

Submitted electronically to: cstaff1@crmc.ri.gov

April 30, 2018

Grover J. Fugate
Executive Director
Rhode Island Coastal Resources Management Council
Stedman Government Center
4808 Tower Hill Road
Wakefield, RI 02879.

Re: South Fork Wind Project -- Rhode Island Federal Consistency Certification (CRMC file number 2018-10-082)

Dear Mr. Fugate:

On behalf of Conservation Law Foundation, the Natural Resources Defense Council and National Wildlife Foundation, we submit the following comments to the Rhode Island Coastal Resources Management Council (CRMC) regarding the state of Rhode Island's federal consistency review of the South Fork Wind Farm. The proposed South Fork Wind Farm Project ("Project"), submitted by Deepwater Wind ("Deepwater Wind")¹ will consist of up to 15 wind turbine generators, submarine cable between the generators, an offshore substation located within federal waters and an export cable that will make landfall on Long Island, NY. The Project will be located in offshore waters approximately 19 miles southeast of Block Island, Rhode Island within Bureau of Ocean Energy Management (BOEM) Renewable Energy Lease Area OCS-A 0486 and the CRMC's 2011 Geographic Location Description. No portion of the project is located within Rhode Island state waters; however, this Project will have reasonably foreseeable impacts on Rhode Island's coastal resources.²

Our organizations applaud the State of Rhode Island's leadership to advance offshore wind power, which can bring significant environmental and economic benefits to the region when developed responsibly and with careful attention to avoid, reduce and mitigate impacts to coastal and marine wildlife. Our primary concern in reviewing this Project is the health and status of North Atlantic right whales -- particularly the potential adverse impacts of increased underwater noise and vessel traffic. Specifically, we are concerned that the Coastal Zone Management Consistency Statement for Rhode Island³ submitted for the South Fork Wind Farm

¹ Deepwater Wind was acquired by Orsted in October 2018. Because the Rhode Island Coastal Resources Management Council, in its notice of public comment on the South Fork Wind Farm project, refers to the project proponent as Deepwater Wind, we will do the same for the purposes of this comment letter.

² See http://www.crmc.ri.gov/windenergy/dwsouthfork/SFWF-CRMC_PubNotice_2018-10-082.pdf.

³ Deepwater Wind voluntarily submitted to the Rhode Island Coastal Resources Management Council their "Coastal Zone Management Consistency Statements (New York, Rhode Island, and Massachusetts)," certifying that their proposal is consistent with enforceable program policies of the Rhode Island federally-approved Coastal Resource Management Program and in particular the Rhode Island Ocean Special Area Management Plan (Ocean SAMP). See <https://www.boem.gov/Appendix-A/> and http://www.crmc.ri.gov/samp_ocean/finalapproved/RI_Ocean_SAMP.pdf. The enforceable policies of the Ocean SAMP are codified in the Rhode Island Code of Regulations available at: <https://rules.sos.ri.gov/organizations/subchapter/650-20-05>.

Project does not adequately address the potential impacts of the Project on critically endangered North Atlantic right whales despite their persistent presence in significant numbers throughout the Project area.

Our organizations are deeply committed to the development of clean, renewable wind energy as expeditiously as possible and in an environmentally responsible manner. We support the development of offshore wind for its environmental and economic benefits, including access to a secure and sustainable energy source and mitigating the effects of climate change. The availability of offshore wind energy will facilitate our country's move away from outdated fossil fuels that have caused devastating and ongoing damage to the environment and to public health. The deployment of offshore wind at scale off the coast of New England presents enormous opportunities for the New England states in pursuit of decarbonizing the electric generation sector. The State of Rhode Island has been a leader in this effort, with the nation's first offshore wind project in operation, the recent contract for 400 MW of the Revolution Wind project, and the potential to contract for an additional 400 MW of offshore wind in the next year.

Our comments seek to ensure that Rhode Island retains its leadership role in the development of offshore wind resources while also leading in protection for vulnerable species in the marine ecosystem. When completing its federal consistency review the State must meet its obligations under the Coastal Zone Management Act of 1972, 16 U.S.C. § 1456, to ensure that the Project is consistent with the enforceable policies of its federally approved Coastal Resources Management Program.⁴ With these comments we urge the State of Rhode Island to do everything in its power during its federal consistency review to ensure that potential adverse effects of offshore wind development on critically endangered North Atlantic right whales are mitigated to the maximum extent practicable.

I. Status and Threats to the Critically Endangered North Atlantic Right Whale and Other Large Whales

As the State of Rhode Island is aware, the conservation status of the North Atlantic right whale is dire. Listed as endangered under the U.S. Endangered Species Act for decades, recent scientific analysis confirms that the population has been declining since 2010 due to entanglements in commercial fishing gear and ship strikes. In the last two years, at least 20 animals have died, and the population is now estimated to be no more than 420 individuals. Moreover, females are more negatively impacted than males, surviving to only 30-40 years of age with an extended inter-calf interval of approximately ten years.⁵

⁴ See the Rhode Island Ocean Special Area Management Plan Chapter 11 (Policies of the Ocean SAMP) at http://www.crmc.ri.gov/samp_ocean/finalapproved/RI_Ocean_SAMP.pdf. The enforceable policies and regulations of the Ocean SAMP are also contained in the Rhode Island Code of Federal Regulations, Subchapter 650-RICR-20-05, Part 11 available at <https://rules.sos.ri.gov/organizations/subchapter/650-20-05>.

⁵ Pace III, R.M. *et al.*, "State-space mark-recapture estimates reveal a recent decline in abundance of North Atlantic right whales," *Ecology and Evolution*, vol. 7, no. 21, pp. 8730-8741 (2017); Kraus SD, "Marine mammals in the Anthropocene: Keeping endangered from becoming extinct," Plenary speech. Society of Marine Mammalogy Biennial, Halifax, Canada (23 Oct 2017).

In the wake of an alarming number of deaths of North Atlantic right whales in 2017, NMFS declared an Unusual Mortality Event (UME),⁶ which devotes additional federal resources to determining and—if possible—mitigating the source of excessive mortality. This designation is still in effect. Moreover, a UME was declared for the Atlantic population of humpback whales since January 2016 and minke whales since January 2017.⁷ Elevated numbers of humpback whales have been found stranded along the Atlantic Coast since January 2016 and, in a little over three years, 88 humpback whale mortalities have been recorded (data through February 18, 2019), with strandings occurring in every state along the East Coast.⁸ Fifty-nine minke whales have stranded between Maine and South Carolina from January 2017 to March 2019.⁹ The declaration of three large whale UMEs by the agency in the past few years, for which anthropogenic impacts are a significant cause of mortality, demonstrates an increasing risk to whales from human activities along the east coast of the US.

Vessel strikes are a leading cause of large whale deaths.¹⁰ Slow-moving and deep diving species that rest while on the surface or species that traverse or occupy shipping lanes are at highest risk. Moreover, even data available on incidence of vessel collision underestimates the actual number of animals struck, as animals struck but not recovered, or not thoroughly examined, cannot be accounted for.¹¹ North Atlantic right whales are particularly prone to ship-strikes given their slow speeds, their occupation of waters near shipping lanes, and the extended time they spend at or near the water's surface.¹² Some types of anthropogenic noise have been shown to induce sub-surface positioning in North Atlantic right whales,¹³ and may displace whales into nearby shipping lanes, increasing the risk of ship-strike at relatively moderate levels of exposure; it is possible that offshore wind development activities could produce the same effects and should

⁶ NOAA-NMFS “2017-2019 North Atlantic Right Whale Unusual Mortality Event.” Available at: <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2019-north-atlantic-right-whale-unusual-mortality-event>.

⁷ NOAA-NMFS, “2016-2019 Humpback whale Unusual Mortality Event along the Atlantic Coast” available at: <https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2019-humpback-whale-unusual-mortality-event-along-atlantic-coast>; “2017-2019 Minke whale Unusual Mortality Event along the Atlantic Coast” available at: <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2019-minke-whale-unusual-mortality-event-along-atlantic-coast>.

⁸ *Supra note 5*; see also, <https://www.newsday.com/long-island/suffolk/whale-washed-ashore-fire-island-1.18812449>.

⁹ *Supra note 8*.

¹⁰ The South Fork Construction and Operations Plan notes that noise associated with construction interferes with right whale's ability to feed, see Appendix P 20, 35, and vessel collisions remain one of the leading causes of large whale injury and mortality, *id.* at 51 (“Vessel strike is consistently one of the most common causes of North Atlantic right whale mortality annually (Hayes et al., 2017).

¹¹ Reeves, R.R., Read, A.J., Lowry, L., Katona, S.K., and Boness, D.J., “Report of the North Atlantic Right Whale Program Review,” 13–17 March 2006, Woods Hole, Massachusetts (2007) (prepared for the Marine Mammal Commission); Parks, S.E., Warren, J.D., Stamieszkin, K., Mayo, C.A. and Wiley, D., “Dangerous dining: surface foraging of North Atlantic right whales increases risk of vessel collisions.” *Biology letters*, vol. 8, no. 1, pp. 57-60 (2011).

¹² NOAA-NMFS, Recovery plan for the North Atlantic right whale (August 2004).

¹³ Nowacek, D.P., M.P. Johnson, P.J. Tyack, “North Atlantic right whales (*Eubalaena glacialis*) ignore ships but respond to alerting stimuli,” *Proceedings of the Royal Society B: Biological Sciences*, 271 (1536). pp. 227-23 (2004).

therefore be treated conservatively. Ship noise is also known to cause elevated levels of stress hormones in right whales, increasing their risk of immunosuppression and reproductive failure.¹⁴

Multiple marine species have been observed to exhibit strong, and in some cases lethal, behavioral reactions to noise including sound levels well below the 160 dB threshold defined by NMFS for Level B take, leading to the scientific community for the National Marine Fisheries Service (NMFS) to revise its guidelines to avoid underestimating the impacts.¹⁵ Further, we call your attention to the attached letter (Attachment A) addressed to BOEM and NMFS and dated September 19, 2018, in which five of the world's leading scientific experts on North Atlantic right whales provide their recommendations for "adequate and effective mitigation of impacts to the North Atlantic right whale during offshore wind development and operations." In this letter, right whale scientists recommend a seasonal prohibition for the Rhode Island/ Massachusetts and Massachusetts Wind Energy Areas on pile driving from January 1 to April 30 and "if development activities absolutely cannot be avoided" the implementation of an "enhanced mitigation protocol" for pile driving during the periods of May 1 to 14 and November 1 to December 31. The enhanced mitigation protocol would be project-specific and developed through "a participatory process that includes scientists, offshore wind developers, and environmental groups" and would be reassessed every two years because right whale distribution is "known to be shifting." Further, these scientists call for the implementation of noise reduction and attenuation technologies throughout the construction period to address potential impacts of noise, which they state is "one of the primary impacts to marine mammals from offshore wind development."

In the evaluation of potential impacts of offshore wind development, the assumption is often made that large whales can avoid impacts by moving to other available habitat for the duration of the activities of concern. However, scientists, including those employed by NMFS, recently published a paper highlighting the potential costs of habitat displacement.¹⁶ Displacement from important breeding and feeding habitats resulted in negative energetic consequences for humpback whales, with possible impacts on calf growth potential.¹⁷ These issues are of particular concern for migratory species, including the North Atlantic right whale, that may traverse multiple wind energy areas during its annual life cycle, and for whales that preferentially

Rolland RM, Parks SE, Hunt KE, Castellote M and others (2012) Evidence that ship noise increases stress in right whales. *Proc R Soc Lond B Biol Sci* 279: 2363–2368.

¹⁵ E.g., Evans, D.L. and England, G.R., "Joint interim report: Bahamas marine mammal stranding event of 15-16 March 2000" (2001); Nowacek, D.P., Johnson, M.P., and Tyack, P.L., "Right whales ignore ships but respond to alarm stimuli," *Proceedings of the Royal Society of London B: Biological Sciences*, vol. 271, no. 1536(2004): 227-231; Parsons, E.C.M., Dolman, S.J., Wright, A.J., Rose, N.A., and Burns, W.C.G., "Navy sonar and cetaceans: Just how much does the gun need to smoke before we act?" *Marine Pollution Bulletin*, vol. 56(2008): 1248-1257; Tougaard, J., Wright, A.J., and Madsen, P.T., "Cetacean noise criteria high site fidelity." *Endangered Species Research*, vol. 32 (2017): 391-413. *Marine Pollution Bulletin*, vol. 90(2015): 196-208; Wright, A.J., "Sound science: Maintaining numerical and statistical standards in the pursuit of noise exposure criteria for marine mammals," *Frontiers in Marine Science*, vol. 2, art. 99 (2015).

¹⁶ Forney, K.A., Southall, B.L., Slooten, E., Dawson, S., Read, A.J., Baird, R.W., and Brownell, Jr., R.L., "Nowhere to go: noise impact assessments for marine mammal populations with high site fidelity." *Endangered Species Research*, vol. 32 (2017): 391-413.

¹⁷ Braithwaite, J.E., Meeuwig, J.J., and Hipsey, M.R., "Optimal migration energetics of humpback whales and the implications of disturbance," *Conservation Physiology*, vol. 3, no. 1 (2015): cov001.

use some of the areas offshore Massachusetts, Rhode Island and New York as specific feeding habitats during large portions of the year, such as endangered fin whales.

Given the highly endangered status of the North Atlantic right whale, protection of this species should be a top priority, and it is important for the CRMC to consider the full range of potential impacts on all marine mammal species known to utilize the Project area, and surrounding areas, under federal consistency review. Further, considering the elevated level of threat to all federally protected large whale species and populations in the Atlantic, including waters of Rhode Island, and emerging evidence of dynamic shifts in the distribution of large whale habitat, any stressors posed by the proposed Project, in state and federal waters, must be mitigated to the fullest extent practicable.

II. North Atlantic Right Whales Are Present in the South Fork Wind Farm Project Area

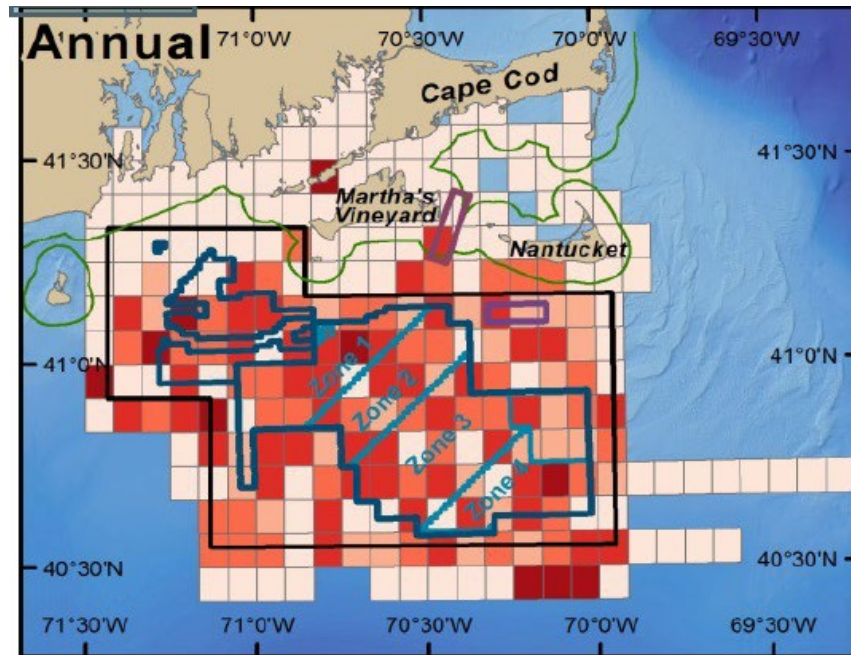
Recent surveys by the Massachusetts Clean Energy Center, BOEM, and NMFS document the presence of North Atlantic right whales in significant numbers throughout the Massachusetts/Rhode Island Wind Energy Area including the proposed Project area (see figure below).¹⁸ In fact, recent aggregations of right whales in this area, including animals that were observed feeding, prompted NMFS to implement a Seasonal Management Area with mandatory vessel speed restrictions from November 1 to April 30th annually to prevent significant injury and mortality due to ship strikes. Consistent aggregations of right whales have led to the implementation of repeated Dynamic Management Areas south of the Nantucket and Martha's Vineyard over the last several years.¹⁹

Consistent with the scientific literature, an appendix in the originally filed Construction and Operation Plan (COP) for this Project noted that “skim feeding is an important activity identified in impact assessments because first, it demonstrates a critical behavior (feeding) which could be disrupted by introduced noise; and secondly, it represents a vulnerable time for right whales to be exposed to ship strikes because they are active at or near the surface.”²⁰ Thus, we urge the CRMC to do everything in its power during federal consistency review of the South Fork Wind Farm Project to ensure that the potential adverse effects of offshore wind on critically endangered North Atlantic right whales are properly analyzed and mitigated to the fullest extent practicable to meet all state standards for protected resources.

¹⁸ Offshore Wind Marine Life Surveys available at <http://www.massceec.com/offshore-wind-marine-wildlife-surveys>; NOAA Fisheries Interactive North Atlantic Right Whale Sightings Map available at <https://www.nefsc.noaa.gov/psb/surveys/>; <https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-ship-strikes-north-atlantic-right-whales> (showing Block Island Seasonal Management Area November 1-April 30).

¹⁹ <https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-ship-strikes-north-atlantic-right-whales#dynamic-management-areas>.

²⁰ See South Fork Wind Farm Construction and Operations Plan, Appendix P (“Assessment of Impacts to Marine Mammals, Sea Turtles and Sturgeon”) at 32; note that the original Appendix P cited in this footnote was replaced by a new Appendix P on March 18, 2019. See also Parks et al. “Dangerous Dining. Surface foraging of North Atlantic Right Whales Increases Risk of Vessel Collisions,” *Biology Letters*, 03 August 2011, <https://doi.org/10.1098/rsbl.2011.0578>.



Sightings per unit effort of endangered large whales (fin whale, humpback whale, sei whale, sperm whale, and North Atlantic right whale) shown seasonally and annually for all years combined (October 2011–June 2015).²¹

III. Coastal Zone Management Act and Federal Consistency Review

The Coastal Zone Management Act of 1972 was enacted to encourage coastal states to be proactive in managing their natural resources for their benefit and the benefit of the Nation, recognizing a national interest in coastal resources. 16 U.S.C. § 1451. It is a voluntary program and if a state elects to participate, it must develop and implement a coastal management program pursuant to federal requirements. *Id.* at 1455(d). Under the Act, federal actions, and the activities of non-federal applicants for federal authorizations and funding, within or outside the coastal zone that have reasonably foreseeable effects on any land or water use or natural resource of the coastal zone (also referred to as coastal uses or resources, or coastal effects) must be consistent to the maximum extent practicable with the enforceable policies of a coastal states federally approved Coastal Management Plan. *Id.* at 1456; 15 C.F.R. 930.11(g).

Federal consistency review serves as an important tool for Rhode Island to exercise its right to preserve its coastal resources by giving states the authority to manage their resources in coordination with federal agencies by developing their own coastal management plan and the authority to review federal projects (as well those receiving federal licenses and permits), to ensure they meet state standards. Here, the Project’s COP contemplates activity in federal waters offshore of Rhode Island and within Rhode Island’s 2011 Geographic Location Description

²¹ See Kraus, S.D., S. Leiter, K. Stone, B. Wikgren, C. Mayo, P. Hughes, R. D. Kenney, C. W. Clark, A. N. Rice, B. Estabrook and J. Tielens. 2016. Northeast Large Pelagic Survey Collaborative Aerial and Acoustic Surveys for Large Whales and Sea Turtles. US Department of the Interior, Bureau of Ocean Energy Management, Sterling, Virginia. OCS Study BOEM 2016-054, at p. 39 (Table 14).

(GLD)²² and, among other requirements, is subject to the Rhode Island CRMC federal consistency review and certification.

IV. The Rhode Island Ocean Special Area Management Plan

The federally approved Rhode Island Ocean Special Area Management Plan (“Ocean SAMP”), administered by Rhode Island’s CRMC, was adopted in 2010 and encompasses nearly 1500 square miles of ocean waters. The Ocean SAMP is a federally recognized coastal management and regulatory tool for outer continental shelf exploration, development, and production activities.²³ As discussed above, state CZMA federal consistency decisions must be based on the reasonably foreseeable coastal effects of the proposed activity and the states enforceable policies as approved by NOAA as part of the state’s federal approved CZMA program. To fulfill its mandate related to federal consistency review, the Ocean SAMP provides its enforceable policies in “Chapter 11 - Policies of the Ocean SAMP (650-RICR-20-05-11).” The enforceable policies of the Ocean SAMP are also codified in the Rhode Island Code of Regulations.²⁴

The third Overall Regulatory Standard states:

Offshore Developments *shall not have a significant adverse impact on the natural resources* or existing human uses of the Rhode Island coastal zone, as described in the Ocean SAMP. Where the Council determines that impacts on the natural resources or human uses of the Rhode Island coastal zone through the pre-construction, construction, operation, or decommissioning phases of a project constitute significant adverse effects not previously evaluated, the Council shall, through its permitting and enforcement authorities in state waters and through any subsequent CZMA federal consistency review, require that the applicant modify the proposal to avoid and/or mitigate the impacts or the Council shall deny the proposal.²⁵

North Atlantic right whales are a natural resource that have been observed in and outside of the Ocean SAMP boundary area and GLD and must be adequately protected throughout their range both in Rhode Island state waters and in adjacent federal waters. For example, the Ocean SAMP notes their seasonal abundance (historically more likely in the spring and fall) and describes an event in April 2010 when nearly 100 North Atlantic right whales were spotted feeding in Rhode Island Sound.²⁶ In the absence of appropriate mitigation, the Project could have a significant adverse impact on North Atlantic right whales.

²² Rhode Island has established a geographic location description associated with the Ocean SAMP, which includes the federal portions of Block Island Sound and Rhode Island Sound as well as portions of the Atlantic Ocean. See <https://www.boem.gov/Appendix-A/>, at p. A-2.

²³ 16 U.S.C. 1456(c)(3)(B); 15 CFR part 930, subpart E.

²⁴ See <https://rules.sos.ri.gov/organizations/subchapter/650-20-05>. Section 11.10 Regulatory Standards (formerly § 1160).

²⁵ Ocean SAMP Chapter 11, 650-RICR-20-05-11, Part 11.10.1 C.

²⁶ Chapter 2 (5-4-2011 Rhode Island Ocean SAMP), at 88-90.

V. Deepwater Wind’s Consistency Statement Fails to Address North Atlantic Right Whales

The Consistency Statement fails to adequately address the potential adverse impacts of this Project on North Atlantic right whales or any other marine mammal. However, a robust analysis of this issue is required where offshore wind development may affect whales in the Project area, as well as in adjacent waters, in several ways including potential injury and harassment from noise during site assessment construction and operation, alterations of or interruptions to migration and feeding patterns, and vessel strikes.

Because it is reasonably foreseeable that the impacts of the Project in federal waters could have significant adverse effects on North Atlantic right whales in Rhode Island’s coastal zone, and the Rhode Island whale watching and other ecotourism businesses that depend upon whales that occur in the Ocean SAMP boundary area and GLD, the federal consistency review should focus on these activities and provide mitigation to the fullest extent practicable, especially given the status of North Atlantic right whales.

VI. The Construction and Operation Plan

The Construction and Operations Plan (Appendix P)²⁷ notes that North Atlantic right whales occur in the South Fork Wind Farm Area year-round. For this Project “[c]etacean exposure probabilities were scaled using the Duke University Marine Geospatial Ecological Laboratory density models (Roberts et al. 2016), including an updated unpublished model for the North Atlantic right whale (Roberts et al. 2017, Roberts et al. 2018) that incorporates additional sighting data.”

To minimize the impact of noise and vessels on marine mammals, Deepwater Wind has committed to the following measures:

- Exclusion and monitoring zones for marine mammals will be established for pile driving activities and HRG survey activities.
- Mitigation measures will be implemented for pile driving and HRG survey activities. These measures will include soft-start measures, shut-down procedures, marine mammal monitoring protocols, and use of qualified and NOAA-approved protected species observers, as appropriate.
- Pile driving activities will not occur at the SFWF from November 1 – April 30 to minimize potential impacts to the North Atlantic right whale.
- Vessels will follow NOAA guidelines for marine mammal strike avoidance measures, including vessel speed restrictions.
- All personnel working offshore will receive training on marine mammal awareness and marine debris awareness.

²⁷ <https://www.boem.gov/Appendix-P/>.

- DWSF will require all construction and operations vessels to comply with regulatory requirements related to the prevention and control of spills and discharges.
- Accidental spill or release of oils or other hazardous materials will be managed through the OSRP (Appendix D).
- The SFWF inter-array cable and SFEC - Offshore will be buried to a target depth of 4 to 6 feet (1.2 to 1.8 m).

In addition, Deepwater Wind has committed to “consider the use of technically and commercially feasible noise attenuation technology.”²⁸ While all of the above types of mitigation measures are essential ingredients for a right whale protection plan, these measures fall short of providing the specificity necessary to ensure that the potential impacts to right whales are effectively mitigated. We understand that additional information on proposed mitigation will be forthcoming in the DEIS. Once completed, the DEIS for the Project must include increased specificity on effective mitigation of potential impacts to North Atlantic right whales and should be equivocal to measures discussed below.

VII. Specific Recommendations on Effective Mitigation of Potential Impacts to North Atlantic Right Whales

Responsible offshore wind development must take strong, precautionary actions to safeguard North Atlantic right whales as they are frequently sighted and acoustically detected in the Massachusetts/Rhode Island Wind Energy Area and surrounding waters. Our organizations, along with over a dozen additional wildlife conservation organizations, have endorsed the measures outlined below as Best Management Practices (“BMPs”) for the protection of the North Atlantic right whale during wind energy construction and operations of fixed foundation offshore wind projects off the U.S. East Coast.²⁹ These BMPs are designed to: (i) reduce co-occurrence of development activities with this sensitive species; (ii) minimize and mitigate any impacts that do occur to the maximum extent practicable, including the prevention of any injury to right whales during construction; (iii) reduce risk of vessel collisions throughout the life of an offshore wind project; and (iv) ensure effective long-term monitoring of the health of marine life present at an offshore wind site to help guide the development of the American offshore wind industry. The below measures are intended to ensure that we can advance imperative, large-scale clean energy solutions while conserving the health of this iconic whale species. Note that as the science, technology, and regulations related to right whale protection and offshore wind power advance, our groups will periodically reexamine and update these BMPs.

²⁸ See COP at pp. 4-215 and 4-216.

²⁹ <https://www.clf.org/wp-content/uploads/2019/03/best-management-practices-north-atlantic-right-whales-during-offshore-wind-energy-construction-operations-along-us-east-coast-20190301.pdf>.

1. Site selection

Offshore wind projects should not be sited in, at minimum, federally designated North Atlantic right whale critical habitat, as defined under the Endangered Species Act, until: (i) peer-reviewed scientific research determines that offshore wind activities are not likely to jeopardize the continued existence of North Atlantic right whales or adversely modify their habitat; and (ii) research informs the development of comprehensive mitigation measures. However, understanding that designated critical habitat may not include all important foraging, calving, and migratory areas for right whales, care should be taken when siting to avoid and minimize use of areas with consistent seasonal right whale aggregations.

2. Seasonal and temporal restrictions on construction

Construction activities, including any geophysical surveys necessary to advise final micro-siting decisions, with noise levels that could cause injury or harassment in marine mammals must not occur during periods of highest risk to North Atlantic right whales, defined as times of highest relative density of animals during their migration, and times when mother-calf pairs, pregnant females, surface active groups (indicative of breeding or social behavior), or aggregations of three or more whales (indicative of feeding or social behavior) are, or are expected to be, present, as supported by review of the best available science at the time of development.

Pile driving and geophysical survey activities should commence, with ramp-up, only during daylight hours and good visibility conditions to maximize the probability that North Atlantic right whales are detected and confirmed clear of the exclusion zone before these activities begin (see also 3, below). The activity can then continue into nighttime hours. If the activity is halted or delayed because of documented or suspected North Atlantic right whale presence in the area, developers must wait until daylight hours and good visibility conditions to recommence.

3. Monitoring exclusion zones during construction

For the North Atlantic right whale, a minimum exclusion zone of 1,000 meters should be established around all vessels conducting activities with noise levels that could result in injury or harassment to this species (e.g., pile driving and geophysical surveys). The size of the exclusion zone should be extended during periods of highest risk to right whales. The activity must be halted or delayed if a North Atlantic right whale is detected in the exclusion zone unless it must proceed for human safety reasons or because, in certain cases, stopping the pile installation mid-way through would result in an unusable turbine foundation.

To maximize the probability of detection of North Atlantic right whales, comprehensive exclusion zone monitoring is essential. At minimum, a combination of National Marine Fisheries Service (“NMFS”) approved Protected Species Observers (“PSOs”) to watch for whale presence and passive acoustic monitoring with underwater recorders located in proximity to the exclusion zone to detect when animals are vocalizing nearby should be required at all times. Staffing and shift-schedules should allow for each PSO to monitor a maximum of 180° during daylight hours. Aerial surveys would also provide a useful supplement to increase detection probability. At

night, a combination of night-vision, thermal imaging, and passive acoustic monitoring should be used.

4. Vessel speed restriction for the lifetime of the project

All vessels operating within or transiting to/from lease areas should observe a speed restriction of ten knots during times when mother-calf pairs, pregnant females, surface active groups, or aggregations of three or more whales are, or are expected to be, present based on best available science. A compulsory vessel speed restriction of ten knots must be required of all industry vessels within any Dynamic Management Area (“DMA”) established by NMFS. Crew transfer vessels may exceed a speed of ten knots only if additional monitoring measures are in place, including aerial surveys or a combination of vessel-based visual observers and passive acoustic monitoring. Any collision should be reported immediately following NMFS guidelines.

5. Reduction of underwater noise during construction

During construction, developers should commit to minimizing impacts of underwater noise on the North Atlantic right whale to the full extent feasible through: (i) the consideration and use of foundation types and installation methods that eliminate or reduce noise; and (ii) the use of technically and commercially feasible and effective noise reduction and attenuation measures, including the use of the lowest practicable source level.

6. Commitment to scientific research and long-term monitoring

Developers should commit to carrying out scientific research and long-term monitoring in lease areas to advance understanding of the effects of offshore wind development on marine and coastal resources, and the effectiveness of mitigation technologies (e.g., noise attenuation and thermal detection). Science should be conducted in a collaborative and transparent manner, utilizing recognized marine experts, engaging relevant stakeholders, and making results publicly available. Developers should coordinate with state and regional scientific efforts to ensure results from individual lease areas can be interpreted within a regional context and contribute to the generation of regional-scale data, which is required to address questions related to population-level change and cumulative impacts across the geographic range of the North Atlantic right whale. Developers should engage in regional and state ocean planning efforts and contribute scientific analysis and data as appropriate, including contributions to the regional ocean data portals.

7. Contribution to species conservation efforts

As a broad commitment to species conservation efforts, offshore wind developers should support mitigation approaches and strategies to reduce other stressors facing potentially affected species such as the critically endangered North Atlantic right whale (e.g., incidental entanglement in fishing gear).

* * *

In conclusion, we reiterate our support for responsibly developed offshore wind power and applaud the actions to date to advance this important climate and clean energy solution. We look forward to working together to ensure that all projects built meet the federal consistency requirements of the CZMA through compliance with Rhode Island's Ocean SAMP and are developed responsibly with strong protections in place for our most vulnerable coastal and marine wildlife.

Sincerely,

Priscilla M. Brooks, Ph.D.
Vice President and Director of Ocean Conservation
Conservation Law Foundation

Francine Kershaw, Ph.D.
Project Scientist, Marine Mammal Protection and Oceans, Nature Program
Natural Resources Defense Council

Catherine Bowes
Program Director, Offshore Wind Energy
National Wildlife Federation

September, 19th, 2018

Mr. James F. Bennett
Chief of the Office of Renewable
Energy Programs
Bureau of Ocean Energy Management
United States Department of the Interior
1849 C Street, NW
Washington D.C., 20240
james.bennett@boem.gov

Ms. Donna Wieting
Director, Office of Protected Resources
National Marine Fisheries Service
National Oceanic and Atmospheric
Administration
1315 East-West Hwy.
Silver Spring, Maryland 20910
donna.wieting@noaa.gov

Dear Mr. Bennett and Ms. Wieting,

We respectfully submit this letter presenting recommendations for adequate and effective mitigation of impacts to the North Atlantic right whale during offshore wind development and operations. These recommendations are based on our expertise as marine scientists working on North Atlantic right whales and marine mammal acoustics.

The most effective means of protecting North Atlantic right whales from injury and harassment from noise generated during the offshore wind construction phase is to implement a temporary prohibition on pile driving during periods of heightened vulnerability. Periods of heightened vulnerability are defined by the following criteria: (i) phases when a higher relative density of animals is present, or expected to be present, within the project site; and (ii) phases when mother-calf pairs, pregnant females, aggregations of three or more whales (including surface active groups; indicative of feeding or social behavior), or entangled animals, are, or are expected to be, present.

In line with the best available science on North Atlantic right whale distribution and abundance in the waters off Rhode Island and Massachusetts, we recommend the following seasonal prohibition on pile driving and, if development activities absolutely cannot be avoided, the implementation of an enhanced mitigation protocol during the following times for leases within the Rhode Island/Massachusetts and Massachusetts Wind Energy Areas:

- January 1st – April 30th: Prohibition on pile driving.
- May 1st – 14th and November 1st – December 31st: Enhanced mitigation protocol in place during pile-driving.

Temporary prohibitions should also be defined for all lease areas along the Atlantic coast based on the best data available for those regions. The enhanced mitigation protocol should be developed for individual offshore wind projects via a participatory process that includes scientists, offshore wind developers, and environmental groups. As North Atlantic right whale distribution is known to be shifting, we recommend the dates of these restrictions and the enhanced mitigation protocol be reassessed every two years by an independent advisory group based on the best scientific and commercial data available.

Noise reduction and attenuation technologies should also be required throughout the entire construction period to the maximum extent practicable, thereby directly addressing one of the primary impacts to marine mammals from offshore wind development.

The probability of serious injury or mortality of North Atlantic right whales significantly increases when vessels of any length are traveling at speeds greater than ten knots. Vessel-based right whale monitoring measures must be employed by the offshore wind industry, including the staffing of at least one PSO aboard industry vessels and the real-time acoustic monitoring of major vessel routes (*e.g.*, using fixed location hydrophones with real-time reporting to transiting vessels). In addition, all vessels operating within or transiting to/from lease areas are strongly urged to observe a speed restriction of ten knots during periods of time involving the confirmed presence of North Atlantic right whales or the expected presence of mother-calf pairs, pregnant females, and aggregations of three or more whales, based on best available science. A compulsory vessel speed restriction of ten knots must be required of industry vessels within any Dynamic Management Areas established by NOAA Fisheries.

We also encourage your agencies to incentivize the use of alternative vessel types by the offshore wind industry that would significantly reduce the risk to North Atlantic right whales (*e.g.*, hovercraft); the use of these vessels would significantly reduce the number of vessel speed mitigation measures presently required of the industry. Similarly, significant resources should be directed towards the research, development, and implementation of improved noise reduction and attenuation technologies for deployment during construction.

Thank you in advance for your consideration of our comments. We would be happy to meet with you or your staff to discuss our recommendations in more detail.

Sincerely,

Scott Kraus, Ph.D.
Vice President and Senior Science Advisor
Chief Scientist, Marine Mammals
Anderson-Cabot Center for Ocean Life
New England Aquarium

Ester Quintana, Ph.D.
Chief Scientist, Marine Mammal Surveys
Anderson-Cabot Center for Ocean Life
New England Aquarium

Aaron Rice, Ph.D.
Science Director, Bioacoustics Research Program
The Cornell Lab of Ornithology
Cornell University

Caroline Good, Ph.D.
Adjunct Research Professor
Nicolas School of the Environment
Duke University

Mark Baumgartner, Ph.D.
Associate Scientist
Biology Department
Woods Hole Oceanographic Institution
MS #33, Redfield 256
Woods Hole, MA 02543