

**UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS**

---

ACK RESIDENTS AGAINST TURBINES, et al.,

Plaintiffs,

v.

U.S. BUREAU OF OCEAN ENERGY  
MANAGEMENT, et al.,

Defendants,

and

VINEYARD WIND 1 LLC,

Intervenor-Defendant.

Civil Action No. 1:21-cv-11390-IT

Hon. Indira Talwani

---

**FEDERAL DEFENDANTS' REPLY MEMORANDUM IN SUPPORT OF  
CROSS-MOTION FOR SUMMARY JUDGMENT**

**TABLE OF CONTENTS**

INTRODUCTION .....1

ARGUMENT .....2

    I.    Plaintiffs lack standing.....2

        A.    Plaintiffs’ opposition and supplemental declaration fail to cure their standing deficiencies. ....2

        B.    Plaintiffs have failed to demonstrate that they will be harmed by air emissions associated with the Project. ....5

    II.   Plaintiffs waived several arguments by failing to raise them during the relevant administrative process.....6

    III.  The Agencies Fully Complied with the ESA.....8

        A.    The 2021 BiOp Properly Considers the Project Described in the Approved COP.....9

        B.    The 2021 BiOp Uses the Best Available Scientific Data. ....11

            1.    *The 2021 BiOp considers and applies the Quintana-Rizzo study.* .....12

            2.    *The 2021 BiOp considers the best available scientific information on the potential for entanglement of right whales in fishing gear* .....15

            3.    *The 2021 BiOp considers the “2020 Annual Report Card” and the 2020 Marine Mammal Stock Assessment.*.....17

            4.    *Barkaszi 2021 is neither part of the best available scientific or commercial information, nor in the administrative record.* .....18

            5.    *The 2021 BiOp considers the effects of operational noise on right whales and explains why Stober and Thomsen 2021 is not part of the best available scientific information for this action.*.....19

        C.    The 2021 BiOp Considers the Effects of Project-Related Vessel Strikes. ....20

        D.    The 2021 BiOp Considers Potential Effects of Pile-Driving Noise on Right Whales.....23

- 1. *The 2021 BiOp properly determines that pile driving, including its lawful soft start procedures, was likely to result in the incidental take (harassment) of 20 right whales.* .....23
    - 2. *NMFS properly accounted for incidental harassment of right whales that may occur as a result of sound exposure within noise impact areas.* .....26
    - 3. *The 2021 BiOp Describes Requirements For Evaluating When Shutdown Is Technically Feasible.* .....29
  - E. The 2021 BiOp’s “No Jeopardy” Finding Accounts for Take in the Form of Incidental Harassment of 20 Right Whales. ....31
  - F. The 2021 BiOp Assesses Effects on Right Whales That Leave the Project Area in Response to Soft-Start Pile Driving.....32
  - G. The 2021 BiOp Appropriately Assesses Operational Noise Impact on Right Whales.....34
  - H. The 2021 BiOp Reasonably Concluded That the Action Is Not Likely To Jeopardize the Continued Existence of Right Whales.....34
    - 1. *The Vineyard Wind Project will not impede right whale recovery.*.....35
    - 2. *The 2021 BiOp analyzes potential project effects on right whale recovery in relation to the goals described in the 2005 Recovery Plan.* .....38
    - 3. *Right whale movement away from pile-driving noise does not implicate species recovery.* .....39
    - 4. *The 2021 BiOp Appropriately References Species Reclassification Goals Because These Are the Recovery Goals Referenced in the 2005 Recovery Plan.* .....41
    - 5. *The Vineyard Wind Project Will Not Affect Species Abundance.*.....42
    - 6. *Federal Defendants Have Addressed Plaintiffs’ Arguments Concerning Recovery.*.....43
  - I. BOEM Reasonably Relied on the 2021 BiOp. ....44
- IV. The FEIS fully complied with NEPA. ....45
  - A. The FEIS appropriately analyzes impacts on the North Atlantic right whale. ....45

- 1. *The FEIS adequately describes existing conditions facing the right whale.* .....45
- 2. *The FEIS considered the possible impacts of noise and vessel strikes.* .....46
- 3. *The FEIS analyzed cumulative impacts.* .....46
- B. The FEIS appropriately analyzes impacts to air quality and greenhouse gas emissions .....47
  - 1. *The FEIS properly analyzes the emission of criteria pollutants.* .....47
  - 2. *The incorporation by reference of the Epsilon report complied with NEPA.* .....49
  - 3. *The FEIS analyzes indirect emissions from onshore activities.* .....49
- CONCLUSION.....50

## TABLE OF AUTHORITIES

<b>Cases</b>	<b>Page</b>
<i>Balt. Gas &amp; Elec. Co. v. Nat. Res. Def. Council, Inc.</i> , 462 U.S. 87 (1983).....	15
<i>Bennett v. Spear</i> , 520 U.S. 154 (1997).....	7
<i>Beyond Nuclear v. U.S. NRC</i> , 704 F.3d 12 (1st Cir. 2013).....	46
<i>Bldg. Indus. Ass’n v. Norton</i> , 247 F.3d 1241 (D.C. Cir. 2001).....	12, 20
<i>City-of-Carmel-by-the-Sea v. U.S. Dep’t of Transp.</i> , 123 F.3d 1142 (9th Cir. 1997) .....	50
<i>Crowder v. Andreu, Palma, Lavin &amp; Solis, PLLC</i> , No. 2:19-cv-820-SPC-NPM, 2021 WL 1338767 (M.D. Fla. Apr. 9, 2021).....	3
<i>Ctr. for Biological Diversity v. NMFS</i> , 977 F.Supp.2d 55 (D.P.R. 2013).....	8, 18, 31
<i>Ctr. for Biological Diversity v. Salazar</i> , 804 F.Supp.2d 987 .....	20
<i>Ctr. for Biological Diversity v. U.S. BLM</i> , 698 F.3d 1101 (9th Cir. 2012) .....	43, 44
<i>Daubert v. Merrell Dow Pharmaceuticals</i> , 509 U.S. 579 (1993).....	18
<i>Dist. 4 Lodge of the Int. Ass’n of Machinists &amp; Aerospace Workers Loc. Lodge 207 v. Raimondo</i> , 18 F.4th 38 (1st Cir. 2021).....	16
<i>FCC v. Nat’l Citizens Comm. for</i> , <i>Broad</i> , 436 U.S. 775 (1978).....	15
<i>Fla. Power &amp; Light Co. v. Lorion</i> , 470 U.S. 729 (1985).....	18
<i>Japan Whaling Ass’n v. American Cetacean Society</i> , 478 U.S. 221 (1986).....	4

<i>Japanese Vill., LLC v. FTA</i> , 843 F.3d 445 (9th Cir. 2016) .....	48
<i>Kern v. U.S. BLM</i> , 284 F.3d 1062 (9th Cir. 2002) .....	49
<i>Lovgren v. Locke</i> , 701 F.3d 5 (1st Cir. 2012).....	46
<i>Lujan v. Defs. of Wildlife</i> , 504 U.S. 555 (1992).....	2, 3, 5, 6
<i>Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.</i> , 463 U.S. 29 (1983).....	19, 28, 29
<i>National Wildlife Federation v. NMFS</i> , 524 F.3d 917 (9th Cir. 2008) .....	36, 37, 44
<i>National Wildlife Federation v. NMFS</i> , 184 F.Supp.3d 861 (D. Or. 2016) .....	42
<i>National Wildlife Federation v. Norton</i> , 386 F.Supp.2d 553 (D. Vt. 2005).....	4
<i>Native Village of Chickaloon v. National Marine Fisheries Serv.</i> , 947 F.Supp.2d 1031 (D. Alaska 2013) .....	24, 44
<i>Noonan v. Wonderland Greyhound Park Realty LLC</i> , 723 F.Supp.2d 298 (D. Mass. 2010) .....	5
<i>Nw. Env't Advocs. v. NMFS</i> , 460 F.3d 1125 (9th Cir. 2006) .....	46
<i>Ocean Mammal Inst. v. Gates</i> , 546 F.Supp.2d 960 (D. Haw. 2008).....	24
<i>Protecting Air for Waterville v. Ohio EPA</i> , 763 Fed. App'x 504 (6th Cir. 2019) .....	5, 6
<i>Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of the Navy</i> , 898 F.2d 1410 (9th Cir. 1990) .....	8, 45
<i>Rock Creek Alliance v. U.S. FWS</i> , 663 F.3d 439 (9th Cir. 2011) .....	44
<i>Sierra Club v. Morton</i> , 405 U.S. 727 (1972).....	4, 5

<i>Strahan v. Linnon</i> , 967 F.Supp. 581 (D. Mass. 1997).....	4, 11, 41
<i>Strahan v. Roughead</i> , 910 F.Supp.2d 358 (D. Mass. 2012).....	8
<i>Strahan v. Sec’y, Mass. Exec. Off. of Energy &amp; Env’t Affairs</i> , No. 19-cv-10639-IT, 2021 WL 9038570 (D. Mass. Nov. 30, 2021).....	3, 4
<i>SW Center for Biological Diversity v. BOR</i> , 143 F.3d 515 (9th Cir. 1998) .....	7, 22
<i>Town of Norfolk v. EPA</i> , 761 F.Supp. 867 (D. Mass. 1991).....	46, 49
<i>Town of Winthrop v. FAA</i> , 535 F.3d 1 (1st Cir. 2008).....	18
<i>United States v. AVX Corp.</i> , 962 F.2d 108 (1st Cir. 1992).....	2
<i>Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.</i> , 435 U.S. 519 (1978).....	7
<i>Wild Fish Conservancy v. Salazar</i> , 628 F.3d 513 (9th Cir. 2010) .....	36
<b>Statutes</b>	
5 U.S.C. § 706.....	7, 18
16 U.S.C. § 1371(a)(5)(D)(ii) .....	24
16 U.S.C. § 1533(f).....	41
16 U.S.C. § 1536(a)(2).....	11, 12, 35, 43
16 U.S.C. § 1536(b)(3)(A).....	43
16 U.S.C. § 1536(b)(4) .....	25, 26, 30
16 U.S.C. § 1536(b)(4)(B).....	43
16 U.S.C. § 1538(a)(1)(B) .....	26
16 U.S.C. § 1540(g).....	6
16 U.S.C. § 1540(g)(2)(A)(i).....	6
43 U.S.C. § 1332(3) .....	1
<b>Regulations</b>	
40 C.F.R. § 51.165(b)(2).....	48
40 C.F.R. § 1502.2(b) .....	48
40 C.F.R. § 1502.21 .....	49

40 C.F.R. § 1508.1(b) .....50

50 C.F.R. § 216.103 .....25

50 C.F.R. § 402.02 .....passim

50 C.F.R. § 402.14(a).....35

50 C.F.R. § 402.14(b)(1).....35

50 C.F.R. § 402.14(d) ..... 11, 12

50 C.F.R. § 402.14(g) ..... 12

50 C.F.R. § 402.14(g)(7)..... 12, 35

50 C.F.R. § 402.14(g)(8)..... 12

50 C.F.R. § 402.14(i)(4).....31

50 C.F.R. § 402.15(a).....9

50 C.F.R. § 402.16.....31

50 C.F.R. § 402.16(a).....31

## INTRODUCTION

Congress enacted the Outer Continental Shelf Lands Act (“OCSLA”) to regulate the development of the outer continental shelf to ensure, among other things, that it is “made available for expeditious and orderly development, subject to environmental safeguards, in a manner which is consistent with the maintenance of competition and other national needs.” 43 U.S.C. § 1332(3). Consistent with Congress’s intent, the Vineyard Wind offshore wind energy project (“the Project”) underwent an extensive, multi-year environmental review by federal and state agencies, which concluded in July 2021 when the Bureau of Ocean Energy Management (“BOEM”) issued final approval of Vineyard Wind’s Construction and Operations Plan (“COP”). BOEM’s decision to approve the COP was informed by the final environmental impact statement (“FEIS”) completed by BOEM and other cooperating federal agencies pursuant to the National Environmental Policy Act (“NEPA”). BOEM’s decision was informed by, among other things, the biological opinion (“2021 BiOp”) issued by the National Marine Fisheries Service’s Greater Atlantic Region (“NMFS/GAR”) pursuant to the Endangered Species Act (“ESA”) and the incidental harassment authorization (“IHA”) issued by that National Marine Fisheries Services’ Office of Protected Resources (“NMFS/OPR”) pursuant to the Marine Mammal Protection Act (“MMPA”).

As terms of Project approval, BOEM imposed numerous measures to protect right whales as proposed by BOEM and NMFS/OPR, as well as reasonable and prudent measures (“RPMs”) included in the NMFS/GAR 2021 BiOp to avoid, minimize, reduce, or eliminate environmental harm that could result from the proposed activities. BOEM 76820. Of relevance to Plaintiffs’ ESA-related claims, NMFS/GAR reasonably concluded in its 2021 BiOp, based on the best available scientific information, that BOEM’s approval of the COP with conditions is not likely to jeopardize the endangered North Atlantic right whale. Therefore, BOEM’s adoption of, and reliance on, the 2021 BiOp satisfies its ESA obligations. With respect to NEPA, the FEIS

demonstrates that BOEM took the requisite “hard look” at potential Project effects on right whales, as well as other potential Project effects, including air quality and greenhouse gas emissions.

We have shown that Plaintiffs lack standing and failed to provide pre-suit notice and/or exhaust some of their claims. However, if the Court reaches the merits of Plaintiffs’ claims, the record before the Court establishes that both agencies fully complied with applicable laws. As such, the Court should enter summary judgment in favor of Federal Defendants.

## **ARGUMENT**

### **I. Plaintiffs lack standing.**

#### **A. Plaintiffs’ opposition and supplemental declaration fail to cure their standing deficiencies.**

Plaintiffs bear “[t]he burden of adducing facts necessary to support standing.” *United States v. AVX Corp.*, 962 F.2d 108, 114 (1st Cir. 1992). To meet that burden at summary judgment, Plaintiffs must present “specific facts” by affidavit or other evidence that establish their standing to sue. *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 561 (1992). Here, Plaintiffs proffer three declarations—two that were filed in support of their opening motion and a third filed with their opposition. Doc. Nos. 88-2, 88-3 & 108. The initial affidavits failed to establish standing, however, because they did not set out any specific facts sufficient to establish that either Ms. DiSibio or Ms. Oliver (and thus, by extension, ACK RATS) would suffer the concrete or imminent injury that Article III requires. Doc. No. 96 at 7-8. Nothing in Plaintiffs’ opposition brief or in Ms. Oliver’s supplemental declaration cures that fundamental deficiency.

In their initial declarations, neither Ms. DiSibio nor Ms. Oliver provided any specific facts to establish that she had a requisite environmental or aesthetic interest in right whales, including whether she had seen (or attempted to see) right whales in the past, nor whether she had concrete

plans to do so in the future. *Id.* at 7. In response, Ms. Oliver’s supplemental declaration now states—without any elaboration—that she “ha[s] seen right whales in the waters around Nantucket” and that she has “concrete plans to observe right whales in the waters around Nantucket in the future.” Doc. No. 108 ¶ 4. Plaintiffs claim that Ms. Oliver’s supplemental declaration should “eliminate all debate,” because it includes the supposed “magic words” in order to “appease federal defendants.” Doc. No. 105 at 14.

That assertion misses the point. Of course, it is the Constitution, not any standard created by Federal Defendants, that Plaintiffs must satisfy. And the problem with Plaintiffs’ standing declarations is not that they omit “magic words”; rather, they lack the specific facts necessary to establish Plaintiffs’ standing. Ms. Oliver’s supplemental declaration suffers from the same problem—it makes only conclusory statements. Though it parrots the *Lujan* language that she must have “concrete plans,” it lacks the “description of [those] concrete plans,” including “any specification of *when*” they will take place as *Lujan* requires. *Lujan*, 504 U.S. at 564; *see also Crowder v. Andreu, Palma, Lavin & Solis, PLLC*, No. 2:19-cv-820-SPC-NPM, 2021 WL 1338767, at \*5 (M.D. Fla. Apr. 9, 2021) (“Article III’s limitations aren’t hollow tokens brushed aside by magic words.”). Ms. Oliver’s supplemental declaration, like her first declaration, thus fails to establish standing.<sup>1</sup>

To be clear, Plaintiffs’ standing does not depend on a showing that they have successfully observed a right whale in the vicinity of the Project Area. *See* Doc. No. 105 at 13. But Plaintiffs *do* need to establish that they will be “‘directly affected’ by the harm to the whales, *apart from [their] . . . special interest*” in the species. *Strahan v. Sec’y, Mass. Exec. Off. of Energy & Env’t Affairs*,

---

<sup>1</sup> Plaintiffs make no similar claim with respect to Ms. DiSibio, leaving the Court without any basis to conclude that her family’s whale-watching activities could be diminished if the Project proceeds.

No. 19-cv-10639-IT, 2021 WL 9038570, at \*8 (D. Mass. Nov. 30, 2021) (quoting *Strahan v. Linnon*, 967 F.Supp. 581, 617 (D. Mass. 1997), *aff'd*, 187 F.3d 623 (1st Cir. 1998) (per curiam)).

To accomplish that, Plaintiffs must do more than live on Nantucket and profess an affinity for right whales. *Id.* (“[I]njury-in-fact may not be established by [a plaintiff’s] ‘sincere and passionate interest in the well-being of the whales’ alone.”). They must establish that harm to a right whale will cause them to suffer some concrete harm—a hurdle they have not cleared. In contrast to the plaintiffs in *National Wildlife Federation v. Norton*, 386 F.Supp.2d 553, 560 (D. Vt. 2005), who had not seen gray wolves but had “devoted substantial amounts of time in support of wolf recovery and in pursuit of the wolf throughout the Northeast,” Plaintiffs offer no facts to distinguish themselves from any other New England resident who knows that right whales are endangered and hopes for their recovery.<sup>2</sup>

That is true despite Plaintiffs’ new claim that harm to right whales will cause them to suffer “ecological grief.” Doc. No. 105 at 15-16. Plaintiffs cannot establish standing merely by invoking new terminology to describe the emotions they might experience if a right whale were harmed. Instead, they must show that their concrete interests, i.e., their interests in observing right whales, will actually be affected, and they have not done so. Further, Plaintiffs’ “ecological grief” theory is indistinguishable from the type of “spiritual interest” that this Court has found insufficient. *See Strahan*, 2021 WL 9038570, at \*8 (“Where [plaintiff’s] spiritual interest lacks concrete elements that the challenged actions directly impact, the court finds the spiritual interest is not the equivalent of ‘activities or pastimes’ that are required to confer standing.”) (quoting

---

<sup>2</sup> For the same reason, Plaintiffs’ citation to *Japan Whaling Ass’n v. American Cetacean Society*, 478 U.S. 221, 230 n.4 (1986), is unavailing. In *Japan Whaling*, the plaintiffs were whale watchers whose whale watching and studying would have been “adversely affected by continued whale harvesting.” *Id.* Plaintiffs allege no similar concrete harm here.

*Sierra Club v. Morton*, 405 U.S. 727, 735, 739 (1972)). Indeed, absent some other concrete interest, Plaintiffs’ “ecological grief” theory is even broader and more nebulous than the “animal nexus” theory that the Supreme Court rejected in *Lujan*.

**B. Plaintiffs have failed to demonstrate that they will be harmed by air emissions associated with the Project.**

Contrary to Plaintiffs’ assertion, Defendants did argue that Plaintiffs lacked standing to pursue any of their claims, including the NEPA claims. *See* Doc. No. 96 at 6-8. In addition, we argued that Plaintiffs’ allegations of “procedural injury” were not sufficient to demonstrate standing—a point that Plaintiffs have not disputed. *Id.* at 8. We did not address air emissions as a potential basis for Plaintiffs’ standing because Plaintiffs’ declarations did not raise the issue. Plaintiffs’ belated attempts to rely on such alleged injuries should be rejected. *See Noonan v. Wonderland Greyhound Park Realty LLC*, 723 F.Supp.2d 298, 348-49 (D. Mass. 2010) (refusing to consider new argument raised in reply). In any event, Plaintiffs’ half-hearted efforts to demonstrate injury based on air emissions from this renewable energy project are insufficient to establish standing.

Plaintiffs’ vague allegations of injury based on air emissions do not demonstrate that they will be harmed by the Project. On summary judgment, a plaintiff cannot rely on allegations to support standing and instead must offer “specific facts” demonstrating they will suffer an injury. *Lujan*, 504 U.S. at 561 (citing Fed. R. Civ. P. 56(e)). Plaintiffs have failed to do so. Vallorie Oliver asserts in her supplemental declaration that, as a resident of Nantucket, she will be exposed to the Project’s onshore emissions, which “include precursors to ozone,” and that these “ozone precursors will affect my respiratory health.” Doc. No. 108 ¶ 12. These bare assertions of unspecified health effects from Project emissions are insufficient to establish standing. *See Protecting Air for Waterville v. Ohio EPA*, 763 Fed. App’x 504, 508 (6th Cir. 2019) (finding that

mere assertions that organization members would be exposed to the emission of toxic chemicals were insufficient to establish standing).

Further, Plaintiffs are wrong that Article III does not require Plaintiffs to submit any evidence to support their alleged injuries from air emissions. *See id.* at 508 (Plaintiffs could have established injury from air emissions by submitting “affidavits from individual members attesting to fear of health concerns in combination with expert reports detailing the injuries that could follow from exposure.”). Ultimately, Plaintiffs have the burden to establish standing at summary judgment by offering specific facts. Given that the Project will be 14 miles offshore, it is necessary for Plaintiffs to offer specific facts showing how air emissions relating to the Project will injure them. *See Lujan*, 504 U.S. at 561. Plaintiffs do not meet this burden by merely asserting that Ms. Oliver is a resident of Nantucket and “thus shares the same air basin where the project’s emissions will be received and felt.” Doc. No. 105 at 20. Moreover, as discussed below, there is no basis to the assertion that air emissions from the Project will be significantly adverse or cause health problems—quite the contrary, the operation of the Project is expected to have beneficial effects on air quality. *See* Section IV.B, *infra*.

## **II. Plaintiffs waived several arguments by failing to raise them during the relevant administrative process.**

Plaintiffs’ Third Claim for Relief asserts claims against BOEM and NMFS alleging violations of the ESA citizen-suit provision, 16 U.S.C. § 1540(g). Doc. No. 59 at 60-61 (¶¶ 75-76). Such claims against BOEM are subject to the ESA’s mandatory 60-day notice requirement, 16 U.S.C. § 1540(g)(2)(A)(i). Doc. No. 96 at 9 (“[T]he Court’s review of Plaintiffs’ ESA citizen-suit claims against BOEM should be limited according to the substance of arguments raised in their three notices of intent to sue. . . .”).<sup>3</sup> Plaintiffs submitted three notices of intent to sue, yet some of

---

<sup>3</sup> To the extent Plaintiffs also assert claims concerning the merits of NMFS/GAR’s 2021 BiOp,

the ESA citizen-suit claims asserted against BOEM go beyond the scope of those notices. For example, Plaintiffs’ notice letters do not reference Area 537 or even the crux of the issue—whether temporarily limiting right whale use of the Wind Development Area (“WDA”) during pile driving is likely to increase the risk of entanglement or vessel strike. *SW Center for Biological Diversity v. BOR*, 143 F.3d 515, 522 (9th Cir. 1998) (while the ESA does not require a notice to list every detail of every alleged violation, it must provide sufficient information that the agency could identify and attempt to abate the violation).<sup>4</sup> Even if Plaintiffs’ 60-day notice letters are deemed sufficient for purposes of commencing ESA citizen-suit claims against BOEM, the Court may nevertheless conclude that Plaintiffs failed to raise certain issues during the administrative processes. *See* Doc. No. 96 at 18-20. Consistent with principles of administrative exhaustion recognized in *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 558 (1978), Plaintiffs’ claims that the agencies unlawfully failed to include specific words in the FEIS and/or 2021 BiOp (e.g., specific references to Statistical Area 537) should be weighed in light of Plaintiffs’ failure to omit the same words in their own comments concerning the Project.

---

such claims against NMFS/GAR are reviewed under the Administrative Procedure Act (“APA”), 5 U.S.C. § 706, and are not considered ESA citizen-suit claims. *See Bennett v. Spear*, 520 U.S. 154, 171-73 (1997). However, to the extent that Plaintiffs’ Third Claim for relief is deemed to include an ESA citizen-suit claim against NMFS/GAR, such claim would be subject to the ESA’s 60-day notice requirement and dismissal for lack of the required notice.

<sup>4</sup> Plaintiffs’ ESA notice also failed to discuss several of the issues they raise now. For example, Plaintiffs failed to discuss or produce any evidence in their briefs, that the action would be the “but for” cause of an increased risk of entanglement or ship strike outside the WDA, i.e., that the risk inside the WDA is lower than the risk outside of the WDA. Doc. No. 105 at 22-23 (quoting Doc. No. 97-3 at 10). Plaintiffs further acknowledge that their notice letter does not mention the phrase “Potential Biological Removal rate” or use the acronym PBR. *Id.* at 23. Plaintiffs suggest that their specific objections concerning the size of pile-driving clearance zones and passive acoustic monitoring (“PAM”) detection limits were captured within their general comments concerning “detect and avoid” measures, although the comments omitted those specific objections. *Id.* at 25-26. This is not enough.

### III. The Agencies Fully Complied with the ESA.

Plaintiffs' argument is built on a fundamentally flawed premise as they misstate the APA and ESA principles that must guide the Court's inquiry here. The essential questions are whether: (1) NMFS/GAR as consulting agency, issued a legally sufficient BiOp on the effects of the proposed actions described by various action agencies; and (2) BOEM's adoption of and reliance on the BiOp fulfilled its duty to ensure that the COP it authorized is not likely to jeopardize the continued existence of North Atlantic right whales. *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of the Navy*, 898 F.2d 1410, 1415 (9th Cir. 1990) (action agency's reliance on biological opinion will satisfy obligation under ESA if the challenging party cannot point to "new information" that the consulting agency did not take into account), *cited in Strahan v. Roughead*, 910 F.Supp.2d 358, 381 (D. Mass. 2012). The correct standard in the parlance of the ESA is whether BOEM's approval of the Vineyard Wind COP, with conditions, "*reasonably would be expected*, directly or indirectly, to reduce appreciably *the likelihood* of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. § 402.02<sup>5</sup> (emphasis added) (definition of "jeopardize the continued existence of"), *cited in Ctr. for Biological Diversity v. NMFS*, 977 F.Supp.2d 55, 72 (D.P.R. 2013).

In reviewing the legal sufficiency of the 2021 BiOp itself and BOEM's reliance on the 2021 BiOp, it is important to clarify the respective roles of the agencies, including the origin of mitigation measures analyzed in the 2021 BiOp. Both BOEM and NMFS/OPR determined that the Vineyard Wind Project "may affect" right whales, and these determinations led to the initiation of

---

<sup>5</sup> All references to 50 C.F.R. sections are to the 2022 version.

formal ESA consultation with NMFS/GAR.<sup>6</sup> NMFS/GAR then analyzed the effects of all actions and reasonably determined, based on the best available scientific information, that the proposed actions—including their respective mitigation measures for the avoidance and minimization of effects on right whales—“are not expected to cause an appreciable reduction in the likelihood of survival and recovery of North Atlantic right whales in the wild.” NMFS 17532. NMFS/GAR also determined that incidental take was reasonably certain to occur and specified incidental take by harassment of 20 right whales. NMFS 17561. No deaths or injuries or other types of harm that would reduce the numbers, reproduction, and distribution of right whales are anticipated. NMFS 17530. BOEM reviewed the final BiOp and adopted it in support of its decision to approve the COP with conditions. BOEM\_0077152 (COP approval letter); BOEM\_0077788 (January 2022 BOEM Memorandum pursuant to 50 C.F.R. § 402.15(a)). As explained in detail below, Plaintiffs’ arguments about effects of the Vineyard Wind Project on right whales are based on speculation, not an assessment of likelihood or reasonable certainty and, therefore, fail to carry the burden of showing any violation of the APA and ESA.

**A. The 2021 BiOp Properly Considers the Project Described in the Approved COP.**

The 2021 BiOp analyzes the effects of development corresponding to the upper bounds of the Project Design Envelope (“PDE”)<sup>7</sup> (100 WTGs). NMFS 17185; BOEM\_0077285. To avoid

---

<sup>6</sup> BOEM provided a description of its proposed action to approve with conditions the COP prepared by Vineyard Wind. NMFS 16005 (BOEM consultation request). Likewise, NMFS/OPR provided a description of its proposed action to approve with conditions Vineyard Wind’s application for an IHA. NMFS 16363.

<sup>7</sup> Plaintiffs incorrectly suggest that there is some discrepancy with respect to the number of wind turbine generators (“WTGs”) analyzed in the BiOp. Doc. No. 105 at 27-28. The “Project is being developed and permitted using the PDE concept; this means that the ‘maximum impact scenario’ (i.e., greatest number of piles, largest turbines, etc.) is proposed for authorization in permits and is being analyzed in accompanying review documents.” NMFS 17186. The statement that the “total number of foundations installed will not exceed 102,” NMFS 17326, refers to the maximum 100 WTG foundations (NMFS 17186) plus up to two Electrical Service Platform (“ESP”) foundations

underestimating impacts, the 2021 BiOp also properly considers two design scenarios: (1) the maximum design scenario (90 10.3 m WTG monopile foundations, 10 jacket foundations, and 2 jackets for Electrical Service Platforms); and (2) the most likely design scenario (100 10.3 m WTG monopile foundations and 2 jacket foundations for ESPs). “As Vineyard Wind may install either one or two monopiles per day, both the ‘maximum design’ and ‘most likely design’ scenarios were modeled assuming the installation of one foundation per day and two foundations per day distributed across the same calendar period.” NMFS 17328. In all modeled scenarios, sound exposure over a 24-hour period was considered. NMFS 17344.<sup>8</sup>

The authorized incidental take of up to 20 North Atlantic right whales by Level B harassment by pile driving corresponds to the maximum design scenario with one monopile installed per day, again because more pile-driving days would be necessary. NMFS 17349 (use of Table 7.1.12 explained), 17350 (exposure of up to 20 right whales explained). *See also* NMFS 17366 (explanation of expected ESA “harassment” through MMPA Level B harassment sound exposure, but not ESA “harm” through MMPA Level A harassment sound exposure). Modeled, worst-case, right whale exposure to Level A (peak), as opposed to cumulative, is nearly zero (no more than 0.04 right whales). NMFS 17346, Table 7.1.13. For such exposure to occur, a right whale would need to be within 17 meters for a monopile and even closer for a jacket foundation--4

---

(NMFS 17189). Of the maximum 102 foundations, up to 12 of them may be jacket foundations and the rest would be monopile foundations. NMFS 17186, 17188. It is unnecessary to reach the question of whether Vineyard Wind has shown that it will construct a lesser number of WTGs given the 2021 BiOp properly analyzes the PDE in light of BOEM’s reasonable request for consultation.

<sup>8</sup> The 2021 BiOp considered incidental take of right whales resulting from the worst-case scenarios: (1) the modeled cumulative exposures for Level A (cSEL) were slightly higher in the maximum design scenario with two piles installed per day; but (2) the modeled exposures for Level B were higher in the maximum design scenario with one pile installed per day, because more pile-driving days would be necessary. NMFS 17345-47.

meters. NMFS 17343, Table 7.1.9.<sup>9</sup> NMFS/GAR reasonably concluded that, given the required enhanced right whale monitoring and mitigation measures, it is extremely unlikely that a right whale would be exposed to Level A pile-driving noise within this Level A (peak) noise impact area.<sup>10</sup> NMFS 17358. Contrary to Plaintiffs' assertions, when predicting effects of the action on right whales, the 2021 BiOp properly relies on the number of foundations to be driven into the seabed according to the Project design envelope, and reasonably specified incidental take according to worst-case scenarios.

**B. The 2021 BiOp Uses the Best Available Scientific Data.**

The ESA and its implementing regulations require NMFS to use the “best scientific and commercial data available” in rendering its biological opinion. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(d); *Strahan*, 967 F.Supp. at 593. Based on the best scientific and commercial data

---

<sup>9</sup> As explained further *infra* at n.10, modeling the maximum design scenario (90 monopile foundations, 12 jacket foundations, and 2 foundations driven per day), with the time of year restriction (no pile driving January 1-April 30) and 6-dB sound attenuation, but no other mitigation measures, suggests that 1.39 right whales may be exposed to sound above the cumulative Level A harassment threshold. *See* NMFS 17346, Table 7.1.12; 17351, Table 7.1.16. However, after reviewing the additional, required minimization measures for right whales and information establishing the expectation that right whales would avoid aversive stimuli (i.e., any individuals would avoid an ensonified area or not remain there for the duration of a day's pile driving and thus were extremely unlikely to obtain potentially harmful cumulative exposures), NMFS 17351-17356, 17358-17361, NMFS/GAR reasonably concluded those additional measures and whale avoidance of aversive stimuli “significantly reduce this risk. Based on consideration of the measures and their anticipated effectiveness, we agree with the conclusion reached by OPR in the notice of proposed and issued IHA that exposure of any right whales to noise above the Level A harassment threshold will be avoided. As such, we conclude that it is extremely unlikely that any right whales will experience permanent threshold shift or any other injury.” NMFS 17358.

<sup>10</sup> In the course of briefing, NMFS discovered an error in text at NMFS 17358, which identified 2.5 meters (instead of 4 meters) as the radial distance to the Level A (peak) exposure threshold for pile driving a jacket foundation. NMFS 17351, Table 7.1.16's column headings were switched, resulting in modeled exposure of 1.39 right whales to be mislabeled as associated with the Level A (peak) noise threshold (instead of the Level A (SEL) threshold). NMFS 17200, Table 3.4, and NMFS 17343, Table 7.1.9's specification of 4 meters (not 2.5 meters) as the radial distance to the Level A (peak) exposure threshold for pile driving a jacket foundation are correct. NMFS 17346, Table 7.1.12's association of 1.39 right whales with modeled Level A (SEL) noise exposure is also correct. An errata sheet is filed herewith.

available, a biological opinion reviews the “effects of the action” and, based on the effects of the action, concludes “whether the action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.” 50 C.F.R. § 402.14(g). A consequence of an action must be “reasonably certain to occur” to be considered an effect of the action. *Id.* § 402.02 (“A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur.”). Incidental take analyzed by NMFS must also be “reasonably certain to occur.” *Id.* § 402.14(g)(7).<sup>11</sup> In support of their respective actions to issue the 2021 BiOp and approve the COP, NMFS/GAR and BOEM properly considered the best available scientific and commercial data to assess the effects of the Vineyard Wind Project—including mitigation—that are reasonably certain to occur, consistent with the ESA and the consultation regulations.

*1. The 2021 BiOp considers and applies the Quintana-Rizzo study.*

Consistent with the ESA and its implementing regulations, 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(d), (g)(8), BOEM’s decision to approve the Vineyard Wind COP is based on the best scientific and commercial data available, as analyzed in two biological opinions issued by NMFS/GAR in 2020 and 2021, respectively. The 2021 BiOp evaluates a number of new

---

<sup>11</sup> Rather than analyzing whether effects are “reasonably certain to occur,” Plaintiffs’ arguments about alleged adverse effects on right whales hang largely on speculative statements in scientific papers about what “could” happen in the event of full development of several offshore wind projects, *without* sufficient mitigation to minimize and avoid effects on right whales, throughout the Rhode Island/Massachusetts Wind Energy Area. *See* Doc. 105 at 36. For example, the Quintano-Rizzo study opines about the potential effects of commercial offshore wind energy leases in southern New England (not the Vineyard Wind Project specifically). *Id.* at 30 quoting NMFS 53319. Quintano-Rizzo opines that “this enormous development **could** have a local impact.” *Id.* (emphasis added). *See also id.* at 30-31 quoting NMFS 53320 (“[T]hese perturbations **could** affect the use of this region by right whales. . . .”) (emphasis added); *id.* at 38 citing BOEM\_00194539 (“[S]hifts in right whale feeding patterns **could** bring the whales into potential conflict with commercial fishing.”) (emphasis added). Under the best available scientific and commercial data standard, it is not enough to rely “on speculation or surmise.” *Bldg. Indus. Ass’n v. Norton*, 247 F.3d 1241, 1246-47 (D.C. Cir. 2001).

publications on North Atlantic right whales that became available after the 2020 BiOp was written. NMFS 17686. These new publications included the Quintana-Rizzo study, NMFS 53318-35, which assessed right whale use of Southern New England waters, including the Massachusetts and Rhode Island offshore wind lease areas. *See* NMFS 17686-98.

The 2021 BiOp discusses the study’s observation that “right whale occurrence increased during the study period with whales sighted in the area nearly every month since 2017.” NMFS 17295.<sup>12</sup> Contrary to Plaintiffs’ assertion, Doc. No. 105 at 32, in the Environmental Baseline section, the 2021 BiOp notes that the Quintana-Rizzo study found “[h]otspots’ of higher use within the [study] area varied between years and seasons, likely due to variable distribution of prey” and that the “authors conclude that the mixture of movement patterns within the population and the geographical location of the study area suggests that the area could be a feeding location for whales that stay in the mid-Atlantic and north during the winter–spring months and a stopover site for whales migrating to and from the calving grounds.” NMFS 17295.<sup>13</sup>

Plaintiffs appear to suggest that the 2021 BiOp should have gone further by quoting

---

<sup>12</sup> Contrary to Plaintiffs’ assertion that the 2021 BiOp “never engages with” the specific findings of the Quintana-Rizzo study, Doc. No. 105 at 30, the 2021 BiOp cites the study at least five times. *See* NMFS 17295, 17297, 17362, 17363, 17468. And NMFS did not merely cite the Quintana-Rizzo study--NMFS considered whether the Quintana-Rizzo study would change any conclusions of the 2020 BiOp and concluded that it did not. “The information provided in the paper is consistent with the patterns of distribution, abundance, and behavior that were described in our 2020 Opinion, and supports the position that the time of year when pile driving is prohibited (January – April) is the time of year with the greatest density of right whales in the lease area.” NMFS 17687.

<sup>13</sup> Plaintiffs’ characterization of the Vineyard Wind project area as part of a “hot spot” where right whales congregate improperly conflates the Vineyard Wind project area with the rest of the larger MA/RI Wind Energy Area (“MA/RI WEA”) discussed in the Quintana-Rizzo study. *See* Doc. No. 105 at 8 citing NMFS 53321-22, 53326. To the extent that Quintana-Rizzo made any finding with respect to the MA/RI WEA, it is not necessarily true for the Vineyard Wind project area. Moreover, the Nantucket Shoals area described in the Quintana-Rizzo paper as a location of summer right whale sightings, *see* NMFS 53326 (Figure 5), is located outside the footprint of the Project area. NMFS 17468.

specific passages from the Quintana-Rizzo study that purport to highlight the importance of the MA/RI WEA to right whales for foraging and other activities. Doc. No. 105 at 30-32. It was unnecessary for the 2021 BiOp to quote repeatedly from the study in this fashion. It is clear that the 2021 BiOp relies on the Quintana-Rizzo study as part of the best available scientific information and that the 2021 BiOp's conclusions are consistent with that paper.<sup>14</sup> The 2021 BiOp concludes that the "responses to pile driving noise are anticipated to be short-term" (NMFS 17362), "the potential for effects to social behavior is very low" (NMFS 17363), "even if mating does occur in the lease area we would expect it to occur in the winter months when pile driving will not occur," (*id.*), and then continues an evaluation of the effects of the disruption on feeding, resting, migration, and other factors for four additional pages before concluding that instances of behavioral response are likely to amount to harassment, but not injure or kill any right whales. NMFS 17363-67.

To the extent that the Quintana-Rizzo study opines that development of wind energy in the MA/RI WEA may result in habitat changes that may affect right whales over the long term, it is important to note that the Quintana-Rizzo study does not purport to evaluate the effects of the Vineyard Wind Project specifically. Rather, the study describes the potential effects of the full build-out of "hundreds" of wind turbines throughout the entire MA/RI WEA. *See* NMFS 53320.<sup>15</sup>

---

<sup>14</sup> The 2021 BiOp's Effects Analysis relies on the Quintana-Rizzo study when it identifies what behaviors are relevant to the analysis of Project effects: "[w]hen in the WDA where noise exposure would occur, one of the primary activities North Atlantic right whales are expected to be engaged in is migration. However, we also expect the animals to perform other behaviors, including opportunistic foraging, resting, and socialization (Quintana-Rizzo et al. 2021)." NMFS 17362.

<sup>15</sup> Although the Quintana-Rizzo study opines that potential habitat changes resulting from build-out with other wind energy projects could affect the use of this region by right whales, *see* NMFS 53319-20, the study does *not* suggest that development of wind energy is incompatible with protection of right whales. The study concludes that "[i]mplementing mitigation measures by all lease-holding companies will be crucial." NMFS 53332. Plaintiffs' arguments in this case overlook the binding mitigation measures emanating from the COP, BOEM's conditions of COP

By contrast, the 2021 BiOp evaluates the effects of the Vineyard Wind Project specifically. NMFS 17504-05, 17688-89.<sup>16</sup> In addition to analyzing the effects of pile-driving noise from Project construction, the 2021 BiOp considers the other potential effects of operations and maintenance pursuant to the COP approval with conditions throughout the life of the Project. NMFS 17400-504.<sup>17</sup> The 2021 BiOp reasonably concludes that the Vineyard Wind Project is not likely to reduce the number of right whales, affect their fitness and reproductive success, or change the distribution of right whales in the action area or throughout their range. NMFS 17531. Nothing in the Quintana-Rizzo study, or Plaintiffs' arguments based on that study, contradicts this conclusion.

**2. *The 2021 BiOp considers the best available scientific information on the potential for entanglement of right whales in fishing gear.***

---

approval, which include compliance with the IHA, as well as the RPMs specified in the 2021 BiOp' Incidental Take Statement ("ITS") to minimize the impacts of any exempted incidental take of right whales. BOEM's selection of appropriate mitigation measures among various options and adoption of those in the IHA, as well as NMFS/GAR's analysis of them, are exactly the type of administrative actions in which it is appropriate for agencies to bring to bear their extensive expertise. *Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 103 (1983); *FCC v. Nat'l Citizens Comm. for Broad.*, 436 U.S. 775, 813-14 (1978).

<sup>16</sup> As explained in our opening memorandum, Doc. No. 96 at 20, the effects of future Federal actions such as other wind energy projects in the MA/RI WEA will undergo ESA Section 7 consultation later, if and when they occur. As a Section 7 consultation is completed on a wind farm, "the effects of the action associated with that project would be considered in the Environmental Baseline for the next one in line for consultation." NMFS 17292. *See also* NMFS 17688-89.

<sup>17</sup> Contrary to Plaintiffs' assertion, Doc. No. 105 at 30-31, the 2021 BiOp also considers the potential effects of habitat "perturbations" as described in the Quintana-Rizzo study, NMFS 53320, that may result from the Vineyard Wind Project. As explained in the Transmittal Memorandum, NMFS specifically responded to arguments about such perturbations as described in the ESA "notice of intent to sue" letter, Doc. No. 97-2, submitted by Plaintiff Nantucket Residents Against Turbines ("ACKRATS"):

We explain in the jeopardy analysis that we do not anticipate the project to result in the reduction in fitness to any individual right whale and that we do not anticipate any population level consequences. It is unclear what ACKRATS believes is missing in our analysis. ACKRATS present no information or evidence that there will be any other type of take or that the temporary behavioral disturbance (harassment) of 20 right whales will have fitness consequences to individuals or any population level consequences.

NMFS 17707.

Vineyard Wind’s fishery monitoring surveys are part of its comprehensive assessment of potential effects of the Vineyard Wind Project. NMFS 16644, 17198.<sup>18</sup> Based on time-of-year restrictions coinciding with the lowest density and numbers of right whales, decreased soak time, type of rope, breakaway mechanisms, prohibition on at-sea storage of gear, and survey monitoring to date, NMFS reasonably concluded in the 2021 BiOp that no incidental take of right whales is anticipated or authorized as a result of the fisheries resource surveys using trap and pot gear. NMFS 17482. Plaintiffs identify no scientific information that would have changed the effects analysis.

Plaintiffs suggest that the 2021 BiOp should have further considered the possibility that right whales will become entangled in existing fixed fishing gear as a result of soft-start pile-driving procedures. Doc. No. 105 at 33.<sup>19</sup> Contrary to Plaintiffs’ assertion, the purpose of soft-start procedures is not to force right whales to flee from the WDA; soft-start procedures would instead be initiated after the clearance zone is already determined to be clear. NMFS 17358. “Pile driving would only commence once [protected species observers (“PSOs”)] have declared the respective

---

<sup>18</sup> Contrary to Plaintiffs’ assertion that the 2021 BiOp “does not take the cues provided by the Atlantic Large Whale Take Reduction Team [TRT] Key Outcomes Memorandum,” *see* Doc. No. 105 at 33, the memorandum informed the agency actions at issue in this case. This unpublished memorandum summarizes discussion at a meeting convened by NMFS, *see* BOEM\_0194534, and the memorandum is among the references for the FEIS. BOEM\_0069160. Moreover, the TRT is an advisory body, and it is ultimately each agency’s responsibility to meet its statutory mandates. *Dist. 4 Lodge of the Int. Ass’n of Machinists & Aerospace Workers Loc. Lodge 207 v. Raimondo*, 18 F.4th 38, 44 (1st Cir. 2021). Neither NMFS/GAR nor BOEM need to “take cues” from TRT meeting notes in order to prepare an adequate analysis of whether there would be any change in entanglements and vessel strikes caused by the proposed offshore wind action. NMFS and BOEM are critically aware of the danger of right whale entanglement and ship strikes, and the TRT Key Outcomes Memorandum is not relevant to the BiOp’s analysis or BOEM’s reliance on it.

<sup>19</sup> As part of their public comments and ESA notice of intent to sue letters, Plaintiffs do not mention any alleged change in entanglement risk to right whales that would not occur but for the proposed action. Therefore, such claims are not properly before the Court. Even if the Court considers Plaintiffs’ claims, the record before the Court confirms that the 2021 BiOp appropriately considers the best available scientific and commercial information on the potential for entanglement of right whales in fixed fishing gear resulting from the Vineyard Wind project.

clearance zones clear of marine mammals. Marine mammals observed within a clearance zone will be allowed to remain in the clearance zone (*i.e.*, must leave of their own volition). . . .” NMFS 17354. As with the fisheries resource surveys using trap and pot gear, pile driving would not occur during the period of time when the highest densities of right whales are in the area. NMFS 17353. The BiOp notes that fishing occurs throughout the action area and that the WDA occupies a small portion (<1%) of Area 537. NMFS 17312.<sup>20</sup> Plaintiffs fail to provide any scientific or commercial information on the amount of gear in the WDA compared to the rest of Area 537. Nor do they provide any information or analysis demonstrating that an entanglement outside the WDA would not occur but for Vineyard Wind’s pile driving and is reasonably certain to occur. Therefore, Plaintiffs have failed to carry their burden of proof.

**3. *The 2021 BiOp considers the “2020 Annual Report Card” and the 2020 Marine Mammal Stock Assessment.***

Plaintiffs incorrectly suggest that NMFS failed to consider the 2020 Annual Report Card (Pettis et al. 2021) and the 2020 Marine Mammal Stock Assessment because the 2021 BiOp does not quote from these documents in the manner that Plaintiffs would prefer. Doc. No. 105 at 33-34. In actuality, NMFS both considered and cited the 2020 Annual Report Card in the 2021 BiOp. NMFS 17232 (citing Pettis et al. 2021). The 2021 BiOp indicates that it relied on the 2020 Marine Mammal Stock Assessment, NMFS 17231, and includes citations to it (*i.e.*, Hayes et al. 2021) to the extent it represents the best available scientific information. *See, e.g.*, NMFS 17293, 17312, 17316.<sup>21</sup> Moreover, the 2021 BiOp identifies up-to-date right whale mortalities, births, and other

---

<sup>20</sup> As noted in our opening memorandum, right whale movement away from pile-driving noise due to the soft-start procedures would not increase entanglement risk by “pushing” whales from the WDA into Statistical Area 537, because the Project area where pile driving is happening is itself located within Statistical Area 537. *See Data Explorer, NORTHEAST OCEAN DATA*, available at <https://www.northeastoceandata.org/AzfKsltQ> (last visited Nov. 23, 2022).

<sup>21</sup> The 2020 Marine Mammal Stock Assessment (*i.e.*, Hayes et al. 2021) was based on information through January 2018. NMFS 17234. When appropriate, the 2021 BiOp uses even

demographic factors, as well as the resulting population trends, in the Status of the Species and Environmental Baseline sections, NMFS 17230-37, 17293-97, followed by an evaluation of the Project's effects in that context. NMFS 17321. NMFS's determination as to which studies are the "best available" is a scientific determination deserving deference. *Ctr. for Biological Diversity* 977 F.Supp.2d at 74-75.

**4. *Barkaszi 2021 is neither part of the best available scientific or commercial information nor in the administrative record.***

Plaintiffs spend several pages discussing an extra-record document, MARY J. BARKASZI ET AL, CSA OCEAN SCIS. INC., PAMGUARD QUALITY ASSURANCE MODULE FOR MARINE MAMMAL DETECTION USING PASSIVE ACOUSTIC MONITORING (2020) ("the Barkaszi report"), available at [https://gissserver.intertek.com/JIP/DMS/ProjectReports/Cat4/PAMGuard/JIP-Proj4.9.2\\_PAMGuardAssuranceModule\\_MM\\_DetectionPAM\\_2020.pdf](https://gissserver.intertek.com/JIP/DMS/ProjectReports/Cat4/PAMGuard/JIP-Proj4.9.2_PAMGuardAssuranceModule_MM_DetectionPAM_2020.pdf) (last visited Nov. 23, 2022). Doc. No. 105 at 34-38. The Court should strike Plaintiffs' untimely and extra-record references to the Barkaszi report.<sup>22</sup> Even if the Court were to consider the Barkaszi report, nothing in that report undermines the conclusions in the 2021 BiOp. The Barkaszi report discusses a specific type of towed array equipment and a specific software system for PAM, which might not

---

more recent scientific studies, such as Pace 2021, consistent with the requirement to use the best available scientific information. NMFS 17233-34, including n.10.

<sup>22</sup> As an unpublished report issued by an oil and gas industry association, it is unclear whether opinion testimony based on this report would be admissible pursuant to Federal Rule of Evidence 702 and pursuant to the criteria set forth in *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993). However, it is unnecessary to reach *Daubert* issues, because the document is outside the administrative record and not subject to review in this case. "The task of the reviewing court is to apply the appropriate APA standard of review, 5 U.S.C. § 706, to the agency decision based on the record the agency presents to the reviewing court." *Fla. Power & Light Co. v. Lorion*, 470 U.S. 729, 743-44 (1985); *Town of Winthrop v. FAA*, 535 F.3d 1, 14 (1st Cir. 2008). Moreover, Plaintiff did not move to supplement the administrative record and, in any event, such a motion would be untimely. More than 30 days have passed since Federal Defendants produced the administrative records or any supplements thereto. *See* Doc. No. 58 ¶ 2 ("Any motions related to disputes about the administrative record . . . must be filed no more than 30 days after service of the administrative record.").

be used by Vineyard Wind. *See Barkaszi report, cited in Doc. No. 109 ¶ 2.* A towed array (a system of noise-detecting hydrophones towed behind a ship on a cable) is only one type of mobile array. The 2021 BiOp identifies a variety of different types of PAM that might be used, including both moored and mobile systems. NMFS 17476, 17478-9.<sup>23</sup>

Plaintiffs overstate the 2021 BiOp's reliance on PAM as a method to detect right whales. Doc. No. 105 at 37. The 2021 BiOp recognizes that the use of PAM will supplement (not replace) visual monitoring to detect right whales. NMFS 17360 ("PAM can be highly effective at detecting vocalizing marine mammals at greater distances from a source than can be observed by a visual PSO."). NMFS/GAR reasonably decided to credit PAM as part of the suite of mitigation measures that together help to reduce pile-driving effects on right whales, avoid Level A harassment and, as a result, support the 2021 BiOp's "no jeopardy" conclusion. NMFS/GAR's analysis of the PAM was reasonable. *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

**5. *The 2021 BiOp considers the effects of operational noise on right whales and explains why Stober and Thomsen 2021 is not part of the best available scientific information for this action.***

NMFS/GAR discussed the Stober and Thomsen 2021 paper, NMFS 57131, both in the 2021 BiOp itself, NMFS 17333, and in the 2021 BiOp Transmittal Memorandum, NMFS 17709. NMFS/GAR fully explained the basis of its decision to use findings from hydroacoustic monitoring in situ of operational noise from the Block Island Wind Farm ("BIWF"), which uses direct-drive technology similar to the wind turbine generators planned for Vineyard Wind. NMFS 17333. In sum, compared to Stober and Thomsen 2021, the BIWF monitoring information

---

<sup>23</sup> As specified by the terms and conditions of the ITS accompanying the 2021 BiOp, Vineyard Wind must prepare a PAM Plan that describes all equipment, procedures, and protocols related to the required use of PAM. NMFS 17566. This plan must be submitted to NMFS and BOEM for review and approval at least 90 days prior to the planned start of pile driving. *Id.*

provided better, real-world information from a wind farm in the MA/RI WEA.<sup>24</sup> The 2021 BiOp’s explanation of reliance on the BIWF study is reasonable and Plaintiffs fail to identify any relevant scientific information that was not considered, explain why other scientific information is better than what NMFS/GAR relied on, or demonstrate how reliance on allegedly better information would make any difference to the analysis.<sup>25</sup> *See Bldg. Indus. Ass’n*, 247 F.3d at 1246-47 (rejecting claims under ESA “best available data” standard where challenger failed to point to any superior data that was ignored by expert agency).

**C. The 2021 BiOp Considers the Effects of Project-Related Vessel Strikes.**

Consistent with the reasoning in cases construing the sufficiency of mitigation measures supporting a BiOp’s “no jeopardy” finding, such as *Center for Biological Diversity v. Salazar*, 804 F.Supp.2d 987, 1001 (D. Ariz. 2011), the mitigation measures in the 2021 BiOp for avoidance of Project-related vessel strikes are: (i) “reasonably . . . certain to occur,” (ii) “capable of implementation,” and (iii) “address the threats to the species in a way that satisfies the jeopardy . . . standard” (citation omitted). As to being reasonably certain to occur, BOEM has incorporated the COP’s protected species detection and vessel strike avoidance measures as conditions of COP

---

<sup>24</sup> “Operational noise from the direct-drive WTGs at the BIWF were generally lower than those observed for older generation WTGs, particularly when weighted by the hearing sensitivity of different marine mammal species.” NMFS 17333. NMFS further explained that the underwater noise levels estimated by Stober and Thomsen were “based on extrapolation that may not be indicative of real world conditions.” NMFS 17709. Moreover, Stober and Thomsen 2021 recognizes that operational noise is less than shipping noise. *Id.* “[T]his suggests that in areas with consistent vessel traffic, such as the Vineyard Wind lease area, operational noise may not be detectable above ambient noise.” *Id.*

<sup>25</sup> Contrary to Plaintiffs’ assertion, *see* Doc. No. 105 at 38, the statement in the 2021 BiOp concerning “unresolved uncertainty” in the methods of the Stober and Thomsen 2021 paper is not an attempt to wave away the import of that study. The 2021 BiOp explains that “[w]ithout information on soundscape, water depth, sediment type, wind speed, and other factors, it is not possible to determine the reliability of any predictions from the Stober and Thomsen paper to the Vineyard Wind project.” NMFS 17333.

approval. BOEM\_0077189-94. BOEM also separately and explicitly incorporated the IHA and the 2021 BiOp's reasonable and prudent measures as conditions of COP approval. BOEM\_0077152. Mitigation measures including speed restrictions, the use of PSOs, and PAM together ensure that Project-related vessel strikes will be avoided. Doc. No. 96 at 31-32. The 2021 BiOp analyzes the potential for vessel strikes over the lifetime of the Project and reasonably concluded that it is "extremely unlikely that a project vessel will collide with a whale." NMFS 17428. Because no injury or mortality is anticipated or authorized as a result of Project-related vessel strikes, the 2021 BiOp's "no jeopardy" determination remains reasonable and well supported.

Plaintiffs offer nothing to undercut the sufficiency of the vessel strike mitigation measures. Doc. No. 105 at 39-43. Plaintiffs mischaracterize, and therefore understate, the applicable vessel speed restrictions. Contrary to Plaintiffs' suggestion, *id.* at 40, not all crew transport vessels will be eligible for an exemption from the speed restriction. Crew transfer vessels may travel at speeds greater than 10 knots only at certain times of the year and in certain geographic areas (such as Nantucket Sound, where right whales are rare, *see* NMFS 17699, 17723). NMFS 17204.<sup>26</sup>

Putting aside the obvious logistical problems<sup>27</sup> that would result from imposing a vessel

---

<sup>26</sup> From November 1 through May 14, crew transfer vessels may travel at more than 10 knots (18.5 kilometers per hour) if: (i) there is at least one visual observer on duty at all times; and (ii) simultaneous real-time PAM is conducted. *Id.* If a right whale is detected within or approaching the transit route, all crew transfer vessels must travel at 10 knots (18.5 kilometers per hour) or less for the remainder of that day. *Id.* Furthermore, Vineyard Wind must submit an acceptable right whale Strike Avoidance Plan in order for crew transfer vessels to travel greater than 10 knots (18.5 kilometers per hour) between May 15 and October 31 for periods when Dynamic Management Areas are established. NMFS 17427.

<sup>27</sup> Given the 50–60 mile distance from port to the WDA, traveling at 10 knots or less would take approximately 4.5 to 5 hours each way (9–10 hours total). NMFS 3546. It would be infeasible for workers to spend 10 hours of a 12-hour workday in transit. *Id.* Plaintiffs' suggestion that Vineyard Wind could theoretically provide vessels with crew cabins for overnight trips, *see* Doc. No. 105 at 41 n.10, does not render the existing crew transport procedures unlawful. The ESA does not require action agencies to review alternative actions and adopt the action that will be most beneficial to the species. The Act requires only that the action that is taken avoids jeopardy. NMFS/GAR's 2021 BiOp analyzes the action proposed by BOEM, and BOEM reasonably relied

speed restriction with no exceptions, the 2021 BiOp explains the basis for reasonably concluding that exempting *some* crew transport vessels from the 10-knot speed restriction *when certain conditions are met* is not likely to result in a vessel strike. Because the most intense period of vessel traffic would occur during the construction phase, *see* NMFS 17409, and the majority of Project vessel traffic will occur within the Project area, *see* NMFS 17194, and vessel transit corridors to New Bedford and Vineyard Haven, *id.*, and because pile-driving construction is limited to the time of year when right whales are less likely to be in the Wind Development Area, *see* NMFS 17353, it follows that construction crew transport vessels will be running in areas and at times of the year when risk of strike is less likely.

In addition to the speed restrictions, all vessels, including crew transport vessels, are subject to other requirements including: training for all vessel observers and captains; using PSOs and PAM to monitor for right whales; maintaining a minimum separation distance; and taking action as necessary to avoid violating the relevant separation distances. NMFS 17203-06. Plaintiffs highlight the limitations of the speed restriction, and the use of PSOs, and PAM as if each of these mitigation measures were the only measure adopted to avoid vessel strikes and were not linked to right whale presence. Doc. No. 105 at 42-43. However, NMFS considered the benefits of these measures in concert and reasonably concluded that, “[c]ombined with the requirements for vessel speed restrictions . . . these measures will make it extremely unlikely that a project vessel will collide with a whale.” NMFS 17428.

**D. The 2021 BiOp Considers Potential Effects of Pile-Driving Noise on Right Whales.**

---

on that BiOp when approving the COP with conditions short of requiring overnight accommodations on the crew vessels. *Cf. Sw. Ctr. for Biological Diversity v. U.S. Bureau of Reclamation*, 143 F.3d 515, 523 (9th Cir. 1998) (ESA does not require agency to select what the Plaintiffs may deem to be the “best” alternative or the one that would most effectively protect the species from jeopardy).

The 2021 BiOp analyzes a suite of measures, including “soft start” procedures imposed as conditions of Project approval, to avoid and minimize exposure of ESA-listed whales to pile-driving noise during construction. Doc. No. 96 at 14. NMFS explained that “[e]ffects to distribution will be limited to avoiding the area with disturbing levels of noise during pile driving. There will be no change to the overall distribution of right whales in the action area or throughout their range.” NMFS 17531. To the extent that an individual right whale may be exposed to pile-driving noise and harassed as a consequence of BOEM-authorized pile-driving activities (including the soft-start procedures), such incidental harassment is accounted for as part of the authorized harassment of 20 right whales pursuant to the IHA, NMFS 17350, and the BiOp’s ITS. NMFS 17561.

***1. The 2021 BiOp properly determines that pile driving, including its lawful soft-start procedures, was likely to result in the incidental take (harassment) of 20 right whales.***

Soft-start procedures are part of a suite of measures that begin with ensuring right whales are not detected by trained observers and sophisticated technologies in the clearance zone for a full 60 minutes before pile driving commences. Inclusion of soft-start procedures at the initiation of pile driving was included in the COP submitted to BOEM, and is required by BOEM’s COP approval with conditions (section 5.7.6), as a reasonable precautionary effort to decrease potential construction impacts. There are a number of reasonable ways to think about soft-start procedures, but contrary to Plaintiffs’ characterization, soft-start procedures are neither an impermissible intentional “hazing,” Doc. No. 105 at 43-45, nor designed to “force” or “clear[]” right whales out of the Project area. *Id.* at 43-44. Rather, soft-start procedures are an integral part of pile driving intended to reduce impacts to right whales that may be in the area to be ensonified, not a separate activity intended to scare right whales. From a common-sense point of view, and as explained in

our opening memorandum, Doc. No. 96 at 14 n.12, given pile driving will occur and it has to start at some level of intensity, it is precautionary to have the initial hammer strikes be at reduced capacity than at full capacity, be slower than usual, and be followed by a waiting period.<sup>28</sup> Indeed, at least one court included similar, “ramp-up” procedures as part of injunctive relief to avoid injury to marine mammals as a result of Navy sonar exercises. *Ocean Mammal Inst. v. Gates*, 546 F.Supp.2d 960, 994 (D. Haw. 2008) (“Before initiating any exercise utilizing MFA sonar, the Navy shall gradually ‘ramp up’ sonar transmissions, with sound levels starting at sufficiently low levels and gradually increasing to allow marine mammals to depart the area before transmissions reach harmful levels.”); cf *Native Village of Chickaloon v. National Marine Fisheries Serv.*, 947 F.Supp.2d 1031, 1042-43 (D. Alaska 2013) (describing “ramp-up” procedures).

From an MMPA perspective, soft-start procedures are part of a suite of management measures, otherwise known as “mitigation,” required by the IHA to avoid and minimize the potential exposure of right whales to pile-driving noise under the MMPA’s least practicable adverse impact standard.<sup>29</sup> The 2021 BiOp considers NMFS/OPR’s authorization of MMPA

---

<sup>28</sup> If a right whale were moving toward an area, which is to be ensonified by pile driving, these initial hammer strikes may warn and deter the right whale from continuing toward the area (i.e., avoid) and thereby decrease the exposure risk. Likewise, if a right whale were within an area which is to be ensonified, but is not picked up by monitoring methods, the right whale may move farther away prior to the noise reaching levels that may be injurious. And, of course, if no right whales are in the area which is to be ensonified, given the prior clearance procedures and monitoring, the soft-start procedures would have no effect on them.

<sup>29</sup> See NMFS 3542 (mitigation), NMFS 3544 (soft start); 16 U.S.C. § 1371(a)(5)(D)(ii) (“The authorization for such activity shall prescribe, where applicable— (I) permissible methods of taking by harassment pursuant to such activity, and other means of effecting the least practicable impact on such species or stock”). As the notice of IHA issuance notes, “[t]he mitigation strategies described below are consistent with those required and successfully implemented under previous incidental take authorizations issued in association with in-water pile-driving activities (e.g., ramp-up, establishing harassment zone, implementing shutdown zones, etc.)” NMFS 3542.

incidental take<sup>30</sup> subject to such methods or means.

From an ESA Section 7 perspective, the 2021 BiOp recognizes that BOEM's and NMFS/OPR's requirements for pile driving to begin with soft-start procedures would reduce effects by causing right whales to either avoid entering the area or move out of it. NMFS 17359 ("The use of the soft start gives whales near enough to the piles to be exposed to the soft start noise a 'head start' on escape or avoidance behavior by causing them to swim away from the source"). Nevertheless, Plaintiffs allege that the BiOp's Incidental Take Statement unlawfully exempts harassment that is not incidental under the ESA.

In their critique of the 2021 BiOp's exemption of modeled "take" by harassment, Plaintiffs ignore two important points. First, NMFS/GAR necessarily incorporated the IHA's measures designed to satisfy the MMPA's "least practicable adverse impact" standard.<sup>31</sup> Second, under the ESA, "[i]ncidental take refers to takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant." 50 C.F.R. § 402.02. Whether the "activity conducted by the Federal agency or applicant" is considered to be the developer's construction of a wind farm generally or pile driving with soft start specifically, BOEM's consideration of approving a COP, or NMFS/OPR's consideration of the developer's request for an IHA, the result is the same—NMFS/GAR's treatment of the harassment of up to 20 right whales as incidental take under the ESA is lawful. The "take" by harassment results from the

---

<sup>30</sup> The MMPA implementing regulations define "incidental taking" to mean an "accidental taking." 50 C.F.R. § 216.103. "This does not mean that the taking is unexpected, but rather it includes those takings that are infrequent, unavoidable or accidental." *Id.*

<sup>31</sup> Specifically, the ESA requires that, "if an endangered species or threatened species of a marine mammal is involved, [and] the taking is authorized pursuant to section 1371(a)(5) of this title," the Secretary shall provide an Incidental Take Statement that, "in the case of marine mammals, specifies those measures that are necessary to comply with section 1371(a)(5) of this title with regard to such taking." 16 U.S.C. § 1536(b)(4). NMFS/GAR, under authority delegated to it by the Secretary, did just that.

activity, but is not the purpose of the activity—regardless of whether the activity is defined as constructing a wind farm, pile driving, using soft-start procedures, approving a COP, or approving an IHA.<sup>32</sup> Thus, contrary to Plaintiffs’ argument, the 2021 BiOp properly exempts any incidental take by harassment caused by soft-start procedures from the ESA’s prohibition against “take,” 16 U.S.C. §§ 1538(a)(1)(B), 1536(b)(4), as are Reasonable and Prudent Measure 1 and its terms and condition 1 in the ITS, which require adherence to the measures in the final MMPA IHA. NMFS 17564-65. *See also* 16 U.S.C. § 1536(b)(4).

**2. *NMFS properly accounted for incidental harassment of right whales that may occur as a result of sound exposure within noise impact areas.***

Plaintiffs’ arguments are based on an incorrect premise that a right whale would suffer Level A harassment and injury immediately upon entering the Project’s Level A harassment (SEL) noise impact area, as delineated by an isopleth (line on the map), which may extend in a 7.25-kilometer radius around jacket pile foundations. Doc. No. 105 at 46 citing BOEM\_0077442. As explained in the notice of issuance of the IHA, “[t]his in fact is not the case, as the distance to the [permanent threshold shift] isopleth represents the distance at which the animal would have to remain during installation of all four piles” constituting a jacket foundation. NMFS 3518. *See also* NMFS 17187, Table 3.1 (1 jacket foundation consists of 3-4 pin piles; only 1 jacket foundation installed per day<sup>33</sup>). Thus, the 7.25-kilometer area corresponds to the area where Level A

---

<sup>32</sup> The purpose of constructing a wind farm is to generate electricity. The purpose of pile-driving is to sink foundations into the seabed. The purpose of soft start procedures is to protect marine wildlife. The purpose of approving a COP is to allow construction and operation of a wind farm. And, the purpose of issuing an IHA is to authorize the harassment of marine mammals under the MMPA.

<sup>33</sup> The maximum design scenario in Table 7.1.12 assumes 2 monopiles, not 2 jackets, would be installed per day. “Vineyard Wind and BOEM have stated that installation of two monopoles [sic] per day may occur.” NMFS 17349. “[T]he maximum number of jacket foundations modeled per day was one (four jacket [pin] piles).” NMFS 17347.

harassment and injury would result after cumulative exposure during a 24-hour period. *See* NMFS 3518; NMFS 17343, Table 7.1.9. The modeled radial distance from the jacket foundation within which a right whale would need to stay in order to accumulate enough noise exposure to result in Level A harassment is 7.25 kilometers considering 6-dB sound attenuation as the only minimization measure, yet only one right whale was predicted to be exposed to noise above the Level A harassment threshold. NMFS 17358. However, PAM and vessel-based or aerial surveys will help ensure that right whales are not in proximity to pile-driving operations. *Id.* After independently considering the benefits of the additional required measures, NMFS/GAR reasonably concluded that it is “extremely unlikely” that a right whale would be exposed to Level A pile-driving noise within this cumulative Level A noise impact area. *Id.*<sup>34</sup> Furthermore, under the terms of the IHA issued by NMFS/OPR, Vineyard Wind must implement noise attenuation devices during all impact pile driving. NMFS 3495. Vineyard Wind must take sound field verification measurements and apply additional sound attenuation measures if the distances to the isopleths corresponding to Level A and/or Level B harassment thresholds are greater than the distances predicted by modeling. *Id.*; NMFS 3519.

NMFS/OPR explained in the notice of issuance of the IHA that “the modeling results represent likely zones by which we identify the potential for [permanent threshold shift] and behavioral harassment to occur.” NMFS 3518. To the extent that a right whale may experience Level B harassment as a result of exposure to pile-driving noise, such incidental harassment is accounted for as part of the authorized harassment of 20 right whales pursuant to the IHA, NMFS

---

<sup>34</sup> By contrast, the area where instantaneous exposure to pile-driving noise may result in Level A harassment extends only 17 meters from a monopile and 4 meters from a jacket with 6-dB sound attenuation. NMFS 17200, Table 3.4; 17343, Table 7.1.9. Again, after reviewing the additional measures required through NMFS/OPR’s and BOEM’s actions, NMFS/GAR reasonably concluded that it is “extremely unlikely” that a right whale would be exposed to Level A pile-driving noise within this very limited peak Level A noise impact area. NMFS 17358.

3510, and the BiOp's ITS. NMFS 17561.

Plaintiffs also question the sufficiency of PAM procedures. Doc. No. 105 at 46-47.<sup>35</sup> In sum, the 2021 BiOp acknowledges the limitations of PAM. But, contrary to Plaintiffs' suggestion, the PAM is not the only measure available to identify the presence of right whales. Rather, the Project includes multiple mitigation measures to avoid and minimize exposure of right whales to pile-driving noise. Plaintiffs again fail to demonstrate that it was arbitrary and capricious for NMFS/GAR to consider the use of PAM as part of the suite of mitigation measures to reduce pile-driving effects of the action on right whales, avoid Level A harassment and, as a result, support the 2021 BiOp's "no jeopardy" conclusion. *State Farm*, 463 U.S. at 43.

Plaintiffs also miss the mark with their criticisms of the use of PSOs. As to Plaintiffs' arguments that an observer cannot accurately detect and identify a right whale beyond 1,500 meters or under poor visibility conditions, Doc. No. 105 at 46-47, the 2021 BiOp indicates that, at distances more than 1,500 meters from the pile, "the observers ability to detect whales is reduced and observations beyond this distance may be unreliable and incomplete." NMFS 17359. Immediately thereafter, however, it says that this conclusion "is highly dependent on the elevation and visibility provided by the PSO platform and visibility may be such that monitoring a significantly larger area is possible." *Id.* Moreover, the action built in additional PAM measures to

---

<sup>35</sup> Plaintiffs suggest that right whales may evade detection because they exhibit a low "call frequency" and incorrectly assert that the lack of analysis on this topic is a "major defect" in the BiOp. Doc. No. 105 at 46. However, the 2021 BiOp does, in fact, discuss vocalization and recognizes that right whales are at risk of communication masking due to underwater sound because some call types have low source levels. NMFS 17235. The 2021 BiOp also recognizes that certain vocalizations are infrequently produced by right whale mothers and calves, perhaps because the two maintain visual contact until calves are approximately three to four months of age. NMFS 17236.

help ensure that pile driving does not harm right whales.<sup>36</sup> As with Plaintiffs' criticisms of PAM, Plaintiffs fail to demonstrate that it was arbitrary and capricious for the 2021 BiOp to rely on the use of PSOs among a suite of other mitigation measures to minimize and avoid potential exposure of right whales to pile-driving noise. *State Farm*, 463 U.S. at 43.<sup>37</sup> The Court should grant summary judgment in favor of Federal Defendants with respect to Plaintiffs' claims concerning all measures implemented to avoid and minimize effects of right whale exposure to pile-driving noise.

**3. *The 2021 BiOp Describes Requirements For Evaluating When Shutdown Is Technically Feasible.***

The 2021 BiOp describes the specific requirements for evaluating when shutdown is technically feasible, i.e., the BOEM-prescribed conditions for COP approval in accordance with the NMFS-approved IHA. Doc. No. 96 at 38 n.27, NMFS 17355. In response, Plaintiffs suggest

---

<sup>36</sup> For example, PAM is used to supplement visual observation, and there are extra requirements for augmenting PSO monitoring capabilities for pile driving in particular times of year, such as aerial or vessel-based surveys. NMFS 17209-15. Furthermore, the action requires "an Alternative Monitoring Plan that includes measures for enhanced monitoring capabilities in the event that poor visibility conditions unexpectedly arise, and pile driving cannot be stopped. The Alternative Monitoring Plan must also include measures for deploying additional observers, using night vision goggles (for all marine mammals and sea turtles), or using PAM (for marine mammals) with the goal of ensuring the ability to maintain all clearance and shutdown zones in the event of unexpected poor visibility conditions." NMFS 17209-10; *see also* NMFS 17207 ("The Lessee must prepare and submit an Alternative Monitoring Plan to NMFS and BOEM at least 90 calendar days prior to commencing the first pile-driving activities for the Project.").

<sup>37</sup> Plaintiffs also reiterate their arguments based on the Quintana-Rizzo study that the required mitigation measures will be ineffective because right whales may occur in the Project area year round. Doc. No. 105 at 47. Although right whales may be engaged in migration and other behaviors including opportunistic foraging, resting, and socialization when noise exposure would occur, *see* NMFS 17362, social behaviors were observed mainly in winter and spring when pile driving will not occur pursuant to the BOEM-approved COP. NMFS 17363. If mating occurs in the lease area, it would be expected to occur in the winter months when pile driving will not occur. *Id.* Moreover, the time-of-year restrictions are just one component of the suite of mitigation measures required by BOEM as conditions of Project approval, that together support NMFS/GAR's "no jeopardy" determination and BOEM's reliance on the 2021 BiOp to fulfill its ESA duties.

that the override procedures should have been further enumerated in the 2021 BiOp itself rather than incorporated by reference to the IHA or BOEM's COP approval. Doc. No. 105 at 48. Plaintiffs' suggested re-write of the 2021 BiOp would be pointless, as it would lead to an unnecessary paper exercise. The 2021 BiOp specifies the provision in the IHA (4(i)(iv)) with the override procedures, which require a technical engineering and safety assessment using infeasibility as the standard, and then summarizes the procedures as part of the action upon which consultation was requested. NMFS 17355. As required by the ESA, 16 U.S.C. § 1536(b)(4), the 2021 BiOp unambiguously makes compliance with the requirements of the IHA a condition of the BiOp's Incidental Take Statement, specifies that BOEM must require compliance with the IHA through an enforceable condition of the COP approval, and further requires that NMFS/OPR must ensure that all mitigation measures prescribed in its IHA are implemented by Vineyard Wind. NMFS 17565.

Plaintiffs incorrectly assert that there is no regulatory oversight of the lead engineer's decision to veto a shutdown order. Doc. No. 105 at 49. As specified in the IHA, if a right whale is observed at any time by PSOs or personnel on any vessel, Vineyard Wind must report sighting information to the NMFS North Atlantic Right Whale Sighting Advisory System and to the U.S. Coast Guard as soon as feasible, but no longer than 24 hours after the sighting.<sup>38</sup> NMFS 3505. In

---

<sup>38</sup> Furthermore, if a North Atlantic right whale is detected via PAM, the date, time, location (i.e., latitude and longitude of recorder that had detection) of the detection, as well as the recording platform and organization, must be reported as soon as feasible, but no longer than 24 hours after the detection. Full detection data and metadata must be submitted within 48 hours to the NMFS North Atlantic right whale Passive Acoustic Reporting System website, [www.fisheries.noaa.gov/new-england-mid-atlantic/endangered-species-conservation/passive-acoustic-research-atlantic-ocean](http://www.fisheries.noaa.gov/new-england-mid-atlantic/endangered-species-conservation/passive-acoustic-research-atlantic-ocean) (last visited Nov. 22, 2022). NMFS 3506. In addition, Vineyard Wind must compile and submit weekly reports to NMFS during pile driving that document the start and stop of all pile driving daily. *Id.* Vineyard Wind must also submit monthly reports that include a summary of all information in the weekly reports including project activities carried out in the previous month, vessel transits (number, type of vessel, and route), and piles installed, and all observations of marine mammals. *Id.* Finally, the IHA may be modified, suspended, or revoked

sum, there is extensive regulatory oversight with respect to every right whale observation—including every observation that could potentially result in triggering the shutdown procedure—built into the COP approval with conditions, the IHA, and the 2021 BiOp.

**E. The 2021 BiOp’s “No Jeopardy” Finding Accounts for Take in the Form of Incidental Harassment of 20 Right Whales.**

Plaintiffs incorrectly assert that the 2021 BiOp’s “no jeopardy” determination assumes zero take of right whales. Doc. No. 105 at 49. The 2021 BiOp accounts for take in the form of incidental harassment of 20 right whales during Project construction. NMFS 17530.<sup>39</sup> The 2021 BiOp further concludes “[w]e do not expect any serious injury or mortality of any right whale to result from the proposed action. We also do not anticipate fitness consequences to any individual North Atlantic right whales. Because we do not anticipate any reduction in fitness, we do not anticipate any future effects on reproductive success.” NMFS 17531. Finally, the 2021 BiOp also concludes that “[t]here will be no change to the overall distribution of right whales in the action area or throughout their range.” *Id.* These determinations together support the 2021 BiOp’s determination that the Vineyard Wind Project is not likely to jeopardize the continued existence of the right whale. NMFS 17558.

In sum, the action under consultation includes mitigation measures to reduce, minimize, or avoid potential exposure of right whales to harmful noise during Project construction. NMFS

---

if Vineyard Wind fails to abide by the conditions or if NMFS/OPR determines (1) the authorized taking is likely to have or is having more than a negligible impact on the species or stocks of affected marine mammals or (2) the prescribed measures are likely not or are not effecting the least practicable adverse impact on the affected species or stocks and their habitat. NMFS 3509.

<sup>39</sup> As provided in the ESA consultation regulations, 50 C.F.R. § 402.16, the 2021 BiOp requires that NMFS/OPR and BOEM must reinitiate ESA consultation with NMFS/GAR if the amount or extent of taking in the ITS is exceeded. NMFS 17582. *See also Ctr. for Biological Diversity*, 977 F.Supp.2d at 62 (“[I]f the take is exceeded, the NMFS must reinitiate Section 7 consultation to ensure that its ‘no jeopardy’ determination still complies with federal law. 50 C.F.R. §§ 402.14(i)(4), 402.16(a). NMFS would then be obligated to issue a new BiOp—obviously, the court adds, with the latest scientific information at hand.”).

17206-15. After concluding that the anticipated take--the temporary, short-term harassment—of up to 20 right whales incidental to the action was not likely to jeopardize their continued existence, NMFS/GAR identified RPMs and terms and conditions in the ITS applicable to pile driving, among other aspects of the action. NMFS 17564-66. The 2021 BiOp reasonably relied on a carefully selected suite of mitigation measures to avoid exposing right whales to pile-driving noise in arriving at a “no jeopardy” conclusion.

**F. The 2021 BiOp Assesses Effects on Right Whales That Leave the Project Area in Response to Soft-Start Pile Driving.**

Plaintiffs incorrectly assert that the 2021 BiOp fails to consider any biological effects on right whales that temporarily leave the Project area in response to what they characterize as “clearance” activities,” including soft-start pile driving.<sup>40</sup> Doc. No. 105 at 56.

Nevertheless, contrary to Plaintiffs’ assertion, the 2021 BiOp appropriately analyzes the consequences of displacement/behavioral disruption of right whales’ use of the WDA. “Instances of North Atlantic right whale exposure to acoustic stressors are expected to be short-term, not exceeding three hours, with the animal returning to its previous behavioral state shortly thereafter.”<sup>41</sup> NMFS 17530. NMFS/GAR reasoned that “[n]early all studies and experts agree that

---

<sup>40</sup> Plaintiffs propagate the false idea that the Vineyard Wind lease area is the only, or the prime, foraging habitat south of Nantucket. However, Quintana-Rizzo et al (2021) concluded that places with “higher [right whale] use within the [study] area varied between years and seasons, likely due to variable distribution of prey.” NMFS 17295. While the 2021 BiOp recognizes the WDA as a feeding area, it also explains that right whales use other parts of the MA/RI WEA seasonally for feeding, and it emphasizes the importance of Nantucket Shoals for right whale feeding. The BiOp explains that Nantucket Shoals, to the southeast of Nantucket and east of the WDA, is a bathymetric feature that has become an important feeding ground due to its formation of dense concentrations of copepods, right whales’ prey. NMFS 17468.

<sup>41</sup> Plaintiffs strain credulity in suggesting that the 2021 BiOp treats right whales as if they “will wait at the edge of the clearance zone for three to four hours and then, like trained spaniels, come racing back into the WDA to feed once pile driving for the day has stopped.” Doc. No. 105 at 51. The BiOp is clear in saying that right whale behavior is expected to return “to a baseline state shortly after the acoustic stimuli ceases (i.e., pile driving stops or the animal swims far enough away from the source to no longer be exposed to disturbing levels of noise).” NMFS 17362. *See*

infrequent exposures of a single day or less are unlikely to impact an individual's overall energy budget. . . . Based on best available information, we expect this to be the case for North Atlantic right whales exposed to acoustic stressors associated with this project even for animals that may already be in a stressed or compromised state due to factors unrelated to the Vineyard Wind project." NMFS 17531. Furthermore, the 2021 BiOp recognized that, according to Leiter et al. 2017, feeding behavior occurred exclusively during the months of March and April in the study area, NMFS 17297, when pile driving will not occur. The 2021 BiOp relied on the Quintana-Rizzo study reporting that feeding "was recorded on more occasions (n = 190 occasions) than socializing (n = 59 occasions). Feeding was observed in all seasons and years." NMFS 17363. The analysis then explained why any temporary, short-term disruption of feeding, among other factors, was not likely to harm right whales. NMFS 17363-67. The 2021 BiOp also explained why it did not anticipate the associated stress of noise exposure to result in significant costs to affected individuals. NMFS 17364. NMFS/GAR further discussed the biological consequences of behavioral disruption based on the "population consequences of disturbance model" (PCoD) as part of its assessment of the effects of Level B harassment on right whales:

Since we expect that any exposures would be brief (limited only to the time it takes to swim out of the area with noise above the Level B threshold but never more than three hours), and repeat exposures to the same individuals are unlikely (based on abundance, distribution and sightings data), any behavioral responses that would occur due to animals being exposed to pile driving are expected to be temporary, with behavior returning to a baseline state shortly after the acoustic stimuli ceases (i.e., pile driving stops or the animal swims far enough away from the source to no longer be exposed to disturbing levels of noise). Given this, and our evaluation of the available PCoD studies, any such behavioral responses are not expected to impact

---

*also* NMFS 17363 ("Based on best available information that indicates whales resume normal behavior quickly after the cessation of sound exposure (e.g., Goldbogen et al. 2013a; Melcon et al. 2012), we anticipate that exposed animals will be able to return to normal behavioral patterns (i.e., socializing, foraging, resting, migrating) after the exposure ends." The BiOp's focus is on the behavior resuming where the whales have traveled, not whether the whales return to the WDA in order to resume their behavior in that location.

individual animals' health or have effects on individual animals' survival or reproduction.

NMFS 17362. In sum, Plaintiffs' attacks against NMFS's consideration of potential Project effects on right whale foraging behavior are without merit.

**G. The 2021 BiOp Appropriately Assesses Operational Noise Impact on Right Whales.**

Plaintiffs incorrectly assert that the 2021 BiOp fails to adequately assess the potential to jeopardize right whales as a result of operational noise. Doc. No. 105 at 52. Plaintiffs largely re-hash their arguments concerning the applicability of available research (including the Stober and Thomsen study) concerning existing wind projects utilizing smaller WTGs than proposed for the Vineyard Wind Project. As explained above and at NMFS 17709, the 2021 BiOp's "no jeopardy" determination is informed by the best available scientific information, which indicates that operational noise may not be detectable above ambient noise in the WDA. NMFS 17333. The transmittal memorandum for the 2021 BiOp further addresses operational noise and explains how NMFS/GAR used the best available science to inform its analysis:

While we reach the same conclusions as in the 2020 Opinion, that effects to listed species from operational noise will be insignificant or extremely unlikely to occur, this is based on more robust data. In the 2021 Opinion, we explain that information from Elliot et al. (2019; noise measurements from the Block Island Wind Farm) is a reasonable predictor of noise associated with the operations of the Vineyard Wind turbines because of similarities in location (and therefore similarities in soundscape, water depth, sediment type, and wind speed) and use of the same GE Haliade direct drive technology as the turbines planned for Vineyard Wind.

NMFS 17686. In sum, NMFS/GAR reasonably concluded that "[o]perational noise is not expected to impact the distribution of right whales." NMFS 17531.

**H. The 2021 BiOp Reasonably Concluded That the Action Is Not Likely To Jeopardize the Continued Existence of Right Whales.**

NMFS/GAR reasonably concluded that, while the action is likely to result in the temporary and short-term harassment of 20 individual right whales, neither survival nor recovery of the right

whale would be implicated by BOEM’s proposed action. *See* NMFS 17505-06 and 17527-32. The 2021 BiOp painstakingly explains the rationale: in the context of the status of the species, environmental baseline, cumulative effects, and climate change, the action including all of its mitigation measures would not reduce the numbers, reproduction or distribution of the species, nor would it affect the species’ recovery potential in light of recovery goals. *See id.* The explanation that there would be no injury, mortality, reductions in fitness and reproduction, or changes in distribution is relevant to both survival and recovery. As further explained below, Plaintiffs’ specific critiques of the recovery analysis lack merit.

***1. The Vineyard Wind Project will not impede right whale recovery.***

Plaintiffs fundamentally mischaracterize the effects of the Project on right whales, as well as the appropriate level of certainty guiding a recovery analysis. Doc. No. 105 at 54-56. As discussed in detail above, the 2021 BiOp does not anticipate incidental take of right whales due to vessel strikes, entanglement, or noise that would result in Level A harassment or injury as a result of pile driving. NMFS 17358. As part of Plaintiffs’ narrative, they rely on layers and layers of potentials rather than what the law actually sets out as the necessary level of certainty: likelihoods.<sup>42</sup> NMFS/GAR applied the correct level of certainty in its determinations throughout

---

<sup>42</sup> For example, Plaintiffs’ argument relies on statements such as “strong *potential* to increase the *threat*,” “noise, which *can*...damage,” the concerns voiced in the Quintana-Rizzo (2021) paper that spoke of changes that “could” happen with full offshore wind development. Doc. No. 105 at 54 (emphasis added). *See also* n.11, *supra*. The implication of Plaintiffs’ approach is that the addition of a single vessel, a single fishing trap, or any noise-producing equipment would “thwart right whale recovery” because it introduces the *potential* for a *threat* to right whales. Plaintiffs’ argument does not advance beyond the low “may affect” threshold that triggers the requirement to consult in the first place (*see* 50 C.F.R. § 402.14(a)), and they ignore the statute’s and regulations’ subsequent direction to make determinations in a BiOp with a higher level of certainty. *See, e.g.*, 16 U.S.C. § 1536(a)(2) (“[N]ot likely to jeopardize”); 50 C.F.R. §§ 402.14(b)(1) (“[I]s not likely to adversely affect. . .”), 402.14(g)(7) (“[I]f such take is reasonably certain to occur), 402.02 (to jeopardize “means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the

the 2021 BiOp, including its jeopardy analysis. In so doing, it reasonably concluded that “the effects of the proposed action are not expected to cause an appreciable reduction in the likelihood of survival and recovery of North Atlantic right whales in the wild.” NMFS 17532.

Plaintiffs’ reliance on various Ninth Circuit cases does not lead to a contrary result. *Wild Fish Conservancy v. Salazar*, 628 F.3d 513 (9th Cir. 2010), cited by Plaintiffs, is inapposite. *See* Doc. No. 105 at 53. In *Wild Fish Conservancy*, the facts did not support NMFS’s conclusion that operational changes at the fish hatchery at issue in that case would improve in a “small” way the contribution of a local population of threatened bull trout to the survival of the species. *See* 628 F.3d at 520 and 528. To the contrary, NMFS itself had determined that the operation of the fish hatchery at issue in that case would “‘at least reduce, and in some years preclude’ migratory bull trout spawning.” *Id.* at 527. Thus, in *Wild Fish Conservancy*, “the bottom line of the Service’s findings is that as a result of the [challenged] action, the local bull trout population will continue to decline.” *Id.* at 528. Here, by contrast, “[n]o harm, injury, or mortality is expected.” NMFS 17530. Furthermore, there will not be reductions in right whale reproduction, numbers, or distribution, and the “action is not likely to affect the [right whale’s] recovery potential.” NMFS 17531.

The facts here are also clearly distinguishable from *National Wildlife Federation v. NMFS*, 524 F.3d 917, 930 (9th Cir. 2008) (“*NWF*”), in which a NMFS biological opinion concluded that proposed Federal Columbia River Power System dam operations compared to a hypothetical reference scenario using a segregated and net effects analysis, *id.* at 935-36, were not likely to jeopardize threatened and endangered salmon populations or adversely modify their critical habitat. The Court in *NWF* concluded that the Columbia River BiOp’s jeopardy analysis “omitted

---

wild by reducing the reproduction, numbers, or distribution of that species”). Plaintiffs’ approach is simply not the lawful way to perform a recovery analysis under the ESA.

any clear consideration of the impact of proposed operations on listed species' chances of recovery." *Id.* at 926.<sup>43</sup>

The 2021 BiOp's jeopardy analysis for right whales clearly considered the effects of the action in the context of the status of the species, the environmental baseline, and cumulative effects. NMFS 17505-06 and 17527-32. Unlike the Columbia River BiOp, the 2021 BiOp analyzed factors relevant to both survival and recovery, thereby firmly supporting its conclusion that the actions under consultation were not likely to jeopardize right whales' continued existence. That survival and recovery are, in the *NWF* Court's words, "intertwined needs" (*NWF*, 524 F.3d at 932) is abundantly clear in the 2021 BiOp's discussion of survival ("survival is the condition in which a species continues to exist into the future while retaining the potential for recovery") and recovery ("improvement in the status of listed species to the point at which listing is no longer appropriate," which requires survival). NMFS 17506.<sup>44</sup> The 2021 BiOp's recovery analysis consists of both its explanation as to why reductions in right whales' abundance (numbers), reproduction, and distribution are not expected to occur, plus the discussion of why the action and its lack of such reductions are "not likely to affect the recovery potential of North Atlantic right

---

<sup>43</sup> In that case, the Court rejected the Columbia River BiOp's evaluation of the effects of the proposed action by *comparing* them to a hypothetical baseline reference operation. Instead, the Court found that the ESA requires what the Court termed "an aggregate approach" in which the action's effects are evaluated "in their actual context." *NWF*, 524 F.3d at 926, 930. Such an approach must evaluate "the aggregate of the proposed agency action, the environmental baseline, cumulative effects, and current status of the species" to determine whether the action is likely to jeopardize a listed species. *Id.* at 926; *see also id.* at 920-30.

<sup>44</sup> Contrary to what Plaintiffs say, the recovery analysis is not "brief and perfunctory." Doc. No. 105 at 54. The regulatory phrase "[t]o jeopardize" means to "engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. § 402.02. The phrase "by reducing the reproduction, numbers, or distribution of that species" applies to not just survival, but also recovery. The 2021 BiOp's detailed discussion of why the action is not likely to reduce right whale abundance (numbers), reproduction, and distribution applies equally to survival and recovery.

whales.” NMFS 17531. The latter discussion, on recovery potential, builds on the discussion of the lack of reduction in numbers, reproduction, and distribution to conclude that the “action is not expected to result in any condition that impacts the time it will take to reach these goals or the likelihood that these goals will be met. This is because the proposed action will not affect the trend of the species or prevent or delay it from achieving an increasing population or otherwise affect its growth rate and will not affect the chance of quasi-extinction.” *Id.* Therefore, not only is *NWF* distinguishable on the facts given the 2021 BiOp did analyze both survival and recovery, but Plaintiffs missed a significant portion of the recovery analysis. Their claims should be rejected.

**2. *The 2021 BiOp analyzes potential Project effects on right whale recovery in relation to the goals described in the 2005 Recovery Plan.***

Contrary to Plaintiffs’ suggestion that the 2021 BiOp’s “no jeopardy” determination is inconsistent with goals described in the 2005 North Atlantic Right Whale Recovery Plan (“Recovery Plan”), *see* Doc. No. 105 at 54, NMFS/GAR described the criteria that must be met to conclude that right whales have recovered sufficiently to be listed as “threatened” instead of “endangered.” NMFS 17531. The 2021 BiOp explained that “[t]he proposed action will not result in any condition that impacts the time it will take to reach these goals or the likelihood that these goals will be met. This is because the proposed action will not affect the trend of the species or prevent or delay it from achieving an increasing population or otherwise affect its growth rate and will not affect the chance of quasi-extinction.” NMFS 17531. These explanations are tied to the discussion that precedes them on the lack of any reduction in numbers, reproduction, or distribution. Taken together, the discussion on numbers, reproduction, distribution, and recovery criteria support the conclusion that “[t]he proposed action is not likely to affect the recovery potential of North Atlantic right whales.” NMFS 17531.

Plaintiffs quote selectively from the “Integration and Synthesis of Effects” portion of the

2021 BiOp to incorrectly assert that the document includes only a “short discussion” regarding mitigation measures to avoid vessel strikes. Doc. No. 105 at 61 (quoting BOEM \_0077628). Plaintiffs neglect to mention that the 2021 BiOp also includes 13 pages of discussion about vessel operations and mitigation measures, NMFS 17403-16, and over 11 additional pages of analysis about the risk of vessel strikes to ESA-listed whales including right whales. NMFS 17418-29. Of course, in addition to mischaracterizing the amount of discussion about vessel strikes in the 2021 BiOp, Plaintiffs continue to question the sufficiency of vessel strike mitigation measures. Doc. No. 105 at 55. Plaintiffs also re-hash their objections to the mandatory noise mitigation measures. *Id.* at 55-56. In sum, Plaintiffs’ arguments about the sufficiency of the 2021 BiOp’s recovery analysis are premised upon the incorrect assumption that the combined mitigation measures will be insufficient to avoid injury or mortality to right whales. As described in our opening memorandum and above, Plaintiffs’ arguments lack merit.

**3. *Right whale movement away from pile-driving noise does not implicate species recovery.***

As explained elsewhere, Doc. No. 96 at 15-16 n.15, right whale movement away from pile-driving noise due to the soft-start procedures would not increase the risk of entanglement with fishing gear (or, for that matter, increase the risk of strikes by fishing vessels). There is no “pushing” whales into Statistical Area 537, as Plaintiffs allege, because the Project area where pile driving is happening is itself located within Statistical Area 537 and soft-start procedures only follow lengthy monitoring of the clearance zone and beyond for 60 minutes. Plaintiffs fail to identify any greater amount of vessels or gear outside the WDA compared to inside it; therefore, Plaintiffs present no basis for a change in risk to right whales if they are inside the WDA or outside of it, yet all the while inside Area 537.

The 2021 BiOp’s transmittal memorandum specifically addressed Plaintiffs’ assertion that

right whales will enter areas of high vessel traffic as an “avoidance response” to pile-driving noise:

ACKRATS present no evidence that animals avoiding pile driving noise will likely enter areas of high vessel traffic (presumably they mean pile driving not pile drilling). Based on a review of AIS data for 2020 and 2019 (using the Northeast Ocean Data Explorer), the only areas outside of the lease with higher vessel traffic than within the lease area are commercial traffic routes (“shipping lanes”). The nearest “shipping lanes” are the Nantucket to Ambrose Traffic Separation Scheme and the Rhode Island Sound Traffic Separation Zones. At their closest distances to the lease area they are 30 and 21 miles away, respectively. As described in the 2020 and 2021 BiOps, we expect that right whales may avoid the area with noise above the Level B harassment threshold (160 dB re 1uPa rms). Based on the modeled size of the area that will have noise above this level, a whale only needs to swim 2 to 2.5 miles (see Table 7.7 in the 2020 or 2021 BiOp). As such, it is not reasonable to expect that whale to swim into either traffic lane as a result of avoiding pile driving noise. We also note that our vessel strike analysis considered vessel strike risk throughout the action area; the shipping lanes however are in the action area and are considered in the context of the baseline vessel traffic. See attached image from the Northeast Ocean Data Explorer illustrating 2020 and 2019 AIS vessel tracks and the lease area.

NMFS 17708. *See also* NMFS 17727 (figure of vessel tracks). In light of these considerations, and integrating discussion of the status of the species, environmental baseline, and cumulative effects, the 2021 BiOp’s comprehensive analysis of pile-driving acoustic effects on right whales (NMFS 17529-31) “considered the overall number of exposures to acoustic stressors that are expected to result in harassment, inclusive of behavioral responses, TTS, and stress, the duration and scope of the proposed activities expected to result in such impacts, the expected behavioral state of the animals at the time of exposure, and the expected condition of those animals.” NMFS 17530. Right whale movement away from pile-driving noise simply does not impede right whale recovery, because it is not expected to reduce the number of individuals, their reproduction, or distribution.<sup>45</sup>

---

<sup>45</sup> The 2021 BiOp explains the basis for concluding that short-term (3 hours at a time) and intermittent (occurring only on 57 to 102 days) pile-driving noise and right whale movement away from pile driving would not reduce their numbers (“No harm, injury, or mortality is expected,” NMFS 17530), reproduction (“Because we do not anticipate any reduction in fitness, we do not

4. ***The 2021 BiOp Appropriately References Species Reclassification Goals Because These Are the Recovery Goals Referenced in the 2005 Recovery Plan.***

A recovery plan is a planning document compiled by NMFS pursuant to ESA Section 4(f), 16 U.S.C. § 1533(f). Each recovery plan should incorporate descriptions of management actions designed to achieve the plan’s goal for the conservation and survival of the species; “objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions of this section, that the species be removed from the list; and estimates of the time required and the cost to carry out those measures needed to achieve the plan's goal and to achieve intermediate steps toward that goal.” *Id.* The 2021 BiOp discusses the recovery goals described in the 2005 North Atlantic Right Whale Recovery Plan. NMFS 17242.<sup>46</sup> As stated in the Recovery Plan, “[t]he ultimate goal of this recovery plan is to promote the recovery of North Atlantic right whales to a level sufficient to warrant their removal from the List of Endangered and Threatened Wildlife and Plants under the ESA.” NMFS 44831. “The intermediate goal is to reclassify the species from endangered to threatened.” *Id.* Therefore, NMFS reasonably drew conclusions about the prospect for recovery in relation to a specific recovery goal identified in the recovery plan.

Plaintiffs assert, without citation to any authority, that “[t]he ESA requires NMFS to conduct a recovery” analysis, not a “reclassification” analysis.” Doc. No. 105 at 63. Not so. The ESA requires NMFS to develop and implement a recovery plan containing the aforementioned elements. The 2005 North Atlantic Right Whale Recovery Plan conforms to the ESA, and the

---

anticipate any future effects on reproductive success,” NMFS 17531), or distribution (“Effects to distribution will be limited to avoiding the area with disturbing levels of noise during pile driving. There will be no change to the overall distribution of right whales in the action area or throughout their range.” *Id.*).

<sup>46</sup> A prior version of this recovery plan was reviewed and upheld by this court in *Strahan v. Linnon*, 967 F.Supp. 581 (D. Mass. 1997), *aff’d*, 187 F.3d 623 (1st Cir. 1998).

2021 BiOp appropriately references species reclassification goals because these are the recovery goals referenced in the 2005 Recovery Plan. The Recovery Plan explains why NMFS is unable to identify recovery criteria for delisting because conditions related to delisting are now too distant and hypothetical to realistically develop specific criteria. NMFS 44832. Moreover, improving the status of the species to threatened instead of endangered is obviously part of the recovery process that must be obtained first before right whales may be considered fully recovered and removed from the ESA list. If the action is not likely to appreciably reduce the likelihood of recovery to the point right whales could be downlisted to “Threatened” because it will not reduce numbers, reproduction or distribution, then it follows that the Project’s effects are also not likely to appreciably reduce the likelihood of recovery of right whales to the point at which they could be delisted.

**5. *The Vineyard Wind Project Will Not Affect Species Abundance.***

Just as there will be no change to the overall distribution of right whales in the action area or throughout their range, *see* NMFS 17531, the Project will not affect species abundance. NMFS 17530 (“No harm, injury, or mortality is expected.”). No reduction in reproduction is anticipated, either. NMFS 17531. Analysis of recovery abundance levels is not necessary, because neither mortality nor reduction in reproduction are anticipated. NMFS 17531.<sup>47</sup> Moreover, the mitigation

---

<sup>47</sup> Plaintiffs assert NMFS has an obligation to analyze the effects of the action in relation to recovery abundance levels based on *National Wildlife Federation v. National Marine Fisheries Service*, 184 F.Supp.3d 861 (D. Or. 2016). *See* Doc. No. 105 at 57. This assertion is misplaced. In *National Wildlife Federation*, NMFS had previously concluded that the continued existence of a listed species was in jeopardy as a consequence of an agency action under consultation. 184 F.Supp.3d at 870. Under those circumstances, the court reasoned that mitigation measures included in a “reasonable and prudent alternative” (“RPA”) designed to avoid jeopardy had to tie recovery metrics to any rough estimated recovery abundance level or time frame. *Id.* at 894. This analysis of recovery abundance levels was needed because of the jeopardy determination. Here, by contrast, the effects of the action did not involve any reduction in numbers, reproduction, or distribution, much less cause an appreciable reduction in the likelihood of recovery. There are no RPAs needed, since the BiOp concludes “no jeopardy.”

measures described in the 2021 BiOp are part of the action under consultation and designed to avoid and minimize incidental taking, and are not part of Reasonable and Prudent Alternatives (RPAs) to avoid jeopardy.<sup>48</sup> Because the Project itself will not jeopardize right whales, the identification of RPAs is not required. 16 U.S.C. § 1536(b)(3)(A).

**6. *Federal Defendants Have Addressed Plaintiffs' Arguments Concerning Recovery.***

The record before the Court confirms that NMFS has conducted a full analysis of recovery risks and their impacts on the listed species' continued existence. NMFS 17528-32. To the extent Plaintiffs suggest that NMFS/GAR must conduct some further recovery analyses corresponding to specific mitigation measures, *see generally* Doc. No. 88-1 at 35 and Doc. No. 105 at 60-62, they are incorrect. Action agencies must ensure that their actions are not likely to jeopardize the continued existence of listed species. 16 U.S.C. § 1536(a)(2). For the Vineyard Wind Project, most of the mitigation measures originated in the COP, BOEM's proposed COP-approval, and NMFS/OPR's IHA and, therefore, are part of the proposed agency actions subject to consultation. *See* NMFS 17202-20. To the extent mitigation measures (i.e., measures to avoid or minimize effects) are part of the proposed agency actions, they along with all other aspects of the proposed actions must be reviewed to determine whether the proposed action is likely to jeopardize the continued existence of listed species.<sup>49</sup> *Ctr. for Biological Diversity v. U.S. BLM*, 698 F.3d 1101,

---

<sup>48</sup> Reasonable and prudent alternatives are alternative actions that "avoid the likelihood of jeopardizing the continued existence of listed species" or destroy or adversely modifying critical habitat. 50 C.F.R. § 402.02. RPAs are prescribed only if NMFS makes a jeopardy or adverse modification determination.

<sup>49</sup> Reasonable and prudent measures refer to those actions "necessary or appropriate to minimize" the amount or extent of incidental take caused by the proposed action. 50 C.F.R. § 402.02, 16 U.S.C. § 1536(b)(4)(B). RPMs are prescribed after NMFS has determined that the proposed action will not likely jeopardize listed species. 16 U.S.C. § 1536(b)(4)(B). The only mitigation measures imposed by NMFS/GAR in the 2021 BiOp are the RPMs and their implementing terms and conditions (although many of them are also from the IHA pursuant to ESA Section 7(b)(4)(c)(iii)). RPMs are not included in the jeopardy analysis because they are not part of the proposed agency

1118-19 (9th Cir. 2012) (Protective measures incorporated into the proposed action are analyzed by NMFS in the BiOp and taken into account as part of the jeopardy determination.). As described above, NMFS/GAR properly assessed the recovery implications of the mitigation measures within the overall context of the proposed agency actions subject to consultation and not as separate, individual agency actions.

Contrary to Plaintiffs' suggestion, Doc. No. 105 at 52-53, the law does not require a BiOp to present two separate and distinct analyses, one on survival and another one on recovery. *Rock Creek Alliance v. U.S. FWS*, 663 F.3d 439, 443 (9th Cir. 2011) (upholding agency's BiOp that did not address recovery in "separate, distinct sections of the biological opinion"); *Native Village of Chickaloon*, 947 F.Supp.2d at 1064 n.252 (D. Alaska 2013) (following *Rock Creek*). To the extent Plaintiffs suggest that NMFS's analysis concerning survival and recovery was inadequate based on the reasoning in *NWF*, 524 F.3d at 936 (cited by Plaintiffs at Doc. No. 89 at 27), the facts here are distinguishable.<sup>50</sup>

### **I. BOEM Reasonably Relied on the 2021 BiOp.**

BOEM's July 15, 2021 decision to approve the Vineyard Wind COP is expressly conditioned on the applicant's approval with all terms and conditions of the 2021 BiOp. BOEM

---

actions. *See* 50 C.F.R. § 402.02 ("Jeopardize the continued existence" means "engag[ing] in an *action* that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.") (emphasis added).

<sup>50</sup> The biological opinion in that case failed to sufficiently analyze the agency action in relation to a prior jeopardy biological opinion. Under those circumstances, the court concluded that NMFS failed to consider whether the proposed action, which involved continued salmon mortality, would "tip the species into jeopardy." *NWF*, 524 F.3d at 929. Here, by contrast, no right whale mortality is anticipated to occur at all, NMFS 17529, and NMFS has fully explained the basis of its "no jeopardy" determination. *See also Native Village of Chickaloon*, 947 F.Supp.2d at 1063 n.244 (distinguishing *National Wildlife Federation*, *supra*) ("In contrast, no such finding of significant negative impact was made in the BiOp here with respect to Apache's proposed operation; hence an analysis of the point of recovery is not required.").

77152. In light of the 2021 BiOp’s determination that the Vineyard Wind Project is not likely to jeopardize right whales, Plaintiffs must demonstrate that: 1) NMFS’s “no jeopardy” determination is arbitrary and capricious; and 2) BOEM unreasonably relied on this finding in approving the COP. *See Pyramid Lake*, 898 F.2d at 1415) (action agency’s reliance on biological opinion will satisfy obligation under ESA if the challenging party cannot point to “new information” that the consulting agency did not take into account). Plaintiffs have failed to point to any relevant “new information” that NMFS/GAR did not take into account. For the reasons set forth in our opening memorandum and above, the 2021 BiOp is fully supported by the administrative record, and BOEM reasonably relied on this biological opinion.

**IV. The FEIS fully complied with NEPA.**

**A. The FEIS appropriately analyzes impacts on the North Atlantic right whale.**

**1. *The FEIS adequately describes existing conditions facing the right whale.***

Our opening memorandum described the FEIS’s extensive discussion of existing conditions facing right whales and other marine mammals, which is set forth in the “No Action Alternative.” *See* BOEM\_0068571-88; *see also* BOEM\_0069020-31, Table 3.4-1. Rather than engage with that substantive analysis, Plaintiffs offer a scattershot list of facts that they claim the FEIS erroneously omitted. Doc. No. 105 at 59-60. Some of those supposedly missing facts are actually included in the FEIS, such as the presence of commercial lobster fisheries in southeastern New England and the fact that “entanglement in fishing gear has been identified as one of the leading causes of mortality in [right whales].” BOEM\_0068575. And, while the FEIS does not specifically state that right whale deaths outnumber births 3:2, *see* Doc. No. 105 at 59, it does disclose that, as of the date the EIS was published, 31 right whales had been confirmed dead since June 2017, an additional 10 were documented with serious injuries, and reproductive output for the species had declined 40 percent since 2010. BOEM\_0068573. The FEIS also discloses that

“[t]his combination of factors threatens the very survival of this species.” *Id.*

Like their opening brief, Plaintiffs’ opposition makes no effort to explain why the supposedly missing facts they identify render the FEIS substantively deficient. NEPA does not require BOEM to include an exhaustive list of every conceivable fact about right whales. *Nw. Env’t Advocs. v. NMFS*, 460 F.3d 1125, 1139 (9th Cir. 2006). Instead, it requires that an agency take a “hard look” at the environmental consequences of its action. *Beyond Nuclear v. U.S. NRC*, 704 F.3d 12, 19 (1st Cir. 2013). The FEIS evidences that BOEM took a hard look, including by considering existing conditions facing right whales, and Plaintiffs offer no serious argument to the contrary.

**2. *The FEIS considered the possible impacts of noise and vessel strikes.***

Plaintiffs next take issue with the mitigation measures discussed in the FEIS, repeating their disagreement with NMFS’s and BOEM’s conclusions with respect to those mitigation measures. As explained *supra*, Plaintiffs’ criticism is misplaced, and fails to account for the combined effect of the suite of mitigation measures that will be in place. *See supra* Sections III.B.5 and III.C. Moreover, apart from registering their disagreement with Federal Defendants’ conclusions, Plaintiffs fail to establish that the analysis in either the BiOp or the FEIS was arbitrary or capricious. Plaintiffs’ mere disagreement is not a basis for invalidating the FEIS. *Lovgren v. Locke*, 701 F.3d 5, 38 (1st Cir. 2012) (plaintiffs’ disagreement with agency conclusion “is not a basis for deeming it invalid”); *Town of Norfolk v. EPA*, 761 F.Supp. 867, 891 (D. Mass. 1991), *aff’d*, 960 F.2d 143 (1st Cir. 1992).

**3. *The FEIS analyzed cumulative impacts.***

Plaintiffs’ claim that the FEIS lacks a cumulative impact analysis is contradicted by the FEIS. As we explained in our opening memorandum, the FEIS’s No Action Alternative analyzed the impact of reasonably foreseeable wind projects on marine mammals, including right whales.

BOEM\_0068576-88. The FEIS's subsequent discussion of each Vineyard Wind Project alternative then assessed the likely impact of each alternative within the context of all reasonably foreseeable projects. *See* BOEM\_0068589, 0068602.

Apart from flyspecking a couple of facts that the FEIS did not include—namely (i) the exact number of pile-driving days that would be required to install all seven reasonably foreseeable projects, and (ii) the precise number of vessel trips that would be needed to construct and operate the seven projects—Plaintiffs assert that the FEIS fails to “acknowledge that all seven wind projects will generally have similar impacts on right whales.” Doc. No. 105 at 61. And they repeat their unsupported allegation that the Project area is a “popular (and possibly obligate) right whale foraging area.” *Id.* But Plaintiffs' various complaints do not substantively engage with the FEIS's cumulative impacts analysis, much less provide a basis for the Court to conclude that analysis was arbitrary or capricious.

**B. The FEIS appropriately analyzes impacts to air quality and greenhouse gas emissions.**

Plaintiffs' arguments regarding impacts to air quality and greenhouse gas (“GHG”) emissions are addressed below.

**1. *The FEIS properly analyzes the emission of criteria pollutants.***

Plaintiffs initially complained that the FEIS had no information about the emission of Clean Air Act criteria pollutants, but they now acknowledge that it does. *See* Doc. No. 105 at 62-63; *see also* BOEM\_0068850-52. Plaintiffs maintain, however, that the FEIS does not compare the emissions figures to the National Ambient Air Quality Standards (“NAAQS”). But that too is inaccurate. To the contrary, the FEIS explains both the emissions that are expected to occur and whether the NAAQS will not be exceeded:

For pollutants such as NO<sub>2</sub>, PM<sub>2.5</sub>, and SO<sub>2</sub>, USEPA bases NAAQS attainment status on monitored 3-year pollutant concentrations. Because the construction and

installation phase of the offshore components would likely not extend past 2 years and because the emissions would vary throughout the phase, BOEM *does not expect projected air quality impacts to exceed the NAAQS for these pollutants.*

BOEM\_0068850 (emphasis added). Plaintiffs' argument simply ignores the analysis in the FEIS.

Plaintiffs are also incorrect that NEPA required that the FEIS contain additional discussion of the NAAQS. The FEIS explains the emissions that would occur due to the Project, where and when those emissions would occur, and whether substantive standards would be violated. *See* BOEM\_0068843-52. That discussion satisfies NEPA's requirements. In fact, the EPA did a more detailed analysis of Project emissions in connection with Vineyard Wind's application for an Outer Continental Shelf Air Permit, and concluded that emissions would not cause or contribute to exceedances of the NAAQS.<sup>51</sup> BOEM\_0050128-40. While the FEIS could have similarly contained a more detailed analysis, it was not necessary to do so given that any Project impacts on air quality are expected to be minor. *See* 40 C.F.R. § 1502.2(b)<sup>52</sup> (“[Impacts] shall [be] discuss[ed] in proportion to their significance.”); *Japanese Vill., LLC v. FTA*, 843 F.3d 445, 468 (9th Cir. 2016) (“NEPA regulations require ‘only brief discussion of other than significant issues.’”) (quoting 40 C.F.R. § 1502.2(b)).

Moreover, Plaintiffs are simply wrong that the “EIS withheld critical health information from the public.” Pls.' Reply at 63. To the contrary, once it is operational, the Project “would result in annual avoided emissions of 1,632,822 tons of CO<sub>2</sub>, 1,046 tons of NO<sub>x</sub>, and 855 tons [of] SO<sub>2</sub>.” BOEM\_0068852. The reduced emissions are expected to have health benefits and to potentially result in health care costs savings of up to \$27,185,112. BOEM\_0068850-51. The

---

<sup>51</sup> The EPA report refers to significant impact levels (“SILs”). BOEM\_0050131. If emissions from a major source exceed the SILs, then the source would be considered “to cause or contribute to a violation of [the NAAQS].” 40 C.F.R. § 51.165(b)(2). The EPA found that SILs would not be exceeded during the construction phase. BOEM\_0050134.

<sup>52</sup> All references to 40 C.F.R. sections are to the 2022 version.

notion that the Project will cause potential adverse health impacts that were not disclosed in the FEIS is unfounded.

**2. *The incorporation by reference of the Epsilon report complied with NEPA.***

Plaintiffs argue that NEPA did not allow for the FEIS to incorporate by reference the Epsilon report, an appendix to the COP that contains a detailed analysis of the emission of criteria pollutants during the Project’s different phases. *See* BOEM\_0009903-85. Plaintiffs are wrong as a matter of law. Plaintiffs ignore that NEPA regulations explicitly provide for the incorporation by reference of material in separate reports, 40 C.F.R. § 1502.21 (2018), as recognized by several cases. *See, e.g., Town of Norfolk*, 761 F.Supp. at 879 (allowing incorporation by reference where “the reference [in the EIS] was adequate to steer potentially interested persons toward the source document”); *see also* Doc. No. 96 at 39-40 (citing additional cases). The Epsilon report was clearly referenced in the Draft EIS, BOEM\_0034767, and was available during the comment period, as Plaintiffs now concede. *See* Doc. No. 105 at 64. Indeed, the Epsilon report was part of Vineyard Wind’s COP, the very proposal whose impacts the FEIS was drafted to analyze. Thus, the incorporation of the Epsilon report complied with NEPA.<sup>53</sup>

**3. *The FEIS analyzes indirect emissions from onshore activities.***

Contrary to Plaintiffs’ contention, the FEIS does analyze impacts from onshore activities. The FEIS explains that air emissions would be caused by “[o]nshore activities,” including “horizontal directional drilling (HDD), duct bank construction, cable-pulling operations, and

---

<sup>53</sup> Plaintiffs repeat their argument relying on *Kern v. U.S. Bureau of Land Management*, 284 F.3d 1062 (9th Cir. 2002). But *Kern* is unavailing because it did not address incorporation by reference pursuant to 40 C.F.R. § 1502.21. Moreover, unlike the guidelines that the agency attempted to tier to in *Kern*, the Epsilon report was prepared specifically for the Vineyard Wind Project. *See Kern*, 284 F.3d at 1073 (explaining that, while BLM’s prior guidelines contained an analysis of the impacts of a type of fungus, they did not analyze those impacts in the context of the challenged resource management plan).

substation construction.” BOEM\_0068849. The FEIS accounted for these impacts, and concludes that the impacts of such emissions would be minor. *Id.* Thus, Plaintiffs are again simply ignoring what the FEIS plainly states. They also argue that additional emissions analysis is necessary to take into account “emissions from the many employees who will work on the project.” Doc. No. 105 at 64. But the FEIS already analyzes emissions from employees taking part in the drilling, construction, and other activities described in the FEIS. BOEM\_0068849.

Going further, Plaintiffs suggest that additional analysis of emissions is necessary to account for economic growth and additional commuting time associated with workers on the project. *See* Doc. No. 105 at 64-65. Certainly, in some instances, the indirect effects of a project “may include growth inducing effects and other effects related to induced changes in the pattern of land use population density or growth rate, and related effects on air and water,” and other resources. 40 C.F.R. § 1508.1(b). For example, an agency may need to analyze such impacts when considering whether to approve a new highway. *See, e.g., City-of-Carmel-by-the-Sea v. U.S. Dep’t of Transp.*, 123 F.3d 1142, 1162 (9th Cir. 1997). Plaintiffs offer no authority, however, for the proposition that an agency must analyze growth-inducing effects in the context of a project that is expected to generate jobs over the next 25 years, but is not expected to generate population growth. BOEM\_0068635-36.

### CONCLUSION

BOEM’s and NMFS/GAR’s determinations and analyses concerning the Vineyard Wind Project were rational and are fully supported by the respective administrative records. Plaintiffs fail to carry their burden to show that the agencies’ actions were arbitrary, capricious, or contrary to law. Federal Defendants respectfully request that this Court grant their cross-motion for summary judgment as to all claims asserted in Plaintiffs’ Amended Complaint, Doc. No. 59.

Date: November 23, 2022

*Of Counsel:*

Pedro Melendez-Arreaga  
Lead Attorney-Advisor  
Offshore Renewable Energy Team  
Division of Mineral Resources  
Office of the Solicitor  
U.S. Department of the Interior  
1849 C Street, NW  
Washington, D.C. 20240  
(202) 513-7759  
pedro.melendez-arrea@sol.doi.gov

Lea Tyhach  
Attorney - Advisor  
National Oceanic and Atmospheric  
Administration  
Office of General Counsel, Northeast Section  
55 Great Republic Drive  
Gloucester, MA 01930  
(978) 281-9242  
lea.tyhach@noaa.gov

Respectfully submitted,

TODD KIM  
Assistant Attorney General  
Environment & Natural Resources Division  
  
LUTHER L. HAJEK (CO Bar 44303)  
ANGELA N. ELLIS (D.C. Bar No. 1670713)  
Natural Resources Section  
P.O. Box 7611  
Washington, D.C. 20044  
Tel. (202) 598-7942  
Fax (202) 305-0506  
E-mail: luke.hajek@usdoj.gov  
E-mail: angela.ellis@usdoj.gov

*/s/ Mark Arthur Brown*  
MARK ARTHUR BROWN  
D.C. Bar No. 470050  
Wildlife and Marine Resources Section  
P.O. Box 7611  
Washington, D.C. 20044-7611  
Tel: (202) 305-0204  
Fax: (202) 305-0275  
E-mail: mark.brown@usdoj.gov

*Counsel for the United States*

CERTIFICATE OF SERVICE

Pursuant to Local Rule 5.2, I hereby certify that a true copy of the foregoing FEDERAL DEFENDANTS' REPLY MEMORANDUM IN SUPPORT OF CROSS-MOTION FOR SUMMARY JUDGMENT was served upon the attorney of record for each other party by the CM/ECF electronic filing system on November 23, 2022.

/s/ Mark Arthur Brown

Mark Arthur Brown