UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

ACK RESIDENTS AGAINST TURBINES and VALLORIE OLIVER, Plaintiffs, v. U.S. BUREAU OF OCEAN ENERGY MANAGEMENT; NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION; NATIONAL MARINE FISHERIES SERVICE; DEB HAALAND, Secretary of the Interior; GINA A. RAIMONDO, Secretary of Commerce, Defendants, and VINEYARD WIND 1 LLC, Intervenor-Defendant.	Case No. 1:21-CV-11390-IT Hon. Indira Talwani

FIRST AMENDED COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) AND THE ENDANGERED SPECIES ACT (ESA)

Steven P. Brendemuehl (BBO No. 553225)
Law Office of Steven P. Brendemuehl
5 Commonwealth Road ~ Suite 4A
Natick, MA 01760
Phone: (508) 651-1013
Fax: (508) 651-0508
Email: Steven@lawofficespb.com

David P. Hubbard, *Pro Hac Vice* (CA Bar No. 148660)
Gatzke Dillon & Ballance LLP
2762 Gateway Road
Carlsbad, CA 92009
Phone: (760) 431-9501
Fax: (760) 431-9512
Email: dhubbard@gdandb.com

Attorney for Plaintiffs,
ACK Residents Against Turbines and Vallorie Oliver

I. INTRODUCTION

1. This is an action for declaratory and injunctive relief that challenges the failure of the Bureau of Ocean Energy Management (BOEM), an agency within the U.S. Department of the Interior, to comply with the National Environmental Policy Act (NEPA), 42. U.S.C. §§ 4321, *et seq.* and the Endangered Species Act (ESA), 16 U.S.C. § 1531, *et seq.*, when it approved the Vineyard Wind 1 offshore wind project (the "Vineyard Wind project"), which is construction off the southern coast of Nantucket, Massachusetts. Despite preparing an Environmental Impact Statement (EIS) and a Supplement to the EIS (SEIS), BOEM failed to take the requisite "hard look" at the Vineyard Wind project's adverse impacts on whales and other marine mammals, fish, sea turtles, birds, air quality, greenhouse gas emissions, cultural resources, aesthetics, and other resource categories. BOEM's two NEPA documents also failed to examine a legally adequate range of alternatives; failed to mitigate the project's impacts; and grossly underreported the project's cumulative effects.

2. For these reasons, alleged in greater detail below, BOEM failed to conduct an adequate environmental review of the Vineyard Wind project and failed to provide the public with the information required by NEPA.

3. In addition, Plaintiffs herein sue BOEM and the National Marine Fisheries Service (NMFS) for failing to ensure that the Vineyard Wind project would not jeopardize the survival of federally-listed species, including the North Atlantic right whale. (16 U.S.C. § 1536.) Further, the Biological Opinion (BiOp), dated October 18, 2021, that NMFS prepared for the Vineyard Wind project is analytically deficient and not supported by the best available data. By approving the Vineyard Wind project, BOEM violated the procedural and substantive requirements of the ESA. By issuing a defective BiOp, NMFS also violated the procedural and substantive requirements of

the ESA. This action arises and alleges violations under the ESA (16 U.S.C. §§ 1531, *et seq.*) and the Administrative Procedures Act (APA) (5 U.S.C. §§ 551, *et seq.*).

4. The North Atlantic right whale is perhaps the most iconic marine animal on the eastern seaboard of the United States. It is also one of the most imperiled species in the entire world, with fewer than 350 individuals known to exist in the wild. Worse, the species is under constant threat from vessel strikes, entanglement in fishing gear, loss of food sources and other human-caused threats, resulting in high mortality and low reproduction rates. In a word, the North Atlantic right whale is on the verge of extinction. However, one of its longtime safe havens – where there is ample food and protective areas for key stages of the whale's life history – is the area immediately south-southwest of Nantucket Island. Unfortunately, this is the exact place that BOEM has selected for purposes of constructing the largest offshore wind array ever assembled. The Vineyard Wind project is one – but only one – of the offshore wind projects proposed for this area. In the original Draft EIS, however, BOEM did not disclose that Vineyard Wind was part of a much larger offshore wind program. It was not until Plaintiffs and others criticized BOEM for failing to analyze Vineyard Wind in this larger offshore wind development context, that BOEM agreed to prepare a "supplement" to the Draft EIS that purported to address the Vineyard Wind project's *cumulative* impacts.

5. NMFS and BOEM also botched the analysis of Vineyard Wind's potential to jeopardize North Atlantic right whales and other federally-listed sea animals, including four sea turtle species. For example, the BiOp grossly underreported the likelihood of vessel strikes against listed whale species, relied extensively on unproven and unrealistic mitigation measures to reduce such vessel strikes, and failed to even assess the negative impacts of the Project on whale navigation and communication. BOEM and NMFS also failed to take the steps required to ensure

the survival of the affected listed species and to facilitate their eventual recovery, as required by the ESA. In addition, the BiOp makes no attempt to assess the cumulative impacts of the Vineyard Wind project when combined with the impacts of other existing and foreseeable projects that have or will receive authorization from NMFS to take North Atlantic right whale and other listed species.

6. The North Atlantic Right Whale and the other listed species affected by the Vineyard Wind project are irreplaceable parts of the fragile ecosystem that exists off the coast of Massachusetts. By failing to comply with NEPA and the ESA, BOEM and NMFS have put that ecosystem and the species within in it in grave danger, perhaps even pushing at least one species – the North Atlantic right whale – to the point of extinction.

7. In approving the Final EIS – which consists of the original Draft EIS and the SEIS – BOEM also failed to adequately analyze the Vineyard Wind project's impacts on air quality, greenhouse gas (GHG) emissions, cultural resources, aesthetics, growth, hazards, noise, and flight navigation and safety.

8. Therefore, Plaintiffs seek an order from the Court overturning BOEM's and NMFS's unlawful management decisions and requiring these agencies to comply with NEPA and the ESA.

II. JURISDICTION AND VENUE

9. The Court has jurisdiction over this action pursuant to 16 U.S.C. § 1540(g) (ESA); 28 U.S.C. §§ 1331 (federal questions), 1346 (United States as defendant), 2201 (declaratory judgment), and 2202 (injunctive relief); and 5 U.S.C. §§ 701 through 706 (APA).

10. Pursuant to 16 U.S.C. § 1540(g), on November 26, 2021, Plaintiffs sent a 60-day notice of intent (NOI) to sue to NMFS, BOEM, and other federal agencies over their respective

failures to comply with the ESA when they approved the Vineyard Wind project and its various federal entitlements, including the Project's BiOp, dated October 18, 2021. On November 29, 2021, Plaintiffs submitted to BOEM and NMFS a supplement to their 60-day NOI. As required by 16 U.S.C. § 1540(g), Plaintiffs have brought this action after the 60-day correction period.

11. For all claims brought under the APA, Plaintiffs have exhausted all administrative remedies available to them.

12. Venue is properly vested in this Court pursuant to 28 U.S.C. § 1391(e) because Plaintiff ACK RATs is incorporated and based in Nantucket, Massachusetts, and its members reside in Massachusetts. In addition, Plaintiff Vallorie Oliver resides in Nantucket, Massachusetts. Finally, the Vineyard Wind project, which is the subject of the federal actions challenged herein, is to be constructed and operated in waters off the coast of Massachusetts and will cause environmental impacts in Massachusetts.

III. PARTIES

13. Plaintiff ACK RATs (which stands for Nantucket Residents Against Turbines) is a 501(c)(3) non-profit corporation established to protect the natural and human resources that are threatened by BOEM's massive offshore wind energy program and its component elements, including the Vineyard Wind project. Members of ACK RATs will be able to view the proposed wind farm from public and private vantage points on Nantucket. In addition, ACK RATs members routinely travel on, through, and over coastal waters that would be affected by the Vineyard Wind project, including waters that support marine mammals and turtles listed as endangered or threatened under the ESA. ACK RATs and its members have an interest in protecting these species and, for this reason, ACK RATs itself is a member of the Save the Right Whale Coalition, a national organization dedicated to reducing threats to the North Atlantic right whale. ACK RATs

and its members also have an interest in protecting the cultural and historical heritage of this part of New England from the impacts of the Vineyard Wind project. The failure of BOEM and NMFS to comply with NEPA and the ESA will degrade the natural and human environment in Nantucket, resulting in harm to ACK RATs and its members.

14. Plaintiff VALLORIE OLIVER is an individual who resides in Nantucket and has done so her entire life. She travels on and through and makes use of the waters around Nantucket. She considers it her responsibility to protect those waters and all the plant and animal life within it, including the federally-endangered North Atlantic right whale. She also routinely visits the beaches along Nantucket's southerly and westerly shores, where currently the vistas are unobstructed. This will change once the Vineyard Wind project is constructed, as the Project's wind turbines will be clearly visible from the Nantucket shoreline. The proposed Vineyard Wind project – as well as BOEM's entire offshore wind program – threatens the very resources that make Nantucket the unique place that Ms. Oliver has chosen to call home. Ms. Oliver is also deeply committed to the historical heritage of Nantucket, which the Vineyard Wind project is sure to damage. The failure of BOEM and NMFS to comply with NEPA and the ESA will degrade the natural and human environment in Nantucket, resulting in harm to Ms. Oliver. Ms. Oliver is a founding member of ACK RATs.

15. Defendant UNITED STATES BUREAU OF OCEAN ENERGY MANAGEMENT (BOEM) is an agency of the United States government within and under the jurisdiction of the Department of the Interior. BOEM's stated mission "is to manage development of U.S. Outer Continental Shelf energy and mineral resources in an environmentally and economically responsible way." For purposes of this action, BOEM is the federal agency that issues leases and permits for offshore wind projects such as Vineyard Wind. BOEM is also responsible for ensuring

that its actions, including authorization of offshore wind projects, comply with NEPA and the ESA. To this end, BOEM must prepare the requisite NEPA document (either an Environmental Assessment (EA) or EIS) and must consult with NMFS whenever any of its actions has the potential to jeopardize a listed species. Here, BOEM prepared the Final EIS for the Vineyard Wind project; consulted with NMFS regarding the project's impacts on listed species; and approved the project pursuant to a Record of Decision (ROD) issued on May 10, 2021. In addition, BOEM must ensure that all projects it approves comply with the Outer Continental Shelf Lands Act (43 U.S.C. §§ 1331, *et seq.*)

16. Defendant NMFS is an agency of the United States Government within and under the jurisdiction of the Department of Commerce. According to its mission statement, NMFS "is responsible for the stewardship of the nation's ocean resources and their habitat." In addition, NMFS must use "sound science" and an "ecosystem-based" approach to managing the nation's ocean resources, a task which includes the "recovery and conservation of protected resources" such as marine mammals and fish listed under the ESA and Marine Mammal Protection Act. Among the species within the regulatory and protective jurisdiction of NMFS are the various whales (including the North Atlantic right whale), sea turtles, and listed fish species that will be adversely affected by the Vineyard Wind project. NMFS does not approve offshore wind projects. Instead, pursuant to Section 7 of the ESA, NMFS engages in consultation with BOEM to determine whether and to what extent a proposed offshore wind project will jeopardize listed species within NMFS jurisdiction or adversely modify their critical habitat. If it appears that a given project has the potential to take or jeopardize a listed species or adversely modify its habitat, NMFS must prepare a Biological Opinion (BiOp) setting forth its analysis and identifying reasonable and prudent measures to avoid or minimize take of listed species. If necessary, the BiOp may also

include an authorization to take a certain number of particular listed species. In this case, NMFS engaged in consultation with BOEM over the potential impacts of the Vineyard Wind project on listed species and, based on that consultation, prepared and issued a BiOp dated October 18, 2021.

17. Defendant DEB HAALAND is the Secretary of the United States Department of the Interior and, among other things, is charged with overseeing the management of the nation's continental shelf lands and oceans, including those affected by the Vineyard Wind project. In this regard, Secretary Haaland oversees BOEM and is ultimately responsible for the decisions taken by BOEM. Further, Secretary Haaland is responsible for ensuring that all agencies within the Department of the Interior, including BOEM, comply with NEPA, the ESA, and the Outer Continental Shelf Lands Act. In this action, Plaintiffs are suing Secretary Haaland in her official capacity as Secretary of the Interior.

18. Defendant GINA RAIMONDO is the Secretary of the United States Department of Commerce and, among other things, is charged with overseeing commercial activities within the United States and abroad. Among the agencies under Secretary Raimondo's supervision is NMFS. Thus, Secretary Raimondo is responsible for ensuring that NMFS complies with the ESA. In this action, Plaintiffs are suing Secretary Raimondo in her official capacity as Secretary of Commerce.

IV. LEGAL BACKGROUND

A. The National Environmental Policy Act (NEPA)

19. The purpose of NEPA is to "promote efforts which will prevent or eliminate damage to the environment." 42. U.S.C. § 4321. NEPA's fundamental purposes are to guarantee that agencies take a "hard look" at the environmental consequences of their actions before such actions occur. To conduct a "hard look" the agency in question must (1) carefully consider detailed information regarding the action's potentially significant environment effects, and (2) make

relevant information available to the public so that it may play a role in both the decision-making process and the implementation of the decision itself. See, e.g., 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1500.1.

20. For any "major federal action" that "significantly affects" the "human environment," NEPA requires the federal agency in question (here, BOEM) to prepare a detailed EIS that analyzes and discloses the action's environmental consequences. 42 USC § 4332(c); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). If the agency does not conduct this analytical "hard look" prior to the point of commitment, the agency deprives itself of the ability to "foster excellent action." *See* 40 CFR § 1500.1(c); *Marsh v. Oregon Nat. Resources Council*, 490 U.S. 360, 371 (1989).

21. Relatedly, NEPA requires that the EIS fully analyze all direct, indirect, and cumulative impacts of a proposed federal action or project. 40 CFR § 1502.16. Direct effects include those "which are caused by the action and occur at the same time and place." 40 CFR § 1508.8(a). Indirect effects include those "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 CFR § 1508(b). Indirect effects may also include growth inducing impacts and other effects that prompt changes in land use patterns, population density or growth rates, and related effects on air and water and other natural systems, including ecosystems. *Ibid.* Cumulative impacts include those which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time. 40 CFR § 1508.7.

22. The EIS must provide a complete and accurate discussion of the proposed project's foreseeable environmental impacts, including those that cannot be avoided. 5 USC § 706(2)(D); 40 CFR § 1502.22. However, when information is incomplete or unavailable, the EIS must "always make clear that such information is lacking." 40 CFR § 1502.22. And if the missing information can be feasibly obtained and is necessary for a "reasoned choice among alternatives," the agency must include the information in the EIS. *Ibid.* Where the cost of the data is too expensive to secure, the agency must still attempt to analyze the impacts in question. *Ibid.*

23. The EIS must provide an accurate presentation of key facts and environmental impacts, as this is "necessary to ensure a well-informed and reasoned decision, both of which are procedural requirements under NEPA." *Natural Resources Defense Council v. U.S. Forest Serv.*, 421 F.3d 797, 812 (9th Cir. 2005). An EIS that is incomplete or provides misleading information can "impair[] the agency's consideration of the adverse environmental effects and . . . skew . . . the public's evaluation of the proposed agency action." *Id.*, at 811. For this reason, erroneous factual assumptions and misrepresentations of important facts can fatally undermine the information value of the EIS to the public and decision-makers. *Id.*, at 808.

24. In addition, if the EIS identifies a significant effect, the EIS must propose and analyze "appropriate mitigation measures." 40 CFR § 1502.14; *Robertson v. Methow Valley Citizens Council*, 490 U.S. at 352-53 ["omission of a reasonably complete discussion of possible mitigation measures would undermine the 'action-forcing' function of NEPA"]. Finally, the EIS must examine a reasonable range of alternatives to the proposed action, and focus on those that reduce the identified impacts of that action. 42 U.S.C. § 4332(2)(e); 40 CFR § 1502.1. So important is the alternatives analysis that the Council on Environmental Quality (CEQ) regulations describe it as the "heart" of the EIS. 40 CFR § 1502.14. These same regulations require the agency

to "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 CFR § 1502.14(a).

B. The Endangered Species Act

25. *Listing of Species.* For purposes of marine species (including marine mammals, pelagic fish, anadromous fish, and coral), the ESA requires the Secretary of the Commerce to issue regulations listing species as endangered or threatened based on the present or threatened destruction, modification, or curtailment of a species' habitat or range; overutilization for commercial, recreational, scientific, or educational purposes; disease or predation; the inadequacy of existing regulatory mechanisms; or other natural or manmade factors affecting the species' continued existence. 16 U.S.C. § 1533(a)(1). An endangered species is one "in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1532(a). A threatened species is one that will become endangered if current circumstances continue. The ESA requires the Secretary to make listing decisions "solely on the basis of the best scientific and commercial data available." 16 U.S.C. § 1533(b)(1)(A). Only if officially listed does a species receive the full protection of the ESA. The ultimate goal of the ESA is to conserve and recover species so that they no longer require the protections of the Act. 16 U.S.C. §§ 1533(b), 1532(3). The Secretary has delegated the task of listing marine species under the ESA to NMFS.

26. *Critical Habitat.* Concurrently with listing a marine species as threatened or endangered, the Secretary of Commerce, must also designate the species' "critical habitat". 16 U.S.C. § 1533(b)(2). "Critical habitat" is the area that provides the physical and biological features essential to the conservation of the species and which may require special protection or management. 16 U.S.C. § 1532(5)(A). The ESA requires the Secretary to make critical habitat designations and amendments "on the best scientific data available." 16 U.S.C. § 1533(b)(2). The

ESA defines "conservation" to mean "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary." 16 U.S.C. § 1532(3). This definition of "conservation" is broader than mere survival; it also includes recovery of the species. *Id.* The Secretary has delegated the task of designating critical habitat for listed marine species to NMFS.

27. *Recovery Plans.* Section 4(f) of the ESA requires the Secretary of Commerce to develop and implement plans for the conservation and survival of endangered and threatened marine species. Such plans are typically referred to as "Recovery Plans". Recovery Plans must describe site-specific management actions that may be necessary to achieve the conservation and survival of the species; set forth objective, measurable criteria which, if met, would support a determination that the species can be removed from the ESA list; estimate the time and cost necessary to implement those measures needed to achieve the plan's goals. 16 U.S.C. § 1533(f)(1).

28. *Duty to Conserve.* Federal agencies have an affirmative duty to promote the conservation and recovery of threatened and endangered species. Section 2(c) of the ESA provides that it is "the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of the Act." 16 U.S.C. § 1531(c)(1). Section 7(a) also establishes an affirmative duty to conserve listed species. 16 U.S.C. § 1536(a)(1). The duty to conserve applies to the Secretary of the Interior, the Secretary of Commerce, BOEM, and NMFS.

29. *Duty to Insure Survival and Recovery; Duty to Consult.* Section 7(a) mandates that all federal agencies "insure that any action authorized, funded or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat of such species . . . determined . . . to be critical

. . . ." 16 U.S.C. § 1536(a)(2). To fulfill this mandate, the acting agency must prepare a biological assessment to identify all endangered and threatened species likely to be affected by the action. U.S.C. § 1536(c)(1). Where, as here, the affected species are marine animals, the acting agency must consult with NMFS to determine the extent of the impact to the species in question and identify measures to minimize take.

30. *Biological Opinion.* Following consultation under Section 7(a)(2), NMFS must prepare a Biological Opinion (BiOp) that determines whether the proposed action is likely to jeopardize the continued existence of a listed marine species or destroy or adversely modify a marine species' designated critical habitat. The BiOp must summarize the information on which it is based and analyze how the proposed action would affect listed species and their critical habitat. If the BiOp concludes the action has the potential to jeopardize the species or adversely modify its critical habitat, the BiOp must include an Incidental Take Statement which specifies the impact of any incidental taking, provides reasonable and prudent measures to minimize such impacts, and sets forth terms and conditions that must be followed. 16 U.S.C. § 1536(b)(4). Where an agency action may affect a listed species, the absence of a valid BiOp means that the acting agency (here, BOEM) has not fulfilled its duty to insure through consultation with NMFS that its actions will neither jeopardize a listed species nor destroy or adversely modify the species' critical habitat.

31. The BiOp must evaluate the "cumulative effects on the listed species." 50 CFR § 402.14(g)(3). Cumulative effects include those of other federal actions, as well as those of "future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." 50 CFR § 402.02.

32. The BiOp must use the "best scientific and commercial data available." 16 U.S.C. § 1536(a)(2); 50 CFR § 402.14(d). In addition, the BiOp must consider all relevant evidence and factors, and articulate a rational connection between the facts and its ultimate conclusions.

33. *Prohibition Against Unauthorized "Take".* Section 9 of the ESA and its implementing regulations prohibit any person from "taking" a threatened or endangered species. 16 U.S.C. § 1538(a)(1); 50 CFR § 17.31. A "person" includes private entities, such as the applicant for the Vineyard Wind project, as well as local, state, and federal agencies. 16 U.S.C. § 1532(13). The ESA defines "take" broadly to include harming, harassing, trapping, capturing, wounding, or killing a listed species either directly or by degrading its habitat to such an extent that it impairs or disrupts that species' essential behaviors. 16 U.S.C. § 1532(19). However, there is an exception to the Section 9 prohibition on take. A public agency or private party may take listed species if they secure an Incidental Take Statement from either the United States Fish and Wildlife Service (for take of terrestrial and freshwater species) or NMFS (for take of marine and anadromous species). 16 U.S.C. § 1536(b)(4). So long as the permittee complies with the terms and conditions of the Incidental Take Statement, no take violation of Section 9 will occur. 16 U.S.C. § 1536(o)(2).

V. FACTUAL BACKGROUND

A. Project Description

34. In December 2017, Vineyard Wind LLC (Vineyard Wind) submitted to BOEM a Construction and Operation Plan (COP) for an 800-megawatt wind energy facility off the Massachusetts coast (the "Project"). The COP proposes installing up to 100 wind turbine generators and one or two offshore substations or electrical service platforms. The Project would be located approximately 14 miles southeast of Martha's Vineyard and a similar distance southwest of Nantucket, within federal Lease Area OCS-A 0501. The turbines would be located

in water depths ranging from 121 to 161 feet. According to the COP, the Project will include one export/transmission cable landfall near the town of Barnstable, Massachusetts. Staging and onshore construction of Project components will take place at the New Bedford Marine Commerce Terminal.

35. The Project will not operate as an isolated or individual offshore wind array, but will be part of a constellation of windfarms slated for installation on adjoining leaseholds – all of them located within 15 to 20 miles of Martha's Vineyard and Nantucket. Specifically, the Vineyard Wind 1 leasehold (OCS-A 0501), which is the subject of this action, is immediately west of and adjacent to offshore wind Lease Area OCS-A 0520, which is adjacent to offshore wind Lease Area OCS-A 0521, which is adjacent to offshore wind Lease Area OCS-A 0522. The Vineyard Wind 1 leasehold is also immediately east and adjacent to offshore wind Lease Area OCS-A 500, which is within a mile of offshore wind Lease Area OCS-A 0487, which is adjacent to offshore wind Lease Areas OCS-A 0517 and 0486. When taken together, these eight (8) offshore wind Lease Areas will be home to more than 600 wind turbines, all of them extending from the sea floor, through the water column, into the sky. Each of these 600+ wind turbines will reach more than 650 feet above the surface of the ocean and many will be visible from Nantucket and Martha's Vineyard.

B. The Draft EIS

36. As required by NEPA, BOEM prepared a Draft EIS for the Vineyard Wind Project, and released it for public review and comment on December 7, 2018. According to the Federal Register notice, the public comment period was to close on January 22, 2019. The Draft EIS concluded that the Project would not have any significant/major Project-related impacts on

aesthetics, air quality/greenhouse gases (GHGs), biological resources, cultural resources, or hazards.

37. By letter dated January 22, 2019, Plaintiffs submitted comments to BOEM identifying deficiencies in the Draft EIS. These included, but were not limited to, the following:

- General
  - Inadequate explanation of the Project' "Purpose and Need"
  - No Analysis of the Project's growth inducing impacts
  - Inadequate range of alternatives
  - Inadequate cumulative impacts analysis
  - Inadequate and unsupported thresholds for determining impact significance
- Aesthetics
  - Inadequate assessment of the Project' impacts on views from Nantucket Island.
  - No evidentiary support for Draft EIS conclusion that the Project's aesthetic impacts would be "minor".
- Air Quality and GHG Emissions
  - Inadequate analysis and disclosure of Project's construction-related emissions of pollutants subject to National Ambient Air Quality Standards (NAAQS).
  - Inadequate analysis and disclosure of Project's construction-related emissions of GHGs.

- Inadequate analysis of Project's operational air quality and GHG emissions.
- Inadequate analysis of Project's cumulative emissions.

- Biology
  - Inadequate assessment of Project's potential to cause loss of foraging habitat for migratory birds.
  - Inadequate analysis of Project's impacts on whale communication and navigation.
  - Inadequate assessment of Project's noise impacts on whale behavior.
  - Inadequate assessment of Project's potential to cause vessel collisions with whales.
  - Inadequate evidence to support Draft EIS conclusion that Project impacts on North Atlantic right whales will be "minor".
  - Indecipherable tables showing noise impacts on whales.
  - Inadequate evidence to support Draft EIS claim that "soft start" construction activities will reduce project-related noise impacts on listed marine species.
  - Inadequate analysis of Project's operational noise impacts on whales and other marine mammals.
  - Inadequate analysis of Project's EMF (electromagnetic field) impacts on listed sea turtles.
  - Inadequate assessment of Project impacts on soft seabed habitat.

- Inadequate assessment of Project's operational impacts on birds, including three listed species.
- Failure to analyze and quantify magnitude of Project's bird collision impacts.
- Draft EIS avian abundance maps lack key information and mislead the public.
- Inadequate analysis of Project's impacts on listed bat species.
- Inadequate analysis of Project's impacts on water circulation, benthic morphology, and associated biological resources and processes.
- Inadequate mitigation for Project's impacts on benthic resources.
- Inadequate and misleading analysis of Project's impacts on invertebrate and fish habitat.
- Inadequate analysis of Project's construction impacts on fish, such as winter flounder, American lobster, and monkfish.
- Failure to provide data from Essential Fish Habitat study.
- Underreporting of Project's impact on flounder.
- Sound-Distance Noise table is indecipherable.
- Inadequate analysis of Project's pile-driving impacts on fish.
- Failure to assess Project's sub-lethal impacts on fish.
- Inadequate analysis of Project's "decommissioning" noise impacts on marine species.
- Failure to assess whether and to what extent Project will use anti-fouling paint, which has adverse impacts on marine species.

- Failure to analyze Project's potential to increase local water temperature and thereby affect biotic resources.
- Failure to analyze impact of Project vessels discharging untreated waste and ballast water into area of potential effect (APE).
- Failure to analyze Project's potential to introduce invasive species into the APE.

- Cultural Resources
  - Draft EIS improperly defers analysis of Project's impacts on cultural resources.
  - Inadequate assessment of Project's impacts on shipping and fishing heritage of Nantucket.

- Hazards
  - No analysis of hazard impacts associated with oil stored and used in Project's wind turbines.
  - No analysis of Project's potential hazard impacts to local watercraft.

38. On February 11, 2019, BOEM held a "town hall" meeting on Nantucket to describe the Vineyard Wind project and respond to questions from the public.

39. On February 22, 2019, Plaintiffs submitted a second letter to BOEM, in response to the information presented at the February 11 town hall meeting. This letter identified additional defects in the Draft EIS, including the following:

- Failure to adequately analyze Project-related hazards to commercial fishing activities.

- Failure to adequately assess Project's potential to damage lobster, squid, and flounder fisheries.
- Inadequate and misleading simulations of Project's visual impacts.
- Draft EIS's cumulative impact analysis ignores wind power leases adjacent or proximate to the Vineyard Wind 1 leasehold.
- Inadequate mitigation for potential impacts on North Atlantic right whales.

C. The Supplement to the Draft EIS

40. In late 2019, BOEM announced that it would be preparing a Supplement to the Draft EIS for purposes of analyzing the Project's *cumulative* impacts within the context of the other offshore wind projects whose leaseholds are adjacent to or near that of Vineyard Wind 1.

41. On June 12, 2020, BOEM released the Supplement to the Draft EIS (SEIS) for public review and comment.

42. By letter dated July 27, 2020, Plaintiffs submitted comments to BOEM indicating that the SEIS had not addressed the deficiencies described in Plaintiffs' prior comment letters regarding the Draft EIS. Plaintiffs' July 27, 2020 letter also identified additional defects in the SEIS's alleged "cumulative" analysis of the Project's impacts. These included the following:

- Failure to explain the meaning of the terms "negligible", "minor", "moderate", and "major" with respect to Project-related impacts; failure to explain how such terms were derived.
- Failure to analyze the Project's impacts in conjunction with those of the other offshore wind projects currently proposed for the coast of New England.
- Failure to quantify the Project's cumulative impacts.

- Failure to determine and explain whether the Project's cumulative impacts will have a significant effect on biological resources.
- Failure to explain or analytically account for the increase in number of Project wind turbines to be installed.
- Inadequate description of benthic resources in the cumulative Area of Potential Effect (APE).
- Inadequate analysis of Project's cumulative impacts on fin fish.
- Inadequate analysis of Project's cumulative impacts on marine mammals, especially the North Atlantic right whale.
- Inadequate, piecemeal assessment of Project's impacts on marine species.
- Inadequate discussion of scientific literature relevant to impacts on marine mammals, including North Atlantic right whales.
- Failure to account for GHG reduction benefits of whales and how the Project and the other offshore wind projects, by causing whale mortality, will cause those benefits to disappear.
- Inadequate analysis of Project's cumulative impacts on birds.
- Failure to assess the fossil-fuel energy required to produce, install, and operate Vineyard Wind 1 and the other offshore wind projects contemplated under BOEM's offshore wind energy program.
- Inadequate assessment of Project's cumulative impacts on aesthetics/visual resources, especially given that the size and height of the wind turbines had increased since release of the Draft EIS.

- Inadequate assessment of Project's cumulative potential to release invasive species into the APE through discharge of vessel ballast water.
- Incomplete list of cumulative projects.

D. The Final EIS

43. BOEM issued the Final EIS for the Vineyard Wind Project on March 12, 2021. It consisted of the Draft EIS and the SEIS, as well as related appendices. The Final EIS did not mention any potential conflict between the Project and the OCSLA.

44. By letter dated April 7, 2021, Plaintiffs submitted comments to BOEM identifying new and continuing deficiencies in the Final EIS. One such comment criticized the Final EIS for failing to provide information regarding the number of full-time employment (FTE) positions that Vineyard Wind and the other proposed wind energy projects will generate. This information is critical for determining the project's secondary impacts from both a project-specific and a cumulative perspective. The economic growth and employment opportunities promised by Vineyard Wind and the other wind energy leaseholders come with their own impacts, not the least of which are mobile emissions. Such emissions not only generate criteria air pollutants regulated under the federal Clean Air Act, they also generate greenhouse gases (GHGs) – the very thing the offshore wind projects are supposed to help reduce. The available data indicate that the Vineyard Wind project and the other proposed wind energy facilities will require employee-related automobile trips that greatly exceed the number of cars these projects will allegedly "pull off the road". Ultimately, then, the offshore wind projects will result in a net ***increase*** in GHG emissions, despite promises to the contrary. This impact was not adequately analyzed and disclosed in the Final FEIS.

E. The First Vineyard Wind BiOp (Issued September 11, 2020)

45. In 2019 and 2020, while it was preparing the SEIS, BOEM was engaged in ESA section 7 consultations with NMFS regarding the Project's potential impacts on federally-listed threatened and endangered species.

46. The Section 7 consultation culminated in a BiOp, which NMFS issued on September 11, 2020. The September 11, 2020 BiOp was not released to the public for review or comment.

47. The September 11, 2020 BiOp concluded that the Project was not likely to jeopardize the following listed species: fin whale, sei whale, sperm whale, blue whale, North Atlantic right whale, loggerhead sea turtle, green sea turtle, Kemp's ridley sea turtle, leatherback sea turtle, and Atlantic sturgeon.

48. The September 11, 2020 BiOp also concluded that the Project would not adversely modify designated critical habitat for the North Atlantic right whale.

49. The September 11, 2020 BiOp included an Incidental Take Statement through which BOEM may authorize Vineyard Wind to take the following listed species: fin whales, sei whales, sperm whales, North Atlantic Right Whales, loggerhead sea turtles, green sea turtles, Kemp's ridley sea turtles, and leatherback sea turtles.

50. The September 11, 2020 BiOp was and remains legally deficient. Nevertheless, BOEM relied on it when it approved the ROD for the Vineyard Wind project on May 10, 2021. By approving and issuing a legally deficient BiOp for the Project, NMFS violated the procedural and substantive mandates of the ESA. By relying on a deficient BiOp when issuing the project's ROD, BOEM violated both the ESA, NEPA, and the APA.

51. On May 24, 2021, pursuant to the Citizen Suit provisions of the Endangered Species Act, Plaintiffs submitted to NMFS a "60-Day Notice of Intent to Sue" (NOI), setting forth in detail the various deficiencies in the September 11, 2020 BiOp. The NOI stated that if NMFS did not correct the deficiencies therein described, the Plaintiffs would file suit in federal court and request an order invalidating the BiOp.

52. On July 23, 2021, counsel for Plaintiffs received an email from the legal department at NMFS, stating that BOEM had requested re-consultation under Section 7 of the ESA, and that such re-consultation would result in a ***new*** BiOp for the Project. According to the email, the new BiOp, when issued, would supersede the September 11, 2020 BiOp.

F. The Second Vineyard Wind BiOp (Issued October 18, 2021)

53. On October 18, 2021, NMFS issued a second BiOp for the Vineyard Wind project. This BiOp superseded and replaced the September 11, 2020 BiOp. Although BOEM's ROD for the project was issued on May 10, 2021 and was based, in part, on the analysis set forth in the September 11, 2020 BiOp, BOEM did not rescind, update, and/or reissue the project's ROD when the September 11, 2020 BiOp was superseded by the October 18, 2021 BiOp. In other words, the ROD remains tethered to the old BiOp, not the new one.

54. On November 26, 2021, plaintiffs submitted to NMFS a 60-day Notice of Intent to Sue letter (NOI letter) identifying and describing numerous deficiencies in the October 18, 2021 BiOp. These included the following:

- The BiOp is unclear as to the number and size of the wind turbine generators (WTGs) Vineyard Wind intends to install. It is critical that this information be stable and reliable, because when the number of WTGs goes down, the size of the WTGs goes up. And the larger the WTG, the more pile driving it requires. The

BiOp does not analyze whether the switch from fewer but larger WTGs will alter, one way or the other, the amount and intensity of pile driving in the Project Area.

- The BiOp never provides the number of estimated vessel miles traveled, which is the only meaningful metric when determining vessel strike risks on North Atlantic right whales and other marine animals, such as the federally-listed Atlantic sturgeon and the four federally-listed sea turtles identified in the BiOp. It is not enough to disclose the number of vessel trips; it is the *length* of those trips that determines whether and to what extent the vessels pose a risk to federally-listed whales, fish, and turtles.

- The BiOp cites no evidence for the claim that each monopile will require only 3 hours of pile driving. This is a critical omission, given that the BiOp's "no jeopardy" finding and take authorization determinations rely on Vineyard Wind's assertion that no more than 3 hours of pile driving will occur with respect to each monopile.

- The BiOp indicates that some of the monopiles may be installed via vibratory driving as opposed to impact driving. Yet, the BiOp does not analyze the effects of this pile driving method on North Atlantic right whales or the other federally-listed species known to reside in or use the Project Area.

- The BiOp does not clearly or adequately disclose how many vessel trips and vessel miles will be required to lay the cables that (1) connect the WTGs together and (2) connect the Project's wind array to onshore transfer facilities. As a result, the BiOp

underreports and/or under-analyzes the impacts of vessel strikes on North Atlantic right whales and other federally-listed species.

- The BiOp admits that procurement for offshore installation activities will require vessel trips from a variety of mainland ports. However, the BiOp also admits that the ports of origin are currently unknown. This makes it impossible to calculate the number of vessel miles that will be traveled to and from the project site for purposes of WTG installation. Without this information, it is likewise impossible to determine the vessel strike risk to North Atlantic right whales and other federally-listed species.

- The vessel miles traveled issue is especially important in scenarios where procurement ships will be traveling from ports in Canada (e.g., Sheets Port, St. John, and Halifax), as these ports are more than 400 miles from the WTG installation site. Moreover, ships from these ports will travel through seas known to be used by the North Atlantic right whale and other federally-listed species. In failing to account for the vessel miles traveled by ships transiting between the project installation site and Canadian ports, the BiOp underreports the vessel strike risks to North Atlantic right whales, Atlantic sturgeon, and federally-listed sea turtles.

- The BiOp's "No Jeopardy" determination as to project impacts on North Atlantic right whales is based on the successful implementation of various "detect and avoid" measures. These measures, however, are so diluted by exceptions, qualifications, and loopholes as to be functionally meaningless. Thus, they cannot

be used to support any "take" or "no jeopardy" determination. In issuing a BiOp that does not protect North Atlantic right whales from jeopardy, NOAA Fisheries has violated Section 7 of the ESA. 16 U.S.C. § 1536(a)(2).

- The BiOp is inconsistent and unclear as to when project-related vessels must travel at speeds less than 10 knots. The BiOp refers to so many overlapping exceptions and qualifications to the 10-knot speed limit that one has no idea what rule will be enforced under any given circumstance. Strict compliance and enforcement of the 10-knot vessel speed limit is imperative to reducing vessel strikes on North Atlantic right whales, Atlantic sturgeon, and federally-listed sea turtles. Reduced vessels speeds would also minimize harm to these species (including mortality) if vessel strikes occur.

- The BiOp indicates that Vineyard Wind will engage in "soft start" pile driving consisting of three single hammer strikes at 40 percent hammer energy, followed by at least a one-minute delay before full energy hammer strikes begin. Although the BiOp does not discuss the purpose of the "soft start" procedure, it is clearly being proposed as a means of "warning" whales and other federally-listed species and encouraging them to leave the action area. Consequently, the "soft start" functions as a form of active, purposeful harassment/hazing that is not incidental to the action in question (i.e., construction and operation of offshore wind farms.) Such purposeful harassment/hazing is a "take" not authorized under the ESA.

- The BiOp's "take" determinations and "no jeopardy" finding vis-à-vis North Atlantic right whales are based, in part, on the implementation of "seasonal"

protections for the species. The BiOp acknowledges, however, that North Atlantic right whales are present in the project action area year-round. Thus, the proposed seasonal protections will not adequately safeguard the resident/non-migratory population of whales. For this reason, the BiOp fails to provide an adequate take analysis and further fails to protect right whales from jeopardy.

- The BiOp's "take" and "no jeopardy" determinations rely heavily on the ability of vessel-based Protected Species Observers (PSOs) to visually scan the ocean surface and detect North Atlantic right whales at distances sufficient to allow the vessel to alter course and avoid a collision. The BiOp also relies on PSOs to locate whales that might enter the project impact area during pile driving. There is no evidence, however, that PSOs are effective at detecting North Atlantic right whales under these conditions or for these purposes. First, the BiOp only requires two PSOs to be on watch at any given time. Second, the Project Area, as defined in the BiOp, is huge and cannot be surveilled by two PSOs at a time. Third, PSOs cannot see whales more than a few feet below the surface, and many whale strikes happen below the draft-depth of vessels. Fourth, the PSOs will not be able to effectively detect whales on the surface unless the seas are almost completely calm, a situation that rarely occurs in the Project Area. Moderate to high seas – with corresponding swells – will obscure whales during the brief moments when they surface to breathe or feed. Moreover, Nantucket and the seas around it are among the foggiest areas in the entire country, especially during June and July, two of the months when project-related pile driving is scheduled to occur. The fog rolls in quickly, often too fast for the kind of adjustments Vineyard Wind would have to make to avoid

collisions with whales. Fifth, unlike some marine mammals, North Atlantic right whales have no dorsal fin, which makes them even harder to detect visually on the water's surface. For these reasons, the BiOp's reliance on the PSO "detect and avoid" measures proposed by Vineyard Wind is unsupported and will result in excessive take of right whales. Such take will also result in jeopardy to the species. Reliance on PSOs to protect other federally-listed species in the Project Area is likewise misplaced.

- The mitigation measures described in the BiOp provide a "feasibility" exception to pile during limitations. Under these exceptions, Vineyard Wind can continue pile driving even in the presence of North Atlantic right whales or other listed species if halting the pile driving work is not feasible. This exception makes the pile driving protections and limitations meaningless, as it gives Vineyard Wind complete discretion as to when and under what circumstances they can be disregarded. In other words, the BiOp is deficient because it does not define "feasibility" or describe the criteria that must be met before Vineyard Wind can claim that a given pile during limitation is "not feasible."

- The mitigation measures described in the BiOp provide a "practicability" exception to pile during limitations, under which Vineyard Wind can continue pile driving even in the presence of North Atlantic right whales or other listed species if halting the pile driving work is not practicable. This exception makes the pile driving protections and limitations meaningless, as it gives Vineyard Wind complete discretion as to when and under what circumstances they can be disregarded. In other words, the BiOp is deficient because it does not define the term "practicable"

or describe the criteria that must be met before Vineyard Wind can claim that a given pile during limitation is "not practicable."

- Vessel speed limits are subject to a host of exceptions, qualifications, and loopholes, thereby reducing their ability to protect North Atlantic right whales and other listed species from unauthorized take and jeopardy.

- The seasonal restriction on pile driving (Jan 1- April 30) does not protect year-round resident whales.

- The BiOp fails to provide an adequate, complete, and legally compliant analysis of project impacts on the survival and recovery of the North Atlantic right whale. This is an especially glaring omission, given the precarious state of North Atlantic right whale populations in New England. Recent reports – i.e., post-COVID – indicate the North Atlantic right whale is having something of a "baby boom", as 18 calves have been spotted during the last calving season. This likely is the result of COVID-related reductions in large vessels in the area. The BiOp must examine whether this nascent recovery will be impeded or stopped altogether by the Project and the renewal of intense human activity in or near right whale calving areas.

- The BiOp relies on the 2005 Recovery Plan for the North Atlantic right whale, but that plan is now 15 years old and does not account for recent data showing sharp declines in right whale population numbers.

- The BiOp fails to acknowledge that the PSOs will not be able to see effectively at night. There is no prohibition on vessels transiting at night; nor does the BiOp prohibit pile driving at night, provided it begins in the daylight hours.

- The BiOp does not require that PSOs be independent of Vineyard Wind. Without such independence, the PSOs will be subject to "corporate capture" and thus less likely to call for a shutdown of vessel traffic or pile driving when North Atlantic right whales and other listed species may be preset in the Project Area.

- The BiOp is unclear whether all transit vessels will be assigned PSOs. The PSO requirement seems to apply only to pile driving activities. Transit vessels are allowed to rely on crew members, all of whom will be incentivized to keep boats running, even if whales are detected. This protocol, to the extent it can be called one, provides little assurance that North Atlantic right whales and other federally-listed species will be adequately protected.

- To protect North Atlantic right whales and other federally-listed species, the BiOp applies a 10-knot speed limit to vessels 65 feet or greater in length. However, Vineyard Wind can circumvent this speed limit by using ships that are 64 feet in length or less. The BiOp fails to assess this contingency or provide mitigation measures or conditions that would address it.

- The BiOp does not adequately address the project's construction and operational impacts on North Atlantic right whale navigation and communication.

- The BiOp does not consistently address or analyze impacts on North Atlantic right whales for the entire "Project area" as defined in the BiOp.

- The BiOp does not clearly or adequately analyze whether the WTGs, when operational, will emit noise or vibrations capable of affecting whales and other federally-listed species.

- The BiOp fails to adequately assess project-related impacts on North Atlantic right whales in light of recent evidence showing that the species has shifted its feeding grounds to areas in and near the Project Area.

- The BiOp's no jeopardy determination is based on unsubstantiated and/or outdated whale carcass recovery percentages. As a result, the BiOp underestimates the number of North Atlantic right whales the Project will take and correspondingly fails to make a proper jeopardy finding.

- The BiOp's no jeopardy determination fails to account for recent sharp declines in North Atlantic right whale populations. It also fails to account for the extremely low abundance number for the species, which is now less than 350 individuals. Given the low number of North Atlantic right whales and the consistent loss of calf-bearing females, the BiOp should analyze and explain how project-related take of ***any*** individual could be absorbed without jeopardizing the species as a whole. The BiOp, however, provides no such analysis or explanation and is therefore deficient as a matter of law.

- The data discussed in the BiOp demonstrates that the North Atlantic right whale is in serious peril and headed toward extinction; yet the BiOp concludes that the Project will not hasten this trend nor impede the species' recovery. This conclusion is not supported by the evidence. To the contrary, most of the recent right whale sightings have occurred south of Nantucket Island, precisely where the Vineyard Wind Project is to be installed. This suggests a high likelihood of project-to-whale interaction and conflict, resulting in potential harm to the species.

- The BiOp admits that human-derived threats to the North Atlantic right whale are worsening but does not factor this trend into the jeopardy analysis.

- The BiOp admits that "North Atlantic right whales' resilience to perturbations is expected to be very low" but does not address this fact in its jeopardy analysis.

- The BiOp recognizes that shipping, along with commercial fishing, accounts for most right whale injuries and deaths, but inexplicably concludes that project-related vessels will be able to avoid all contact with the species.

- The BiOp acknowledges that North Atlantic right whales spend most of their time (72%) within 33 feet of the water's surface, making them "particularly vulnerable to ship strike . . ." Yet, the BiOp's "take" and "no jeopardy" determinations ignore this finding and, in the absence of any evidence or analysis, conclude that no North Atlantic right whales will sustain vessel strikes. This is the quintessence of an arbitrary and capricious determination by a federal agency.

- The BiOp indicates that North Atlantic right whale "hot spots" are within the Project Area (namely, the offshore export cable corridor or "OECC"). Again, this suggests a high probability of interaction between project-related activities and right whales, leading to adverse impacts, including take and potential jeopardy. Yet the BiOp ignores these facts.

- The BiOp provides clear evidence of recent mortal vessel strikes on North Atlantic right whales. But then the BiOp disregards this evidence when making determinations as to take and jeopardy. This is arbitrary and capricious.

- The BiOp fails to assess vessel strike risk to North Atlantic right whales and other federally-listed species in the context of the already-crowded shipping lanes in or near the Project Area. In addition, the BiOp assumes that right whales and other federally-listed species will move out of Project Area as an "avoidance response" to pile driving noise; however, if this is true, these animals, in their efforts to swim away from the pile driving noise, will likely enter areas of high vessel traffic, increasing the risk of ship strikes. This impact is not analyzed in the BiOp.

- According to the BiOp, Vineyard Wind has given itself the option of using wind turbines of various sizes, including turbines larger than those originally studied in the EIS. The BiOp must correct this omission by analyzing operational underwater noise generated by the largest turbines contemplated for the Project. To our knowledge, no such analysis has been conducted.

- The BiOp improperly accepts Vineyard Wind's position that the project will result in no Level A harassment of North Atlantic right whales. That position is based on

the unproven and unsubstantiated efficiency of Vineyard Wind's proposed "detect & avoid" measures – the very same measures that include a host of exceptions, qualifications, and loopholes.

- BiOp improperly and without evidence assumes that PSOs will be able to adequate surveil a North Atlantic right whale clearance zone that is 10 kilometers in size, as is proposed from 5/1 to 5/14 and 11/1 to 12/31.

- The BiOp, without technical or scientific support, assumes that North Atlantic right whales and other listed species disrupted by pile driving will return to their original locations once the 3-hour pile driving session ends.

- The BiOp improperly limits its evaluation of vessel strikes to the Wind Development Area (WDA) and OECC. It should include the entire Project Area, which consists of the WDA, the OECC, and the vessel transit corridors.

- The BiOp admits that it can only predict increases in vessel traffic for the WDA and OECC – not the entire Project Area. The BiOp says that "this is the only portion of the action area that we have an estimate of baseline trips." This leaves out the areas where vessels will be transiting between mainland ports and the WDA. Many of these areas are used by North Atlantic right whales.

- The BiOp does not clearly indicate whether the proposed "minimization measures" are mandatory and enforceable. The BiOp also relies on measures that Vineyard Wind has volunteered to implement. Such measures, however, are unenforceable by NMFS and thus should not influence the analyses set forth in the BiOp.

- The BiOp lists the Dynamic Management Areas (DMAs) established for North Atlantic right whales between 2014 and 2020. The list shows that the vast majority of these DMAs are located South of Nantucket, in or near the Project Area. This demonstrates that the Project Area is a major right whale population area, thus increasing the likelihood of project-related conflicts with the whales. The BiOp did not take these data into account when making determinations as to right whale "take" and "jeopardy".

- The BiOp acknowledges that vessel strikes can occur when whales are below the water's surface and cannot be visually detected. Nevertheless, the BiOp's take and jeopardy determinations ignore this fact.

- The BiOp admits that carcass recovery is a poor means for determining the number of whale deaths. Yet the BiOp uses this metric, despite its unreliability, to conclude that no North Atlantic right whales will be killed by vessel strikes.

- The BiOp's "reasonable and prudent measures" (RPMs) do not appear to include steps to protect North Atlantic right whales from vessel strikes. Rather, the RPMs appear focused exclusively on pile driving noise impacts.

- The BiOp's environmental baseline does not account for the other offshore wind projects currently proposed on federal leaseholds adjacent to or in the vicinity of the Vineyard Wind leasehold (Lease Area OCS-A 0501). BOEM and NMFS are aware of these nearby projects, as they were the subject of the SEIS and Final EIS that BOEM recently adopted via a Record of Decision on May 10, 2021. These planned offshore wind projects, when combined with Vineyard Wind, will occupy

approximately 1,400,000 acres or more than 2060 square miles, which is roughly the size of the state of Delaware. By not including these other offshore wind projects in the environmental baseline, the BiOp grossly underreports the potential impacts on North Atlantic right whales and other listed species from vessel strikes and other human activities connected to the installation and operation of the proposed wind arrays. These facts suggest that NMFS should prepare a programmatic BiOp that examines all offshore wind projects in the Rhode Island/Massachusetts (RI/MA) Wind Energy Area (WEA) for impacts on federally-listed species.

- The Incidental Harassment Authorization (IHA) that NMFS issued to Vineyard Wind covers the period from May 1, 2023 through April 30, 2024. However, the BiOp says that pile driving might begin as soon as June 1, 2021. This suggests that Vineyard Wind may conduct pile driving activities for a full eleven months prior to the effective date of the IHA, whose sole purpose is to ensure that pile driving impacts on marine mammals are minimized. This is a huge and unlawful disconnect.

- The COP does not restrict the number or location of the Vineyard Wind WTGs. This is a significant regulatory omission that renders it impossible to fully assess the project's impacts on listed species.

- According to the BiOp, "BOEM has updated measures to increase the minimum visibility requirements during pile driving, prohibit pile-driving in December unless certain conditions are met, and require additional information in order for crew

transfer for vessels to exceed 10 knots in Dynamic Management Areas." These "updated measures", however, have not been incorporated into the BiOp and thus are unenforceable under the ESA. Thus, they cannot be used in the BiOp's analysis of project impacts on listed species.

- The entire BiOp relies uncritically on information from Vineyard Wind on a wide range of critical issues, such as whether and how long the project will engage in vibratory pile driving, and how long each pile driving episode – regardless of method – will take.

- According to the BiOp, 46 vessels may be on site at any given time, but that Vineyard Wind expects that number to be 25 vessels. The BiOp does not explain this discrepancy.

- The BiOp states that the number of vessels "involved in the Project Area at one time is highly dependent on the Project's final schedule, the final design of the Project's components, and the logistics solution used to achieve compliance with the Jones Act." In light of these uncertainties, the BiOp should but does not assume the maximum number of vessels – i.e., 43.

- The BiOp recognizes that compliance with the Jones Act may alter (i.e., increase) the number of vessels needed for the project and likely will increase the number of vessel miles as well. Yet the BiOp does not evaluate this contingency, or the impacts associated with it.

- The BiOp states that some project components will be shipped from Europe to ports on the Atlantic coast of North America, where they will be "marshalled" and then transported to the project site. These "marshalling" ports, however, could be located in Massachusetts, Rhode Island, or Canada. Given that these ports are at various distances from the project site, the vessel miles traveled will likewise vary substantially depending on which port is used. The BiOp does not compare the vessel miles from Massachusetts to the site and the vessel miles from Canada to the site. As a result, the BiOp presents an incomplete and inaccurate picture of the actual vessel-related impacts of the project.

- The BiOp mentions nothing about use of Passive Acoustic Monitoring (PAM) outside the immediate construction area of the WGTs. This implies that no PAM will be used along the vessel transit routes between mainland ports and the Project site. As a result, transiting vessels will be relying solely on PSOs to detect whales and avoid collisions. There is insufficient evidence that PSOs will be capable of detecting North Atlantic right whales in the dark, in high seas, or below the water's surface. Therefore, vessels transiting to and from the project construction site will expose whales to greater risk of collision and injury than reported in the BiOp.

- According to the BiOp, "There are a number of measures designed to avoid, minimize, or monitor effects of the action we consider part of the proposed action. BOEM has incorporated into the conditions of COP approval the measures that Vineyard Wind is proposing to take, the requirements of the IHA issued by NMFS, and the requirements of the Reasonable and Prudent Measures and Terms and Conditions of the Incidental Take Statement included with our 2020 Biological

Opinion." These various protective measures, however, have not been incorporated as Terms and Conditions of this BiOp, which is the only BiOp currently in existence and the only BiOp that can be enforced. Moreover, only this BiOp – not the COP and not the IHA – can authorize take and mitigate take under the ESA. In other words, unless the mitigation measures are formally included as conditions in this BiOp, they likely cannot be enforced under the ESA.

- The BiOp states that Vineyard Wind entered into an agreement with the National Wildlife Federation that includes commitments to minimize effects on North Atlantic right whale. That agreement, however, is between private parties and not enforceable by NMFS or any other federal agency. Yet, the BiOp implies that the Agreement and its terms have been incorporated into the Incidental Take Statement set forth in the BiOp.

- The COP allows vessels to travel from November 1 to May 14 at speeds in excess of 10 knots, provided at least one PSO (also referred to as a "Visual Observer") is on board. The BiOp does not provide a scientifically valid reason for abandoning this requirement from May 15 to October 31 given that North Atlantic right whale use and reside in the project area throughout these months.

- The COP conditions also rely heavily on the PSO's ability to confirm that all North Atlantic right whales have been cleared from the transit route and WDA for 2 consecutive days. The BiOp, however, does not explain how this will be accomplished given that the transit routes in some cases will be 455 miles one-way. Further, there is no way that PAM stations can be set up along the entire transit

route – at least there is nothing in the COP or BiOp indicating that this is a requirement or will otherwise take place. In short, there is no evidence showing that the measures proposed for protecting North Atlantic right whales from vessel strikes will be effective.

- The BiOp does not explain how use of real-time PAM will detect whales at a sufficient distance from vessels to enable the vessel captains to take evasive action and prevent a collision.

- The BiOp indicates that crew transit vessels – of whatever length – may travel at speeds above 10 knots, provided a PSO is on board and real time PAM is being used. This measure provides inadequate protection/mitigation against vessel strikes. First, crew transit vessels represent a majority of the vessels to be used during project construction, which means that the speed limit does not even apply to most of the boats that might collide with a whale. Second, as pointed out above, neither PSOs nor PAM is likely to provide adequate protection against vessel strikes on whales, especially since there is no indication that PAM can take place during the entire length of the transit route. Third, even if the crew transit vessels are less than 65 feet – and nothing in the BiOp says they will be – the danger they pose to whales will remain significant because vessel speed – not size – is what determines whether and how seriously a whale is struck by a passing boat.

- The map on p. 47 (Figure 2) [Vessel Routes from Canadian Ports] shows vessels passing along the eastern edge of designated North Atlantic right whale critical habitat in the Bay of Fundy. This suggests that ships transmitting through this

location may in fact cross into North Atlantic right whale critical habitat and adversely modify it. For this reason, the BiOp should have addressed this contingency. It failed to do so.

- The BiOp admits that North Atlantic right whale feeding grounds have shifted "with fewer animals being seen in the Great South Channel and the Bay of Fundy and more animals being observed in Cape Cod Bay, the Gulf of Saint Lawrence, and mid-Atlantic, and South of Nantucket." This shows that the North Atlantic right whale and the Project are on a collision course. This problem will only be exacerbated by the other 7 wind projects slated for construction adjacent to Vineyard Wind. The BiOp, however, does not analyze this cumulative impact.

- The BiOp includes a great deal of data showing that the North Atlantic right whale is in sharp decline, with a total population that will soon fall below 300 individuals, yet the BiOp fails to interrelate these data and the anticipated impacts of the Vineyard Wind project. That is, the BiOp fails to adequately assess the project's impacts, such as vessel strikes and noise and potential reductions in prey species, in the context of the North Atlantic right whale's current struggles to maintain population viability and avoid extinction.

- The BiOp states that "[u]pdated photo-identification data support that the annual mortality rate changed significantly, and the new information reports a faster rate of decline than previously estimated." Yet, the BiOp never examines whether the project – singly or cumulatively – will exacerbate this situation and accelerate the mortality rate. Nor does the BiOp assess whether the project will impede recovery

of the species, given the challenges to recovery that already exist. Put differently, the BiOp does not assess qualitatively and critically whether the existing state of the North Atlantic right whale population and the dynamics that define it will worsen with implementation of the Vineyard Wind project. Instead, the BiOp is fixated on numeric data – e.g., the mathematically-derived estimate for the number of whales that will sustain Level B hearing impacts – rather than using the quantitative data to effectively evaluate the project's actual impacts on the species.

- The BiOp indicates that female adult mortality is the main factor influencing the North Atlantic right whale's poor population growth rate. The BiOp does not, however, explain why the adult female mortality rate is so high or whether project-related activities are among the types of anthropogenic impacts that affect adult female mortality.

- The BiOp acknowledges that North Atlantic right whales vocalize at low source levels, "which may put North Atlantic right whales at greater risk of communication masking compared to other species." But then, in the next sentence, the BiOp states: "However, recent evidence suggests that gunshot calls with their higher source levels may be less susceptible to masking compared to other baleen whale sounds." The BiOp fails to clarify that gunshot calls are made only by young males, primarily during mating season. The other types of calls – screams, blows, upcalls, warbles and down calls – are used by males and females, adults and juveniles, for a larger range of communication needs. Thus, the BiOp misleadingly implies that, because gunshot calls are less susceptible to masking, the project will not obstruct/obscure North Atlantic right whale vocalizations or otherwise impede

North Atlantic right whale communication. The evidence indicates the opposite conclusion.

- The BiOp acknowledges the North Atlantic right whale remain the Gulf of Maine and South of Nantucket year-round. Yet, the impact analysis and mitigation measures continue to assume that the North Atlantic right whales in these areas are migratory and will exit the project area for half the year. This renders the BiOp analytically deficient.

- Unlike toothed whales, baleen whales such as the North Atlantic right whale do not use echolocation to locate prey or to navigate. Instead, the North Atlantic right whale relies much more on its ability to see under water. Not only do North Atlantic right whale mothers maintain visual contact with their calves, North Atlantic right whales generally use vision to identify heavy concentrations of zoo plankton for foraging. The BiOp, however, never analyzes whether the project's construction activities or daily operations will create turbidity sufficient to degrade the North Atlantic right whales visual acuity.

- The BiOp admits that vessel sounds "may limit communication space as much as 67 percent compared to historically lower sound conditions." The BiOp, however, does not explain what such a reduction in "communication space" means in terms of North Atlantic right whale behavior, life history stages, and reproductive success. Nor does the BiOp address whether the vessel noise from project activities will make this situation worse and further shrink the North Atlantic right whale's communication space.

- The BiOp recognizes that vessel strikes and fishing gear entanglement are now the biggest threats to North Atlantic right whale. The BiOp also states that "the total annual North Atlantic right whale mortality exceeds or equals the number of detected serious injuries and mortalities." According to the BiOp, "these anthropogenic threats appear to be worsening." Again, however, the BiOp fails to use these data as context for evaluating the project's impacts, and more specifically, its potential to add to the anthropogenic threats that currently plague the North Atlantic right whale.

- The BiOp states that North Atlantic right whales' resilience to future perturbations is expected to be very low. Despite this statement, the BiOp later concludes that major construction projects in North Atlantic right whale habitat – such as the refuge area south of Nantucket – will pose no jeopardy risk to the North Atlantic right whale. This conclusion is unsound and unsupported.

- The BiOp states that the total female North Atlantic right whale population will drop to 123 by 2029, and that prey densities are also on the decline, further hastening the North Atlantic right whale's slide toward extinction. These facts would suggest that any project-related impact on North Atlantic right whale could be devastating, given the extremely low population numbers and the current mortality trends. Yet the BiOp downplays this threat.

- The BiOp briefly summarizes the recovery goals for the North Atlantic right whale but does not evaluate whether the Vineyard Wind project – individually or cumulatively – will impede achievement of these goals.

- According to the BiOp, the Kemp's ridley sea turtle is experiencing declines in nests and in total population. As with the data on North Atlantic right whale population trends, the BiOp does not place the project's impacts within the context of the turtle's current population dynamics, leaving the reader without a meaningful assessment of whether the project will, in fact, impede recovery of this species.

- The BiOp acknowledges that the North Atlantic right whale's obligate prey species are copepods, but it does not address whether the project will affect the density, amount, or location of copepods or whether changes to any of those key indicators will adversely affect North Atlantic right whale foraging.

- The BiOp does not examine whether North Atlantic right whale, in their efforts to avoid the offshore wind complex south of Nantucket, will forego areas where the whales currently forage for copepods.

- According to the BiOp, North Atlantic right whales spend 72 percent of their time in the upper 33 feet (10 meters) of water. This, in part, explains why they are so susceptible to vessel strikes. Again, however, the BiOp makes no effort to correlate this information with the project's anticipated impacts related to vessel movements.

- The BiOp acknowledges that due to warming deep waters in the Gulf of Main, the distribution of right whales has changed. The BiOp further explains that these changes in water temperature have altered when and where late stage corepods concentrate in great numbers. This, in turn, is affecting right whale feeding behaviors. This information is critical for understanding the current and evolving condition of the North Atlantic right whale population in New England, but the

BiOp does not adequately assess how these dynamics of right whale feeding behavior and movement patterns intersect with human activities associated with the Vineyard Wind project.

- The BiOp discloses that North Atlantic right whale depend on the high lipid content of calanoid copepods "and would not likely survive year-round only on the ingestion of small, less nutritious copepods in the area." Despite this information, the BiOp does not investigate whether and to what extent the MA/RI WEA, including the Vineyard Wind leasehold, currently supports calanoid copepods. If such copepods are currently found in abundance within the WEA, the BiOp should but does not assess whether the project during construction and operation will cause North Atlantic right whale to avoid the area and forego an excellent and perhaps necessary feeding ground.

- The BiOp suggests that the shift in calanoid copepod populations is precisely what has brought more North Atlantic right whale into southern New England and, more particularly, into the waters south of Nantucket where the Vineyard Wind project lease is located. Given these facts, it is reasonable to conclude that the project site and the entire RI/MA WEA now support a greater concentration of calanoid copepods than they did previously, making them an important foraging region for the North Atlantic right whale. If this is true, then the project – singly and cumulatively – has the potential to cut whales off from the very food resource they need to survive. Yet the BiOp does not examine this potential impact. These data correspond with results from recent aerial surveys of the RI/MA WEAs, which

show that North Atlantic right whale occurrence in these areas has increased markedly since 2017.

- According to the BiOp, the Project site and RI/MA WEA generally function as a North Atlantic right whale feeding "hotspot" that whales rely on year-round. This conclusion undercuts many of the analytical assumptions in the BiOp and casts doubt on the "seasonal" protections incorporated into or imposed upon the project.

- The BiOp attempts to downplay evidence of mating in the RI/MA WEA, even though numerous recent studies show that North Atlantic right whale surface active groups (SAGs) have been observed in the area. It is well-established that one of the major functions of SAGs – if not the primary function – is mating. Rather than assume that the occurrence of SAGs in the WEA likely means some level of courtship and mating is going on, the BiOp side-steps this issue and lets it drop. If the project site and the WEA as a whole support both foraging and mating by North Atlantic right whale, the importance of these locations to North Atlantic right whale survival and recovery increases substantially. Correspondingly, the project's potential to interfere or impede critical whale behaviors – of which foraging and mating are two – likewise increases substantially. The BiOp does not adequately address this issue.

- The BiOp states that in 2021, "NMFS Supplemented the DMA (Dynamic Management Area) program with a new slow zone program which identifies areas recommended for 10 knot speed reductions based on acoustic detection of right whales." This Slow Zone program, however, is voluntary, and the data show that

compliance with voluntary rules and programs, while variable, tends to be quite low. Thus, it is unlikely that NMFS New Slow Zone program will result in tangible protective benefits of the North Atlantic right whale.

- The BiOp seems not to understand the difference between presenting data and conducting an analysis. While the BiOp does plenty of the former, it rarely engages in the latter. As a result, the BiOp does not engage in a dialogue with data to ascertain how various facts interact and influence each other.

- The BiOp acknowledges that "there are a number of lease areas geographically close to OCS-A 0501 where the proposed project will be built and three lease areas are adjacent to OCS-A 0501." This confirms that a programmatic BiOp should be prepared for all of the offshore wind projects in this WEA.

- The BiOp fails to assess the Project's total noise/sound impacts, where project-related noise sources are combined to reflect simultaneous implementation activities. For example, the BiOp does not combine vessel noise with pile driving noise, even though vessel use will likely be occurring during pile driving activities. This is an analytical defect.

- The BiOp does not indicate whether ongoing U.S. Navy operations are included in the Environmental Baseline for purposes of analyzing the project's impacts on whales and other listed species. Failure to include such naval operations would be legal error.

- At times, the BiOp suggests that all of the project's impacts on North Atlantic right whale and other marine mammals are covered under the Incidental Harassment Authorization (IHA) that NMFS issued pursuant to the Marine Mammal Protection Act. The IHA, however, only covers impacts from pile driving; it does not cover impacts and potential take related to activities other than pile driving, such as vessel strikes, that may occur outside the pile driving impact area. The BiOp should be clear on this point and then assess whether effects not covered under the IHA may jeopardize or result in take of listed species.

- The BiOp indicates that, based on North Atlantic right whale density estimates, the project will expose only one right whale to noise above the Level A harassment threshold. Yet it is unclear whether the IHA authorizes Level A harassment of any right whales. Nor is it clear whether the BiOp fills that gap and authorizes take on North Atlantic right whale due to Level A noise impacts.

- The IHA and BiOp constantly refer to the use of Passive Acoustic Monitoring (PAM) of whale calls as a means of supplementing the PSO effort to detect North Atlantic right whales that might enter the pile driving impact area. However, the BiOp does not describe how the RAM will be conducted; nor does it assess whether PAM can be used in this particular application, especially where vessel noise and pile driving noise may mask the vocalizations of the whales.

- The BiOp acknowledges that approximately 20 North Atlantic right whale will be taken by virtue of Level B noise impacts. Yet the BiOp never analyzes the extent to which this level of take will affect the current population dynamics of the North

Atlantic right whale. That is, the BiOp does not explain why the take of 20 North Atlantic right whale through Level B noise harassment will not jeopardize the ability of the 320 remaining right whales to remain viable as a population. Nor does it explain why such take would not impede recovery of the species. Such explanations are critical given that the North Atlantic right whale appears headed toward extinction, absent radical reductions in anthropogenic threats.

- The BiOp states that the project will use a "soft start" approach to pile-driving, which is intended to gently alert marine mammals of the heavier, noisier work to come later and to encourage those mammals to avoid the project action area: "[G]iven sufficient notice through use of soft start, marine mammals are expected to move away from a sound source that is annoying prior to exposure resulting in a serious injury and avoid sound sources at levels that would cause hearing loss." There are serious flaws in this analysis and the assumptions that underlie it. There is no indication that this "soft start" pile-driving approach will actually trigger an avoidance reaction in marine mammals, especially where, as here, the underwater sound environment is already noisy. It is just as likely that the soft start will have no effect on North Atlantic right whale behavior at all, given that North Atlantic right whale do not typically respond to noise events or noise sources the way some other whale species do. The more probable outcome is that North Atlantic right whale will not be "moved" by the soft start and won't actually leave the action area until the pile-driving noise reaches painful/harmful levels. In fact, if the action area holds dense pockets of calanoid copepods, the North Atlantic right whales will likely remain in the action area to feed, even if it means putting up with potentially

damaging noise levels. And even if the soft start does cause North Atlantic right whale and other marine mammals to leave the action area, such forced avoidance of a major foraging area may itself constitute take; yet the BiOp does not assess this potential impact.

- The BiOp cites a number of studies that use population consequences of disturbance (PCoD) models and states: "Nearly all PCoD studies and experts agree that the infrequent exposures of a single day or less are unlikely to impact individual fitness, let alone lead to population level effects." As noted above, however, the project's pile driving noise will not cease after a single day, but will go on for many days on end, for at least 3 hours each day. It is unclear whether the studies cited in the BiOp addressed this kind of situation. In addition, the BiOp seems to assume that impacts that degrade individual fitness will not, by themselves, "lead to population level effects." This may be true in some contexts, with some species. But when the affected species is the North Atlantic right whale, whose entire population stands of approximately 300, any loss of individual fitness may, in fact, have significance consequences for the population as a whole. This BiOp, however, does not discuss this possibility.

- The BiOp assumes that a North Atlantic right whale, once discouraged by pile driving noise from foraging in the action area, will soon find ample foraging opportunities at another nearby location. This assumption, however, is not supported by analysis or evidence.

- The BiOp makes a similar unsupported conclusion regarding the project's potential to trigger "stress responses" in North Atlantic right whales. Despite documented evidence that right whales show increase stress hormones in response to chronic noise, the BiOp nevertheless concludes that the pile-driving and vessel noise associated with the project's construction will not increase North Atlantic right whale stress. This conclusion is unsupported.

- The BiOp acknowledges that vessel noise "has the potential to disturb marine mammals and elicit an alerting, avoidance, or other behavior. The BiOp also states that vessel noise can mask whale vocalizations, thus interfering with the animal's "ability to find prey, find mates, socialize, avoid predators, or navigate." Despite these facts, the BiOp then states that "[b]ased on the best available information, ESA-listed marine mammals are either not likely to respond to vessel noise or are not likely to measurably respond in ways that would significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding or sheltering." These two statements are incongruous, making the BiOp internally inconsistent and confusing. Further, the BiOp does not cite or reveal the technical sources that constitute the so-called "best information" on which the BiOp's conclusion is based.

- The BiOp's entire discussion of existing vessel traffic in the action area is highly suspect because it relies on automatic identification system (AIS) tracking of ships to determine the number of vessels in a given area over a given period of time. As the BiOp acknowledges, most vessels less than 65 ft in length do not have or use AIS, which means they would not be included in the "existing" vessel traffic

baseline. The BiOp even admits "vessel traffic is significantly more than described." Yet, the BiOp does not opt for a different method of determining existing vessel traffic.

- The BiOp states that project-related "vessels traveling from Europe are large slow-moving construction/installation or cargo vessels that travel at slow speeds of approximately 10-18 knots." In the context of vessel strikes – and vessel strike avoidance – 10 to18 knots is not slow. Any vessel, especially a large one, that travels in excess of 10 knots poses a significant risk of vessel strikes on North Atlantic right whale.

- The BiOp indicates that, on average, 25 vessels will be involved in construction activities on any given day, 7 of which will be transiting to and from ports while the others remain at the action area. The vessel strike risk assessment, however, should have been based on the maximum number of expected vessels per day, not the average. Vessel strikes are, in part, a function of vessel traffic and congestion within a defined space, so if on a given day when 40 or 45 vessels are in the action area (as opposed to the daily average of 25), the risk of vessel strike on that day would be substantially higher than the "average" day assumed in the BiOp.

- The BiOp explains that the North Atlantic right whale, unlike most baleen whales "seem generally unresponsive to vessel sound, making them more susceptible to vessel collisions." In light of this, the BiOp have applied a different, more sensitive metric for determining whether project-related vessel trips will create a "take" level risk for North Atlantic right whale. The BiOp, however, failed to do so. Also, the

fact that North Atlantic right whale do not respond to vessel noise with avoidance behavior suggest that the species may not react as expected to soft start pile-driving noise either. In other words, in North Atlantic right whale generally do not respond to noise cues with avoidance behaviors, then the project's pile-driving mitigation program – which is based on the assumption that whales will leave the action area once soft start pile driving begins – is flawed and will not achieve the hoped-for result. The BiOp did not address this issue.

- The BiOp states that large whales do not have to be at the water's surface to be struck, because studies show that a whale swimming at a depth one to two times the vessel draft is subject to "pronounced propeller suction-effect." This "suction effect may draft the whale closer to the propeller, increasing the probability of propeller strikes." This suggests that whales well below the water's surface – i.e., well below where they can be detected visually by PSOs – are still vulnerable to vessel strikes. For this reason, the entire PSO approach to detecting and avoiding whales is likely to be ineffective. The BiOp, however, does not address this issue.

- The exceptions to the 10-knot vessel speed limit largely render the speed limit ineffectual. For example, the 10-knot maximum does not apply in Nantucket Sound, which is where many North Atlantic right whale are to be found. In addition, the 10-knot speed limit does not apply to crew transit vessels, which is the most common and numerous vessel type used for the Project. The speed limit also does not apply to vessel activity between May 15 and October 31, even though data show that North Atlantic right whale increasingly stay in the waters off New England, including the project action area, all year round. For these

reasons, the 10-knot speed limit does not protect whales to the extent assumed in the BiOp, rendering the BiOp inadequate as a matter of law.

- The BiOp does not analyze the Vineyard Wind project's potential to cause take of federally-listed bird species, resulting in a major omission.

55. On November 29, 2021, plaintiffs sent a second letter to NMFS identifying yet another defect in the October 18, 2021 BiOp. This letter, which supplements the NOI dated November 26, 2021, points out that the BiOp fails to account for the other incidental take authorizations NMFS has issued for past, current, and future projects with the potential to affect North Atlantic right whales and other listed species. Thus, the BiOp fails to provide a legally adequate cumulative assessment of the Vineyard Wind project's potential to jeopardize these species and/or impede their recovery.

56. During the 60-day notice period, neither BOEM nor NMFS responded to plaintiffs' comments. Nor did NMFS revise the BiOp to address or correct the deficiencies identified by plaintiffs.

G. Vineyard Wind's Withdrawal and "Resubmittal" of Project

57. On November 3, 2020, the United States presidential election was held. In that election, Joseph Biden defeated Donald Trump, ushering in a change in administration.

58. Plaintiffs are informed and believe, and on that basis allege, that Vineyard Wind was concerned that the out-going Trump Administration would deny its Project in whole or in part, prior to the inauguration of President-elect Biden.

59. On December 14, 2020, United States Solicitor Daniel H. Jorjani submitted a legal memorandum to then-Secretary of the Interior, David Bernhardt, stating that the offshore wind

projects currently proposed for the Atlantic seaboard, including Vineyard Wind, would unreasonably interfere with activities protected under the Outer Continental Shelf Lands Act (OCSLA). 43 U.S.C. § 1337(p). According to Mr. Jorjani's memorandum, this unreasonable interference rendered the offshore wind projects inconsistent and incompatible with the OCSLA.

60. Plaintiffs are informed and believe, and on that basis allege, that Vineyard Wind learned of Mr. Jorjani's memorandum and, fearing that its Project would be denied, withdrew its Project and COP from further consideration by BOEM on December 14, 2020.

61. On January 20, 2021, Joseph Biden was inaugurated as the 46th President of the United States. On or about January 22, 2021, Vineyard Wind resubmitted its Project. BOEM allowed the Vineyard Wind Project to proceed as if the Project had not been withdrawn. Thus, no new NEPA or ESA documents were required or prepared, and BOEM continued to process the Project under the pre-existing Draft EIS, SEIS, and BiOp.

H. The Record of Decision

62. On May 10, 2021, BOEM approved the Final EIS and COP for the Project, setting forth both actions in a Record of Decision (ROD) published in the Federal Register.

63. The ROD constituted final agency action regarding the Vineyard Wind Project and its accompanying Final EIS. BOEM's approval of the Project through the ROD also constitutes final agency action for purposes of Section 7 of the ESA. As pointed out above, BOEM issued the ROD based, in part, on the September 11, 2020 BiOp. However, both BOEM and NMFS deemed the September 11, 2020 BiOp insufficient, which is why they initiated "re-consultation" in late May 2021, approximately two weeks after the ROD was approved. BOEM did not rescind or withdraw the ROD it issued on May 10, 2020 or take other steps to ensure the ROD considered

the analysis and findings set forth in the October 18, 2021 BiOp. For that reason, among others, the ROD is legally deficient.

64. In issuing the ROD and approving the Project and its defective Final EIS, BOEM violated the procedural and substantive mandates of NEPA and the ESA.

VI. CLAIMS FOR RELIEF

65. For each of the Claims in this Complaint, Plaintiffs incorporate by reference each and every allegation set forth in this Complaint.

First Claim for Relief

(Against BOEM for Violating NEPA)

66. BOEM has violated NEPA and its implementing regulations by issuing a ROD for the Vineyard Wind Project and by approving the Final EIS for the Project, despite the Final EIS's procedural and substantive defects. 42 U.S.C. § 4331, *et seq*; 40 CFR § 1500, *et seq*. The Final EIS, and the ROD that formalized its approval, are arbitrary and capricious and otherwise not in accordance with the law in violation of 5 U.S.C. § 706.

67. An EIS must provide a detailed statement of: (1) the environmental impacts of the proposed action; (2) any adverse environmental effects that cannot be avoided should the proposed action be implemented; (3) alternatives to the proposed action; (4) the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity; and (5) any irreversible and irretrievable commitment of resources that would be involved in the action should it be implemented. 42 U.S.C. § 4332(C). An EIS must "inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 CFR § 1502.1. NEPA also requires federal agencies, such as BOEM, to analyze the direct, indirect, and cumulative

impacts of the proposed action and to take a hard look at those impacts. 40 CFR §§ 1508.7, 1508.8. In addition, NEPA requires federal agencies to consider mitigation measures to minimize the environmental impacts of a proposed action. 40 CFR § 1502.14 (alternatives and mitigation measures); 40 CFR § 1502.16 (environmental consequences and mitigation measures).

68. The ROD and Final EIS that BOEM prepared and approved for the Vineyard Wind Project failed to comply with each of these NEPA requirements. The Final EIS does not analyze an adequate range of alternatives; nor does it adequately analyze the Project's impacts on the human and natural environment, as discussed in Plaintiffs' comment letters to BOEM and as set forth in this Complaint. The Final EIS also fails to consider mitigation measures capable of reducing the action's impacts on human and natural resources and relies on outdated, inaccurate, incomplete, and inadequate information when assessing the impacts of the proposed action.

69. BOEM approved the ROD and Final EIS knowing that the September 11, 2020 BiOp, on which both documents rely, was deficient. BOEM and NMFS did not initiate or conduct re-consultation to address the BiOp's deficiencies until *after* the ROD was approved on May 10, 2021. The October 18, 2021 BiOp post-dates the ROD and cannot be used to support its conclusions. Therefore, BOEM approved a ROD that was based, in part, on a legally inadequate 927.BiOp.

70. For each of the reasons set forth above, BOEM's adoption of the ROD and Final EIS for the Vineyard Wind Project was arbitrary, capricious, and not in accordance with law as required by NEPA, its implementing regulations, and the APA.

Second Claim for Relief

(Against NMFS for Issuing Legally Deficient BiOp)

71. In issuing the October 18, 2021 BiOp for the Vineyard Wind Project (GARFO-2021-01265), NMFS acted arbitrarily, capriciously, and unlawfully because the conclusions set forth in the BiOp were not based on the best available science, as required by the ESA. 16 U.S.C. § 1536(a)(2).

72. NMFS' issuance of the BiOp was arbitrary, capricious, and unlawful because the BiOp failed to adequately address the proposed action's individual and cumulative impacts on federally-listed species, including the North Atlantic Right Whale, and relied on unproven, unsupported, and ineffective measures to protect such species from take and other forms of harm.

73. NMFS' issuance of the BiOp was arbitrary, capricious, and unlawful because the BiOp included an Incidental Take Statement that underreported and underestimated the number of individuals of each affected listed species that would be taken by the proposed action. The Incidental Take Statement also failed to include a complete or effective set of reasonable and prudent measures that would minimize impacts, including taking, on the affected listed species. 16 U.S.C. § 1536(b)(4).

74. For each of the reasons set forth above, and the reasons described in Plaintiffs' 60-Day Notice of Intent to Sue letter, NMFS' issuance of the October 18, 2021 BiOp was arbitrary, capricious, and unlawful. 5 U.S.C. §§ 701-706.

Third Claim for Relief

(Against BOEM and NMFS for Violating the ESA by Failing to Insure Against Jeopardy)

75. BOEM and NMFS violated, and continue to violate, Section 7(a)(2) of the ESA and its implementing regulations by failing to ensure through consultation that BOEM's approval of

the proposed Vineyard Wind Project will not jeopardize the North Atlantic Right Whale and other federally-listed species within the APE.

76. BOEM is violating the ESA by carrying out the actions necessary to implement the Vineyard Wind Project, despite the fact that the October 18, 2021 BiOp is legally defective and based on inadequate scientific data. NMFS violated the ESA by authorizing BOEM to take the actions necessary to the implementation of the Vineyard Wind Project – actions that will jeopardize the federally-listed species within the APE. Such violations are subject to judicial review pursuant to 16 U.S.C. § 1540(g).

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs respectfully request that this Court:

(1) Adjudge and declare that Defendant BOEM's approval of the ROD for the Vineyard Wind Project, including its Final EIS, violates NEPA and its implementing regulations;

(2) Adjudge and declare that Defendant NMFS's adoption of the October 18, 2021 BiOp for the Vineyard Wind Project (GARFO-2021-01265) was arbitrary, capricious, and unlawful;

(3) Adjudge and declare that Defendant NMFS's adoption of the October 18, 2021 BiOp for the Vineyard Wind Project (GARFO-2021-01265) violates Section 7(a)(2) of the ESA because BiOp concludes, with insufficient evidence, that BOEM's action (i.e., approval of the Vineyard Wind Project) will not jeopardize the North Atlantic Right Whale or any other federally-listed species;

(4) Adjudge and declare that Defendant BOEM's approval of the Vineyard Wind Project violates Section 7(a)(2) of the ESA because BOEM has failed to ensure that its actions do

not jeopardize the North Atlantic Right Whale and all other federally-listed species potentially affected by the Project;

(5) Order Defendant NMFS to vacate and set aside the October 18, 2021 BiOp for the Vineyard Wind Project;

(6) Order Defendant BOEM to vacate and set aside the ROD for the Vineyard Wind Project and its attendant Final EIS;

(7) Pending completion of an adequate Biological Opinion for the Vineyard Wind Project, enjoin Defendants BOEM and NMFS from issuing any permit, approval, or other action within the Vineyard Wind APE or elsewhere that could adversely affect federally-listed species;

(8) Pending completion of an adequate EIS for the Vineyard Wind Project, enjoin Defendant BOEM from issuing any permit, approval, or other action that might adversely affect the human or natural environment;

(9) Award Plaintiffs their fees, costs, expenses and disbursements, including reasonable attorneys' fees as provided by the ESA, 16 U.S.C. § 1540(g)(4), or the Equal Access to Justice Act, 28 U.S.C. § 2412; and

(10) Grant Plaintiffs such additional and further relief as the Court deems just and proper.

DATED: February 10, 2022

The Plaintiffs,
ACK Residents Against Turbines
and Vallorie Oliver,
By Their Attorney,

/s/ Steven P. Brendemuehl
Steven P. Brendemuehl
Law Office of Steven P. Brendemuehl
5 Commonwealth Road ~ Suite 4A
Natick, MA 01760
steven@lawofficespb.com

/s/ David P. Hubbard
David Hubbard
David P. Hubbard, *Pro Hac Vice*
Gatzke Dillon & Ballance LLP
2762 Gateway Road
Carlsbad, CA 92009
dhubbard@gdandb.com

CERTIFICATE OF SERVICE

I hereby certify that this document filed through the CM/ECF system will be sent electronically to the registered participants as identified on the NEF on February 10, 2022.

/s/ David P. Hubbard
David P. Hubbard, *Pro Hac Vice*
Gatzke Dillon & Ballance LLP
2762 Gateway Road
Carlsbad, CA 92009
(760) 431-9501
dhubbard@gdandb.com