile driving, within identified time periods, and known areas of higher NARW density and persistence, including but not limited to, Nantucket Shoals, Cape Cod Bay, calving grounds, and designated NARW critical habitat. Include extended seasonal restrictions for particular activities or restrictions on surface occupancy. Implement measures that prevent pile driving when monitoring of NARWs is not effective and NARWs are predicted to be present.”<sup>58</sup>

However, the Final Strategy should provide more clarity on these proposed measures. It is becoming increasingly difficult to define “time of year when NARWs are most likely to occur in lease areas.”<sup>59</sup> This is true in areas like Nantucket Shoals and the area to the west off the coast of Southern New England, which represents habitat of year-round importance to foraging and migrating animals,<sup>60</sup> and also areas in the Mid-Atlantic where right whales are also detected across the year.<sup>61</sup> The Final Strategy should prioritize determining the time that right whales are most likely to occur in a given area based on the best available scientific information derived from multiple monitoring methods and platforms (e.g., aerial survey data, passive acoustic monitoring, opportunistic sightings, habitat-density models, etc.), and require that information to be incorporated into official guidance.<sup>62</sup>

Further, the size of the right whale population now is such that there is not a “safe” level of impact of the industry on the species. Even if pile driving, vessel activity or other harmful activities occurs during times of year when right whales are less likely to be present, any impacts on the few individuals that are present may still have population-level effects.

---

<sup>58</sup> Draft Strategy at 40.

<sup>59</sup> *Id.*

<sup>60</sup> O’Brien, O., et al. “Repatriation of a historical North Atlantic right whale habitat during an era of rapid climate change,” *supra*, and citations therein.

<sup>61</sup> E.g., Davis, Genevieve E., et al. “Long-term passive acoustic recordings track the changing distribution of North Atlantic right whales (*Eubalaena glacialis*) from 2004 to 2014.” *Scientific reports* 7.1 (2017): 1-12; Murray, Anita, et al. “Acoustic presence and vocal activity of North Atlantic right whales in the New York Bight: Implications for protecting a critically endangered species in a human-dominated environment.” *Conservation Science and Practice* (2022): e12798; Chou, Emily, et al. “Occurrence of baleen whales in the New York Bight, 1998–2017: insights from opportunistic data.” *Journal of the Marine Biological Association of the United Kingdom* (2022): 1-7.

<sup>62</sup> Given the seasonality of right whale habitat use, we do not think depicting the mean annual densities of North Atlantic right whales in the Draft Strategy provides an accurate depiction of potential impacts to the species. For instance, mean annual density in the highly seasonal calving habitat in the Southeast obscures the fact that this is the only known calving habitat for the species and the heightened vulnerability of mothers and calves. In the Northeast, there is considerable variation in right whale densities when comparing BOEM’s mean annual densities (Draft Strategy at Fig. 1) to spring predictive modeling in the same area (see, e.g., <https://www.arcgis.com/home/item.html?id=abb0ed8b29b04958a36d4aade1a2e995>). Analyses of impacts of offshore wind on North Atlantic right whales requires the careful evaluation of seasonality and the significance of habitat areas in supporting vital life history behaviors (e.g., calving, socializing, foraging). It would be helpful if this point was better captured, including potentially through the figures, in the Final Strategy.

Particularly in areas where right whales are undertaking important life history behaviors such as foraging, socializing, or calving, we stress the need for the Final Strategy to adopt a precautionary approach with requirement of risk avoidance measures, such as installation of quieter foundation types and mandatory speed reductions of 10 knots or less.

- ii. *Clearance Zones*: We are pleased that the Draft Strategy conveys a goal to “minimize the amount and severity of behavioral disturbance”<sup>63</sup> when monitoring clearance zones, which is particularly important for right whales, especially when foraging. However, the Final Strategy should also state that clearance zones must be *effectively* monitored using a combination of visual and acoustic monitoring methods. The distance from the pile driving site at which right whales may experience behavioral disturbance is very large, on the range of several kilometers. BOEM and NOAA Fisheries should require developers to develop a monitoring plan that will effectively monitor for whales over these distances or to adopt noise reduction methods or technologies which reduce the required clearance zone size to one which can be monitored effectively.

In addition, commencement of impact pile driving during periods of darkness or poor visibility must be prohibited. Based on the known limitations of currently available night-time monitoring methods and technologies, particularly over distances commensurate with those of the clearance and exclusion zones, 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.<sup>64</sup> To proceed with the necessary precautions in place, BOEM and NOAA Fisheries must require developers to commence pile driving only during periods of good visibility (*i.e.*, daylight and clear weather conditions). Impact pile driving started during good visibility conditions can continue after dark, as necessary, providing passive acoustic monitoring and the best available infrared technologies are used to support visual monitoring of the clearance and exclusion zones during periods of darkness (*see* Attachment 3).<sup>65</sup> Quieter foundation types may afford developers significant flexibility in the construction schedule, including potentially year-round and 24-hour construction in some areas. In our view, these incentives should be fully explored by BOEM, NOAA Fisheries, and industry.

- iii. *Shutdown Zones*: The Draft Strategy sets the standard that a right whale needs to be acoustically detected within a shutdown zone for shut down or pile driving (or other activity) to occur. However, localization presents an ongoing challenge in passive acoustic monitoring and near-real time systems capable of localization are still in various stages of readiness. Despite this, developers are proposing to use them for near real-time monitoring and mitigation during pile driving.

---

<sup>63</sup> Draft Strategy at 40.

<sup>64</sup> *See, e.g.*, Smultea Environmental Sciences LLC (Smultea Sciences). 2021. Review of night vision technologies for detecting cetaceans from a vessel at sea. Prepared for Ørsted North America, 399 Boylston St., 12th Floor, Boston, MA 02116 by M.A. Smultea, G. Silber, P. Donlan, D. Fertl, and D. Steckler.

<sup>65</sup> <https://www.nrdc.org/resources/essential-mitigation-measures-protect-right-whales-during-all-phases-offshore-wind>.

There are a number of considerations when deploying systems for localizations including:

- i. The frequency range of the focal species as this will affect detection range and therefore proximity that the hydrophone systems need to be placed in order to detect the vocalizations on one or more buoys (for omni-directional hydrophone arrays at least three buoys are required, and accuracy can be greatly improved by using at least four; in general, simulations should be run to determine the number of hydrophones required and their location to maximize localization accuracy<sup>66</sup>).
- ii. Systems should be calibrated before deployment so that sound levels are accurate.<sup>67</sup>
- iii. For time-of-arrival based systems, synchronization of data streams from the multiple buoys is essential for accurate calculations.
- iv. Whichever system is used, there needs to be careful testing and documentation of localization errors.

Given the nascent stage of acoustic localization, developers should be required to provide to the permitting agencies full details on the system proposed to be used, and specifically address the above considerations, in any proposal to use acoustic localization for mitigation purposes during pile driving. If there is uncertainty over the effectiveness of the localization technologies and/or methodology, we recommend that shut down occur when right whales are detected acoustically at any distance from the pile driving site.

- iv. *Protected Species Observers (PSOs)*: Experience of PSOs is extremely important and particularly in the case where confirmation of species identification is needed. We recommend at least half of the PSO team consist of experienced PSOs (those who have previously conducted marine mammal monitoring and mitigation for offshore pile driving projects) to maximize detection rates and detection distances from the sound source and to increase the ability of the team to classify detections to the species level which is important for accurately counting species takes.<sup>68</sup> Inexperienced PSOs are known to detect fewer animals, are less likely to identify a marine mammal to the species level, and make fewer detections farther from the vessel.<sup>69</sup>

When determining how many PSOs to employ, a number of factors must be assessed including the experience level of available PSOs (as mentioned above), IHA and Standard Operating Condition (SOC) requirements (PSO and monitoring requirements), available vantage points, site conditions, and exclusion zone distances. NMFS IHAs only provide a

---

<sup>66</sup> Spiesberger J., "Extremely reliable locations and calling abundance via passive acoustic monitoring." Presentation at the NYSERDA E-TWG State of the Science Workshop (Jul. 27, 2022).

<sup>67</sup> E.g., Merchant, Nathan D., et al. "Measuring acoustic habitats." *Methods in Ecology and Evolution* 6.3 (2015): 257-265.

<sup>68</sup> Smith HR, Zitterbart DP, Norris TF, Flau M, Ferguson EL, Jones CG, Boebel O, Moulton VD. 2020. A field comparison of marine mammal detections via visual, acoustic, and infrared (IR) imaging methods offshore Atlantic Canada. *Marine Pollution Bulletin*. 154:111026. <https://doi.org/10.1016/j.marpolbul.2020.111026>.

<sup>69</sup> Stone, C.J. 2015. Implementation of and considerations for revisions to the JNCC guidelines for seismic surveys. JNCC Report No. 463b; Barlow, J., M.C. Ferguson, W.F. Perrin, L. Ballance, T. Gerrodette, G. Joyce, C.D. MacLeod, K. Mullin, D.L. Palka, and G. Waring. 2006. Abundance and densities of beaked and bottlenose whales (family Ziphiidae). *Journal of Cetacean Research and Management* 7(3):263-270.

minimum number of PSOs, and BOEM's SOCs specify that the number of PSOs monitoring the exclusion zone must be sufficient to effectively monitor the exclusion zone at all times. Given no physical obstructions, one PSO can continuously monitor 180 degrees. Therefore, to effectively monitor the full exclusion zone which is 360 degrees around the sound source, multiple PSOs must be stationed at several vantage points at the highest level so that they can each continuously scan a section of the exclusion zone. If additional platforms are required due to large exclusion zones, then the PSO team would expand to include the additional PSOs for these platforms. Generally, you can expect to have four PSOs on each platform. However, if the available and safe vantage points on any of the observation platforms do not allow for a 360-degree view of the zones, then additional PSOs and observation sites would be necessary in order to maintain full continuous monitoring of the entire zone(s).

The Final Strategy should also include standards for passive acoustic monitoring (PAM) operators. Regardless of the technology that is selected, the operation of the chosen near real-time PAM system should be undertaken by operators with sufficient experience recognizing species-specific whale vocalizations and the ability to categorize vocalizations at the species level. This includes established experience monitoring for the known species of whales that can be found in the project area. In addition to species specific experience, PAM operators must also have prior experience in fixed/mobile asset verification and the PAM tools that are being used.

- v. *Vessel Strike Risk Reduction*: See section Goal 1, Part 1.B. of this letter for our overarching comments on vessel strike risk reduction.
- vi. *Quieter Foundations, Technology, and Methods*: See section Goal 1, Part 1.C. of this letter for our overarching comments on noise reduction and note the recommendation therein regarding the use of direct-drive turbines to reduce operational noise. The Final Strategy should include risk reduction solutions for both construction and operation noise in Appendix B.
- vii. *Marine Debris and Gear*: See section Goal 1, Part 1.D. of this letter for our overarching comments on entanglement risk and offshore wind.

### **3. Comments on project-specific preliminary monitoring measures**

We are pleased that the Draft Strategy proposes at least three years of baseline data collection as the standard,<sup>70</sup> which is the minimum time needed to begin to understand trends and identify anomalous time periods. We also strongly support the proposal that baseline monitoring activities will include at least three years of aerial surveys following the New England Aquarium design. It is clear from recent scientific publications that such surveys hold much promise for understanding the effects of offshore wind development on large whales and other marine species, and address the scientific hypotheses on the

---

<sup>70</sup> Draft Strategy at 43.



hypothesized short-term effects of wind energy development and long-term effects of operation on marine mammals and turtles set forth by Kraus et al. 2019.<sup>71</sup> Our one question is whether three years of baseline data collection can be practically implemented, and the data generated be used to analyze and subsequently inform the analyses necessary under NEPA, MMPA, and ESA, in relation to the current permitting and construction schedules. We recommend BOEM and NOAA Fisheries clarify the parallel data collection and project permitting timelines, and how one will inform the other, in the Final Strategy.

We support the proposal to develop robust reporting standards and standardized databases, including a centralized, publicly accessible data portal.<sup>72</sup> We recommend that this work proceed in close partnership with the Regional Wildlife Science Collaborative (RWSC) and state-led efforts, such as those being pursued by the New York State Energy and Research Development Authority (NYSERDA) Environmental Technical Working Group. This will ensure that redundancies are avoided, and resources are most appropriately targeted. We also underscore the need for your agencies to commit to the highest standards of transparency in monitoring offshore wind projects and make all data publicly available; this will be crucial in securing public trust in this new industry.

In addition to baseline and long-term monitoring, we underscore the need to prioritize monitoring of the effectiveness of mitigation methods in order to inform adaptive management of the industry. BOEM and NOAA Fisheries should view this action with the top-most priority and coordinate with RWSC, researchers and developers to ensure that scientific study designs are developed, and resources appropriately deployed, to enable data to be collected on this question at the very start of offshore wind development and continued for several years in partnership with different projects.<sup>73</sup>

## **Goal 2 – Research and Monitoring**

We appreciate BOEM and NOAA Fisheries’ existing support of the RWSC, and the Draft Strategy’s note that monitoring and research efforts should advance in coordination with the entity.<sup>74</sup> The RWSC was established to develop a coordinated strategy for research, science, and monitoring; it helps ensure that we can compare results from various research efforts properly and allow all parties – state, federal, and developer-funded to direct their efforts to solve for the science communities’ most important data needs. Collaborating with and funding RWSC maximizes offshore wind investments and our understanding of ocean and coastal resources, and we urge the agencies to look toward this science-based, multi-sector collective to help execute and plan monitoring activities.

---

<sup>71</sup> Kraus, S.D., R.D. Kenney, and L. Thomas. 2019. A Framework for Studying the Effects of Offshore Wind Development on Marine Mammals and Turtles. Report prepared for the Massachusetts Clean Energy Center, Boston, MA 02110, and the Bureau of Ocean Energy Management. May 2019.  
<https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/A-Framework-for-Studying-the-Effects.pdf>.

<sup>72</sup> Draft Strategy at 42.

<sup>73</sup> Draft Strategy at 44.

<sup>74</sup> See, Action 2.1.7 “Coordinate with the RWSC and Federal and state partners to evaluate new data and emerging data gaps and to develop data access and sharing guidelines” and Action 3.1.4 “Coordinate closely with the RWSC.” Draft Strategy at 34 and 37.

We support the research and monitoring goals outlined in the draft Strategy (Goal 2), and particularly the agencies' intention to: (i) develop studies capable of providing the statistical power to detect changes in North Atlantic right whale ecology and demographics as they relate to offshore wind development; and (ii) take an ecosystem-level approach to investigating the effects of large-scale build out of offshore wind, and especially changes in local and regional hydrography (*e.g.*, ocean circulation), and any resulting impacts on the species' prey resource (*i.e.*, abundance, density, energy content, and distribution of zooplankton in foraging habitat). We echo the recommendation of the Atlantic Scientific Review Group that research and monitoring Actions 2.3.2 and 2.3.3 be considered as priority actions.<sup>75</sup>

### **Goal 3 – Collaboration, Communication, and Outreach**

As previously noted, we appreciate BOEM and NOAA Fisheries' commitment to: create a group to implement the strategy; to explore and advance the outlined mitigation and decision-support tools and research and monitoring; and to collaborate regularly with all levels of government, stakeholders, and the public. We again stress the need to ensure funding for this work is distributed expeditiously in order for the work to meaningfully influence projects that will responsibly operate across the North Atlantic right whale's habitat for approximately the next 30 years or more.

Not only do we support increased collaboration and communication *between* BOEM and NOAA Fisheries, we also emphasize the need for both agencies to increase collaboration *within* their respective agencies. Because both agencies are made up of a complex network of offices that are organized both geographically and topically, key information—such as the latest science on right whale status or newest recommended mitigation measures—may not be swiftly conveyed between offices. This has at times resulted in offices within each agency becoming disconnected from one another, and resulting decisions being made inconsistently. For example, final permits authorizing the Lease Sale for Carolina Long Bay off Wilmington, North Carolina contained outdated information about population status and existing threats, despite the environmental community urging BOEM to update this information in multiple letters. We encourage the Final Strategy to outline steps that can be taken to facilitate cohesiveness within both BOEM and NOAA Fisheries around its shared goals of protecting right whales during offshore wind development.

### **Conclusion**

A right whale strategy that meaningfully addresses offshore wind's potential impacts now is key to starting this industry on firm footing. We have a brief period before the industry takes off next year offshore Southern New England to fold in further necessary protections for this iconic species, and to proceed in a manner that highlights the Biden administration's commitment to fight climate, and to stem biodiversity loss.<sup>76</sup>

---

<sup>75</sup> Letter from Atlantic Scientific Review Group (ASRG), *supra*, at 3.

<sup>76</sup> The White House. FACT SHEET: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs, March 29, 2021. <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/>.

Both of the agencies' goals to protect the right whale and to establish responsible offshore wind can be achieved. It requires a proactive, protective right whale and offshore wind Final Strategy, based on the best available scientific information, and designed to avoid conflicts with the species at all stages of wind development and to learn as we go. The administration should layer in further strong avoidance and minimization measures – particularly to guard against vessel strikes and harmful noise levels, as well as be responsive to potential cumulative harm – and a strong Final Strategy will include this.

We urge BOEM and NOAA Fisheries to advance programmatic regulations that require the proactive mitigation measures outlined in the document to address the presented threats, and to secure the funding needed to advance the work outlined above in a dedicated, and expeditious manner.

Sincerely,

Francine Kershaw, Ph.D.  
Senior Scientist  
**Natural Resources Defense Council**

James Murphy  
Director of Legal Advocacy  
**National Wildlife Federation**

Georgia Hancock  
Marine Program Director and Counsel  
**Animal Welfare Institute**

Eileen Murphy, Ph.D.  
Vice President, Government Relations  
**New Jersey Audubon**

Patrick M. Comins  
Executive Director  
**Connecticut Audubon Society**

William Rossiter  
Vice President  
**NY4WHALES**

Erica Fuller  
Senior Attorney  
**Conservation Law Foundation**

Chris Allieri  
Founder  
**NYC Plover Project**

CT Harry  
Senior Marine Campaigner  
**Environmental Investigation Agency**

Michael Stocker  
Founding Director  
**Ocean Conservation Research**

E. Heidi Ricci  
Director of Policy and Advocacy  
**Mass Audubon**

Melissa L. Edmonds  
Science & Policy Analyst  
**Southern Environmental Law Center**

Matt Gove  
Mid-Atlantic Policy Manager  
**Surfrider Foundation**

Regina Asmutis-Silvia  
Executive Director  
**WDC North America**

Merry Camhi, Ph.D.  
Director, New York Seascape Program  
**Wildlife Conservation Society**

---

CC:

Dr. William Brown, Chief Environmental Officer  
BOEM

Dr. Jill Lewandowski, Director  
BOEM Division of Environmental Assessment and Center for Marine Acoustics

Dr. Peter Thomas, Executive Director  
Marine Mammal Commission

Ms. Kimberly Damon-Randall, Director  
NOAA Fisheries Office of Protected Resources

Dr. Jon Hare, Director  
NOAA Fisheries, Northeast Fisheries Science Center