IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MARYLAND

SIERRA CLUB, et al.,

Plaintiffs,

*

Civ. No. DLB-20-3060

NATIONAL MARINE FISHERIES

SERVICE, et al.,

Defendants,

*

AMERICAN PETROLEUM INSTITUTE,

and

et al.,

Intervenors. *

MEMORANDUM OPINION

Nearly four years ago, the nonprofit environmental organizations Sierra Club, Center for Biological Diversity, Friends of the Earth, and Turtle Island Restoration Network filed this lawsuit challenging the legality of a National Marine Fisheries Service ("NMFS") biological opinion ("BiOp" or "2020 BiOp") on the impact that oil and gas extraction in the Gulf of Mexico will have on protected marine life, including the Rice's whale. According to the plaintiffs, NMFS and the Assistant Administrator for the National Oceanic and Atmospheric Administration ("NOAA") violated the Administrative Procedure Act ("APA"), 5 U.S.C. § 701 et seq., and the Endangered Species Act ("ESA"), 16 U.S.C. § 1531 et seq., by issuing the flawed BiOp, which underestimated the risks of harm to protected species and took inadequate measures to mitigate those risks. Several entities representing the oil and gas industry—the American Petroleum Institute ("API"), EnerGeo

Alliance, the National Ocean Industries Association ("NOIA"), and Chevron U.S.A. Inc. ("Chevron") (collectively, "the intervenor-defendants")—intervened as defendants.

Pending before the Court are cross-motions for summary judgment and motions for the admission of extra-record evidence. For the reasons below, the Court grants the plaintiffs' motion for summary judgment, denies the defendants' and the intervenor-defendants' motions for summary judgment, and denies the motions for the admission of extra-record evidence as moot. The Court declares the 2020 BiOp in violation of the ESA and the APA, vacates the BiOp effective December 20, 2024, and remands the matter to NFMS for further proceedings consistent with this opinion.

I. Background

The Gulf of Mexico is home to a range of endangered or threatened marine species protected under the ESA. AR13405. These include the Rice's whale (previously known as the Gulf of Mexico Bryde's whale, *see* 86 Fed. Reg. 47,022-01 (Aug. 23, 2021)), an endangered marine mammal that exists nowhere else on Earth. AR13405, AR13415–19.

The Gulf of Mexico is home to much of the nation's oil and gas industry as well. AR13513. The oil and gas industry conducts extensive extraction activities in land under federal waters known as the Outer Continental Shelf ("OCS"), including a region known as the Gulf OCS that begins about three miles offshore from several Gulf states and extends 200 nautical miles from shore to the outer boundary of the United States' Exclusive Economic Zone. AR13383–86; 43 U.S.C. §§ 1301(a)(2), 1331 *et seq.*; 48 Fed. Reg. 10,605 (Mar. 14, 1983). The Gulf OCS includes "tens of thousands of active wells, thousands of production platforms, tens of thousands of miles of underwater pipelines," and the region sees a commensurate high volume of vessel trips. ECF 65-2, ¶ 3.

A variety of statutes and regulations attempt to harmonize the co-existence of marine life and gas and oil extraction activities in the Gulf. The Outer Continental Shelf Lands Act ("OCSLA"), 43 U.S.C. § 1331 *et seq.*, regulates the development of the OCS's oil and gas resources, including the leases the United States extends to private corporations to explore, develop, and produce oil and gas. The Department of the Interior, through its agencies, is responsible for enforcing safety and environmental standards for offshore oil and gas activities. 30 C.F.R. § 550.101.

The ESA applies to federal oil and gas leases extended pursuant to OCSLA. Section 7 of the ESA mandates that federal agencies ensure that any agency action "is not likely to jeopardize the continued existence of any endangered [] or threatened species or result in the destruction or adverse modification of habitat of such species[.]" 16 U.S.C. § 1536(a)(2). Accordingly, any agency whose action "may affect" ESA protected species—the "action agency"—must first initiate a consultation with the appropriate wildlife service—the "expert agency"—before taking that action. 50 C.F.R. § 402.14(a).

NMFS is the federal agency within NOAA tasked with ensuring that agency action complies with the ESA as applied to marine species. AR13251–52. The Assistant Administrator for NOAA leads these efforts. In a formal consultation, NMFS must ascertain whether the proposed action, in conjunction with the environmental baseline and any cumulative effects, is likely to jeopardize the continued existence of the species or damage their critical habitats. 50 C.F.R. § 402.14(g).

At the close of a consultation, NMFS sets forth its findings and conclusions in a biological opinion. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(h). If NMFS concludes that the action is likely to jeopardize a species or result in harm to its habitat, it must propose a "reasonable and

prudent alternative" ("RPA") to avoid those effects. 16 U.S.C. § 1536(b)(3)(A). Separately, NMFS must produce an incidental take statement ("ITS") that addresses whether the proposed agency action is likely to incidentally take members of a protected species—where "take" means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct," 16 U.S.C. § 1532(19)—even if the action would not jeopardize the species or its habitat on the whole, and specifies the amount or extent of permissible takes. 50 C.F.R. § 402.14(i).

NMFS has conducted several consultations in recent decades pertaining to federal oil and gas leases in the Gulf OCS. AR13253–54. After one such consultation in 2007, NMFS issued a biological opinion concluding that the proposed oil and gas activities in the Gulf OCS would not jeopardize ESA protected species or habitats. AR13252. Notably, NMFS predicted that because the risk of a very large oil spill was low, any related harms to the animals and their habitats would be minimal. AR13987.

NMFS was wrong. In 2010, the Deepwater Horizon oil rig exploded, releasing millions of barrels of oil into the Gulf of Mexico—several hundred times more than the amount NMFS anticipated for a worst-case scenario oil spill. AR13253; AR52871. The explosion contaminated over 43,000 square miles of surface waters and over 1,300 miles of shoreline and killed or seriously harmed over 100,000 individuals of species listed under the ESA as threatened or endangered. AR40050. To this day, the affected species and habitats have yet to recover. *See, e.g.*, AR40556.

In response, NMFS reinitiated formal consultation to review anew federally authorized OCS oil and gas leases. AR13255. After nearly a decade of research and several rounds of litigation, in March 2020 NMFS published a new biological opinion on the impact of oil and gas activities in the Gulf OCS. *See* AR13256–60; ECF 16-4. The 2020 BiOp covers "all activities associated with the [OCS] oil and gas program in the Gulf of Mexico" proposed to be taken by

federal agencies involved with the program. AR13251–52. Covered proposed actions include all those associated with existing leases and all new leases issued "through approximately 2029." AR 13252, AR13266–366. Because these leases have a 40-year lifespan, "the proposed action is projected to cover 50 years." AR 13252. Only a handful of uncommon agency actions will undergo further "step-down review" when they occur. AR13366–76, AR87962. For the remainder, the 2020 BiOp is the only ESA consultation that will take place.

In the 2020 BiOp, NMFS concluded that the proposed oil and gas activities in the Gulf would jeopardize the Rice's whale, a protected marine mammal. AR13847. After making this jeopardy finding, NMFS developed an RPA that it claimed would mitigate that threat. *Id.* The RPA imposes several restrictions on vessel activity in the area where Rice's whales are primarily found, including a speed limit and a ban on transit at night. AR13850. NMFS concluded that none of the other dozens of protected species would be jeopardized by the proposed activity and that their habitats would not be adversely modified. AR13847. However, NMFS also determined that the proposed action likely still would result in incidental take of multiple listed species, including the Rice's whale. AR13850.

On October 21, 2020, the plaintiffs filed this action, claiming that the 2020 BiOp—including its environmental and species analyses, jeopardy analyses, RPA, and ITS—violates the APA and the ESA. ECF 1, 65-2.

On January 19, 2021—the final full day of the departing presidential administration—the defendants moved to transfer the case to the U.S. District Court for the Southern District of Texas or the U.S. District Court for the Eastern District of Louisiana. ECF 16. In the days that followed, API, EnerGeo Alliance, NOIA, and Chevron entered the case as defendants. ECF 19 & 33. The intervenor-defendants joined the motion to transfer. ECF 57 & 59. On May 24, 2021, the Court

denied the motion. ECF 63. In the months that followed, the defendants and the intervenor-defendants answered the complaint. ECF 73, 76, 77.

On May 27, 2022, the plaintiffs moved for summary judgment, ECF 93, and for the admission of extra-record evidence, ECF 94. After extending the briefing schedule multiple times, the Court ordered the defendants to file their first briefs on the two motions by October 26, 2022. ECF 101. The day those briefs came due, the defendants moved to stay the briefing schedule because they would soon be moving for the Court to remand the 2020 BiOp to NMFS without vacating the opinion. ECF 102. The day before, they had received a letter from the Bureau of Ocean Energy Management ("BOEM") and the Bureau of Safety and Environmental Enforcement ("BSEE")—agencies of the Interior Department—requesting to reinitiate consultation on the 2020 BiOp. ECF 102-1, at 7–8; ECF 102-2, at 2–4. After briefing and an on-the-record call, the Court granted the motion to stay the briefing schedule as to the plaintiffs' motion for summary judgment and denied it as to the plaintiffs' motion to admit extra-record evidence. ECF 106.

As they had announced, the defendants and the intervenor-defendants moved for remand without vacatur on November 9, 2022. ECF 108, 109, 112. After briefing and a hearing, on January 17, 2023, the Court referred the case to Magistrate Judge Quereshi for settlement. ECF 133.

On July 21, 2023, the parties reached an agreement to stay the case and filed a stipulation to stay proceedings. ECF 147. The Stipulated Agreement to Stay Proceedings had two parts: a series of "WHEREAS" clauses and a series of numbered, operative clauses. *Id.* Each part was preceded by a recitation that the plaintiffs and the defendants "hereby agree and stipulate as follows," *id.* at 1, or "stipulate and agree as follows," *id.* at 4, respectively. The "WHEREAS" clauses declared (in relevant part) that BOEM "will" implement three measures to protect the Rice's whale for the duration of the consultation between BOEM and NMFS. *Id.* at 3–4. First,

BOEM would issue a Notice to Lessees offering non-binding guidance and recommendations on how to protect the Rice's whale. Id. at 3; ECF 147-1. Second, BOEM would add a stipulation to Gulf of Mexico oil and gas leases, including the then-imminent Lease Sale 261, directing lessees and operators to keep careful watch for Rice's whales, observe speed restrictions, keep a specified distance from the whales, and document compliance with these and other requirements. ECF 147, at 3; ECF 147-2. Third, "BOEM will exclude" a specified area of the Gulf "from Gulf of Mexico oil and gas lease sales (beginning with Lease Sale 261)." ECF 147, at 4. The agreement then declared that on that basis—"therefore"—the parties agreed to stay the litigation for the duration of the consultation on the 2020 BiOp. Id. at 4. Then, the operative provisions outlined a timeline for the consultation. The Bureaus "anticipate[d]" providing their consultation package to NMFS by September 1, 2023, and NMFS "agree[d] to conclude the consultation within one year of receiving a complete consultation package from the Bureaus." Id. NMFS also agreed to "consider and address each of [the plaintiffs'] issues as part of the reinitiated consultation, as appropriate," but emphasized that it "does not and cannot make any commitment as to the merits of how any particular issue will be addressed or resolved." Id. at 4 & n.4. In addition, the agreement noted that if the plaintiffs or the defendants "believe[] there is good cause to lift the stay, they may so move the Court" after meeting and conferring with the other parties to the agreement. *Id.* at 5.

The Court invited the intervenor-defendants to file any objections to the agreement. ECF 148. The intervenor-defendants did not object to the agreement's operative terms. ECF 149, at 1–2. Nevertheless, they "reserve[d] all rights to challenge BOEM's actions in an appropriate venue and at the appropriate time." *Id.* at 3. On August 24, 2023, the Court approved the stipulation and stayed the case. ECF 154.

The "appropriate time" arrived immediately. The "appropriate venue" turned out to be the U.S. District Court for the Western District of Louisiana. The same day the Court approved the agreement, the intervenor-defendants (accompanied by the State of Louisiana) sued BOEM, challenging the inclusion of the two binding protective measures in Lease Sale 261. Compl., *Louisiana v. Haaland*, No. 2:23-cv-01157-JDC-KK (W.D. La. Aug. 24, 2023). Days later, the intervenor-defendants moved for a preliminary injunction. Mot. Prelim. Inj., *Louisiana*, 2:23-cv-01157-JDC-KK (W.D. La. Aug. 28, 2023). The plaintiffs intervened in defense of the measures. Order Granting Intervention, *Louisiana*, 2:23-cv-01157-JDC-KK (W.D. La. Sept. 14, 2023). On September 21, the U.S. District Court for the Western District of Louisiana enjoined BOEM from including the protective measures and ordered the sale to proceed on September 30, 2023. Order 30, *Louisiana*, 2:23-cv-01157-JDC-KK (W.D. La. Sept. 21, 2023).

The plaintiffs and BOEM appealed, Notices of Appeal, *Louisiana*, 2:23-cv-01157-JDC-KK (W.D. La. Sept. 22, 2023), and sought an emergency stay of the injunction, Emerg. Mot. To Stay, *Louisiana v. Haaland*, No. 23-30666 (5th Cir. Sept. 22, 2023); Emerg. Mot. Partial Stay, *Louisiana*, No. 23-30666 (5th Cir. Sept. 22, 2023). But while the plaintiffs sought to stay the district court's injunction of the protective measures, BOEM did not. Instead, BOEM challenged only the district court's order that the sale take place by September 30. Emerg. Mot. Partial Stay 16–29, *Louisiana*, No. 23-30666 (5th Cir. Sept. 22, 2023). The U.S. Court of Appeals for the Fifth Circuit denied the plaintiffs' motion to stay the injunction but granted BOEM's motion, staying the lease sale until November 8, 2023. Order, *Louisiana*, No. 23-30666 (5th Cir. Sept. 25, 2023).

Two days later, the plaintiffs moved to expedite the appeal. Emerg. Mot. Expedite Appeal, *Louisiana*, No. 23-30666 (5th Cir. Sept. 27, 2023). The Fifth Circuit granted the motion. Order Granting Mot. Expedite, *Louisiana*, No. 23-30666 (5th Cir. Sept. 28, 2023). Once again, the

plaintiffs argued that the measures to protect the Rice's whale should remain in the lease sale. And once again, BOEM did not—challenging only the sale timeline. Opening Br. Fed. Defs.-Appellants, *Louisiana*, 23-30666 (5th Cir. Oct. 6, 2023); Reply Br. Fed. Defs.-Appellants, *Louisiana*, 23-30666 (5th Cir. Oct. 18, 2023). The Fifth Circuit briefly stayed the injunction to permit briefing and oral argument.

One day after oral argument, the Fifth Circuit dismissed the appeal. *Louisiana v. Haaland*, 86 F.4th 663, 665, 667 (5th Cir. 2023). The court held that the plaintiffs did not have standing and concluded that BOEM had not challenged the injunction anyway. *Id.* To address BOEM's concerns about the timeline, the Fifth Circuit modified the injunction, giving BOEM until December 21, 2023 to conduct the sale. *Id.*

With the protective measures thus enjoined, the parties to this case met and conferred four times about lifting this Court's stay. ECF 157-1, at 9. Ultimately, the plaintiffs moved to lift it. ECF 157. On January 9, 2024, the Court granted their motion to lift the stay, denied the defendants' motion for remand without vacatur, and granted the plaintiffs' motion for the admission of an extra-record declaration from Dr. Susan Lubetkin. ECF 165. Briefing on the motions for summary judgment and a host of associated motions for the admission of additional extra-record evidence concluded on May 3, 2024. *See* ECF 93, 175, 179, 180, 182, 183, 185, 186, 191, 195, 198 (summary judgment briefing); ECF 177, 181, 184, 187, 188, 192, 193, 194, 196, 197, 199, 200, 201 (admission of evidence briefing). No hearing is necessary. *See* Loc. R. 105.6.

II. Legal Standards

The aim of the ESA is "to halt and reverse the trend toward species extinction, whatever the cost." *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978). To that end, the ESA prohibits "virtually all dealings with listed species by any individual or entity except in extremely narrow

circumstances." *Appalachian Voices v. U.S. Dep't of Interior*, 25 F.4th 259, 264 (4th Cir. 2022) (quoting *Tenn. Valley Auth.*, 437 U.S. at 180) (cleaned up).

Two ESA provisions are relevant to this case: Section 7 and Section 9. Under Section 7, federal agencies must "ensure that 'any action authorized, funded, or carried out by [the] agency . . . is not likely to jeopardize the continued existence of any [listed] species." *Id.* (quoting 16 U.S.C. § 1536(a)(2)). "To 'jeopardize the continued existence' 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." *Id.* (quoting 50 C.F.R. § 402.02). A procedural duty accompanies that substantive requirement.

Whenever an agency action "may affect listed species," the agency must formally consult with the [appropriate wildlife service]. During consultation, the [service] must formulate a "biological opinion" on whether that action, in light of the relevant environmental context, "is likely to jeopardize the continued existence of [those] species." In making this determination, the [service] must "use the best scientific and commercial data available."

Id. (quoting 50 C.F.R. § 402.14(a), (g); 16 U.S.C. § 1536(a)(2)).

Section 9 "broadly prohibits the 'take' of any listed species. To 'take' means to 'harass, harm, ... wound, [or] kill, ... or to attempt to engage in any such conduct." *Id.* (quoting 16 U.S.C. § 1538(a)(1), and then *id.* § 1532(19)). If the expert agency "determines that an agency action is not likely to jeopardize a listed species but is 'reasonably certain' to lead to incidental 'take' of that species, it must provide the action agency with an incidental take statement." *Id.* at 264–65. The ITS must "specify the 'amount or extent' of incidental take, 'reasonable and prudent' mitigation measures, and 'terms and conditions' to implement those measures." *Id.* "Any incidental take consistent with these limits is not prohibited by Section 9. But whenever these limits are exceeded the action agency must 'reinitiate consultation immediately." *Id.* at 265.

"Because the Endangered Species Act does not specify a standard of review, [courts] apply the general standard of review of agency action established by' the Administrative Procedure Act." *Id.* at 268 (quoting *Sierra Club v. U.S. Dep't of the Interior*, 899 F.3d 260, 270 (4th Cir. 2018)). The APA directs courts to "hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Id.* (quoting 5 U.S.C. § 706(2)(A)).

Agency action is arbitrary and capricious "if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."

Id. at 269 (quoting Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983)).

"Review under this standard is highly deferential, with a presumption in favor of finding the agency action valid." *Id.* (quoting *Ohio Valley Env't Coal. v. Aracoma Coal Co.*, 556 F.3d 177, 192 (4th Cir. 2009)). "Nevertheless, [courts] must conduct a 'searching and careful' review to determine whether the agency's decision 'was based on a consideration of the relevant factors and whether there has been a clear error of judgment." *Id.* (quoting *Sierra Club*, 899 F.3d at 270)).

III. Discussion

The 2020 BiOp violates the ESA and the APA. First, the BiOp underestimated the risk and harms of oil spills to protected species. Second, the jeopardy analysis for two listed species, the Rice's whale and the Gulf sturgeon, assumed these species' populations remained as large as they were before the catastrophic Deepwater Horizon oil spill ("DWH"), even though the record evidence and NMFS's own findings indicated that DWH significantly diminished their populations. Third, the RPA addressed only a couple of the stressors that were likely to jeopardize

the Rice's whale, without explaining why addressing only those two problems was good enough or even explaining how the measures it proposed would prevent the jeopardy those two stressors would cause. Fourth, the ITS failed to recognize oil spill take as incidental take and adopted an irrational surrogate for determining how many listed species would be taken by vessel strikes. For these reasons, the BiOp is unlawful and must be vacated.

A. Oil Spill Risk

The plaintiffs argue that NMFS made a host of findings in the BiOp that arbitrarily underestimated the risk that the proposed action would result in oil spills and the harm those spills would cause listed species. They argue that NMFS deferred to BOEM's conclusion that an oil spill of greater than one million barrels was too unlikely to consider an effect of the action, in violation of NMFS's legal duty to reach its own conclusion about that issue. They argue that this adopted finding that the proposed action would not result in an oil spill of that magnitude contradicted NMFS's own findings elsewhere in the BiOp that such an oil spill would be an effect of the action. They argue that NMFS did not account for the acute effects of the two oil spills of around 100,000 barrels that NMFS anticipated the action would cause. The Court agrees with the plaintiffs on these issues—each of which is a separate violation of the ESA. The Court need not and does not rule on the plaintiffs' other arguments.

1. Independent Determination

The plaintiffs argue that NMFS unlawfully deferred to BOEM's conclusion that an oil spill larger than one million barrels was unlikely to occur, rather than make an independent determination of its own. They are correct.

The ESA requires the expert agency to determine the effects of the proposed action and its impacts on listed species and share its opinions with the action agency in a biological opinion. The

statute specifies that "after conclusion of consultation . . . the Secretary"—that is, the expert agency—"shall provide to the [action] agency . . . a written statement setting forth the Secretary's opinion, and a summary of the information on which the opinion is based, detailing how the agency action affects the species or its critical habitat." 16 U.S.C. § 1536(b)(3)(A) (emphases added). "If jeopardy or adverse modification is found, the Secretary shall suggest those reasonable and prudent alternatives which he believes . . . can be taken by the [action] agency . . . in implementing the agency action." Id. (emphases added). An incidental take statement is required if "the Secretary concludes" that the proposed action is consistent with the ESA and the Marine Mammal Protection Act ("MMPA"). Id. § 1536(b)(4)(A)—(C) (emphasis added). What matters is "the Secretary's opinion" as to whether "the agency action would violate subsection (a)(2)." Id. § 1536(g)(1) (emphasis added).

Likewise, the implementing regulations provide that the expert agency, or "Service," is responsible for determining the impacts of the proposed action. The "Service['s] responsibilities during formal consultation" are to "[r]eview all relevant information," to "[e]valuate the current status and environmental baseline of the listed species or critical habitat," to "[e]valuate the effects of the action and cumulative effects on the listed species or critical habitat," and ultimately to "formulate *the Service's opinion* as to whether the action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat" as part of "*its* biological opinion." 50 C.F.R. § 402.14(g)(1)–(4), (8) (emphases added). The regulations further specify that a "biological opinion shall include: . . . [t]he Service's opinion" on the proposed action and its impacts. *Id.* § 402.14(h) (emphasis added).

Courts have interpreted the ESA and these regulations to require the expert agency to make an independent determination of the effects of the proposed action. *See Pub. Emps. for Envt'l Resp.*

v. Beaudreau, 25 F. Supp. 3d 67, 109 (D.D.C. 2014); see also Gerber v. Norton, 294 F.3d 173, 184–86 (D.C. Cir. 2002) ("It is plain on the face of the statute that it is the Service (as delegate of the Secretary of the Interior) that must make this finding."). Accordingly, the expert agency may not "defer[] to the [action agency] . . . without at least making clear that it [is] doing so based on its own independent determination of the issue." Beaudreau, 25 F. Supp. 3d at 110; see also Gerber, 294 F.3d at 185–86 ("When a statute requires an agency to make a finding as a prerequisite to action, it must do so. Merely referencing a requirement is not the same as complying with that requirement. And stating that a factor was considered—or found—is not a substitute for considering or finding it. Nor may the agency delegate its responsibility to the regulated party.") (cleaned up). For good reason: When the expert agency defers to the action agency without doing so based on its own opinion on the issue, the biological opinion can hardly be said to provide the expert agency's opinion at all.

Here, NMFS deferred to BOEM's determination that an oil spill greater than one million barrels should not be considered an effect of the proposed action. NMFS said so. The core of NMFS's analysis of whether such a large oil spill should be considered an effect of the action is a recitation of BOEM's opinion, culminating in complete deference to the action agency's opinion:

As for the potential for an extremely large event due to a well-control incident in the Gulf of Mexico, the recent analysis provided by BOEM (Ji et al. (2014)) evaluated the risk of extremely large spill events on the U.S. OCS. This study predicted the return period for a worst-case spill (defined as a spill over 1 Mbbl) as 165 years with a 95 percent confidence interval between 41-500 years. This still results in a wide range of years over which an extremely large uncontrolled blowout might occur. This wide range of years is due, in part, to the high uncertainty involved in predicting rare events. BOEM has concluded that an extremely large blowout and uncontrolled release of oil should not be considered an effect of the action because the probability is so low that it is not reasonably certain to occur within the time period covered by this opinion and so is not an anticipated result of the proposed action. NMFS will defer to the BOEM and BSEE analysis on oil spills and oil spill control for this conclusion based on their expertise in this subject, and accordingly will not carry it into its analysis of the effects of the action the

hypothetical occurrence of this low-probability extremely large (greater than 1 Mbbl) event.

AR13746 (emphases added). The BiOp is clear: BOEM thought an extremely large oil spill would not happen. NMFS deferred to BOEM's conclusion. And NMFS did not defer on the basis of its own determination that BOEM was right, but merely because BOEM said so.¹

What little NMFS did say about the merits of BOEM's position reveals that NMFS knew there were significant reasons not to defer to BOEM. NMFS noted that in the prior 2007 biological opinion, BOEM took the same view it advanced this time: An extremely large oil spill would not occur. AR13987. At that time, NMFS took a different view: An extremely large oil spill would occur about every 40 years. *Id.* In hindsight, NMFS's position "proved reasonably accurate." *Id.* The DWH spill occurred 31 years after the last major oil spill. *Id.* But even NMFS underestimated the severity of that spill. *Id.* In fact, NMFS's "underestimate of impacts to listed species was the primary reason reinitiation of consultation was requested in 2010." *Id.* So it was important to NMFS that the 2020 BiOp not repeat that mistake. *See* AR13987–88. Yet when BOEM again concluded that the action would not result in an extremely large spill, AR13986–87, NMFS "decided to defer to BOEM as the experts on the probability of occurrence of an extremely large spill," AR13987 (emphasis added). This was despite the fact that "BOEM's methodology would not have predicted that the DWH event would have occurred." *Id.* So by NMFS's own account, NMFS deferred to an agency that had been wrong before, on the same claim that agency had been

_

¹ As it turns out, NMFS conducted its own analysis of the issue. *See* AR13986 (App'x G). That analysis concluded that the largest spill that could result from the proposed action would have a median volume of 1.1 million barrels. AR14000. However, NMFS set its own analysis aside—shunting it to an appendix and disregarding its findings—in deference to BOEM. NMFS "did not carry [its own analysis] forward because . . . [NMFS] *defer[red] to BOEM's analysis and conclusion* that an extremely large spill is a low probability event." AR 13746–47 (emphasis added).

wrong about, which that agency now renewed on the basis of a methodology NMFS knew would have missed the greatest oil spill catastrophe of the previous century. And NMFS provided no meaningful explanation for its decision to defer to BOEM in disregard of these facts. That violated the ESA. *See Beaudreau*, 25 F. Supp. 3d at 107–110; *Gerber*, 294 F.3d at 184–86.

Beaudreau confirms this conclusion. There, BOEM initiated formal consultation with the United States Fish and Wildlife Service ("FWS") on the impact of a proposed offshore wind energy project. Beaudreau, 25 F. Supp. 3d at 77–78, 86–87. After consultation, FWS issued a biological opinion and an accompanying ITS. Id. at 86–87. In the ITS, FWS considered whether it was "reasonable and prudent" to impose temporary, seasonal shutdowns of the wind turbine generators to mitigate the harms to two impacted species. Id. at 87. Ultimately, FWS did not incorporate that measure into the ITS. Id. The sole reason: BOEM (joined by a regulated private party) determined that, in its view, the shutdowns would not be "reasonable and prudent." Id. The ITS contained deferential language including, "it was determined by the BOEM and Cape Wind to not be reasonable and prudent," "BOEM considers that this may involve more than a minor change," "the BOEM has also determined," and "the BOEM indicates." Id. (quoting admin. rec.) (cleaned up).

The U.S. District Court for the District of Columbia held that FWS's deference to BOEM violated the ESA. *Id.* at 107. Interpreting the ESA and the associated regulations, the court found that because FWS was the expert agency, "FWS [wa]s the entity that must make the ultimate determination" on whether a protective measure would be "reasonable and prudent" under ESA Section 7. *Id.* at 108. Yet FWS, the expert agency, deferred to BOEM, the action agency. *Id.* at 109. "[N]owhere in the explanation [wa]s there an indication that the [expert agency] made an independent determination," the *Beaudreau* Court concluded. *Id.* The court held that "[t]his [wa]s unacceptable." *Id.* The court noted that "the ESA and its implementation regulations require the

FWS to make an independent determination," and, "[b]ecause it seemingly did not do so, the Court grant[ed] summary judgment to the plaintiffs on their ESA claims against the FWS." *Id*.

Much the same is true in the case at hand. Here, as in *Beaudreau*, BOEM initiated formal consultation with an expert agency on a proposed action. Here, as in *Beaudreau*, the expert agency promulgated a biological opinion that adopted BOEM's position on a finding solely out of deference to BOEM. Here, as there, the expert agency did not do so on the basis of any independent determination of its own as to whether BOEM's position was sound. If anything, this is a clearer case of unlawful deference. Here, unlike in *Beaudreau*, the expert agency explicitly acknowledged its deference to BOEM. And here, unlike in *Beaudreau*, the expert agency's own view was that there were serious reasons to doubt the soundness of BOEM's methods and conclusion—and the expert agency did not explain why it deferred in spite of them. So here, as in *Beaudreau*, the expert agency violated the ESA by failing to make its own determination and failing to explain its decision to defer in spite of serious countervailing evidence about BOEM's analysis.

The defendants do not deny that NMFS deferred to BOEM. They cannot. Instead, they argue that deference was appropriate. The ESA, they point out, directs the action agency and the expert agency to consult with one another. *See* 16 U.S.C. § 1536(a)(2). The implementation regulations direct them to share data. *See, e.g.*, 50 C.F.R. § 402.14(d). The process is supposed to be collaborative. So, in their view, "NMFS was not required to displace the specialized expertise of the action agencies on particular factual and analytical matters within their authority." ECF 176, at 19.

The defendants' conclusion does not follow. True enough, the consultation process involves collaboration. But it is collaboration to a specific end: the issuance of a biological opinion that identifies the expert agency's opinion on the impact of the proposed action. To that end, the

expert agency may consider the action agency's opinion. But the expert agency must formulate its own opinion. And true enough, NMFS had no obligation to reach a different conclusion than BOEM about whether an extremely large oil spill should be considered an effect of the action. But NMFS had an obligation to reach its own conclusion. If it wanted to adopt BOEM's position, it needed to adopt that position on its merits—not out of unreasoned deference to BOEM.

Beaudreau considered and rejected these same arguments. See 25 F. Supp. 3d at 109–10. The court stated that, "[w]hile collaboration is encouraged," that fact "does not support the notion that [the expert agency] should have deferred to the BOEM," at least without "making clear that it was doing so based on its own independent determination of the issue." Id. at 110. It concluded that "[t]he ESA required the FWS to independently make that determination, and 'it must do so." Id. (quoting Gerber, 294 F.3d at 185).

The defendants cite Shafer & Freeman Lakes Environmental Conservation Corporation v. Federal Energy Regulation Commission, 992 F.3d 1071 (D.C. Cir. 2021), for the proposition that "it was entirely appropriate for NMFS to defer to BOEM's and BSEE's expertise in assessing the probability of an extremely large oil spill." ECF 176, at 20; see also ECF 191, at 12 (citing Shafer again). Shafer says nothing like that. Shafer concerned a challenge to a biological opinion formulated by FWS. Id. at 1089–90. As the Shafer Court noted at the start of its discussion, courts reviewing a biological opinion under the APA are obligated to uphold it unless it was arbitrary and capricious or unsupported by substantial evidence. Id. at 1089. Under those deferential standards, courts are "not to ask whether [the biological opinion] is the best one possible or even whether it is better than the alternatives," but instead must ask only whether the expert agency relied on impermissible factors, failed to consider an important aspect of the problem, or offered an explanation counter to the evidence or otherwise highly implausible. Id. (quoting FERC v. Electric

Power Supply Ass'n, 577 U.S. 260, 292 (2016), and citing Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983)). And courts must take additional care when reviewing scientific judgments, particularly "when the science is uncertain." Id. at 1089–90.

Against these ordinary administrative law principles, the *Shafer* plaintiffs argued that the scientific findings in the biological opinion they challenged were "undeserving of deference" because "the [FWS] personnel who worked on the Biological Opinion lacked hydrological expertise." *Id.* at 1090. In a single paragraph, *Shafer* rejected that argument out of hand. *Id.* The biological opinion relied on hydrology and biology. *Id.* FWS personnel were experts in biology. *Id.* And FWS "consulted hydrologists as part of its decision-making process." *Id. Shafer* concluded that FWS's "judgment accordingly merit[ed] 'the deference traditionally given to an agency when reviewing a scientific analysis within its area of expertise." *Id.* (quoting *Appalachian Power Co. v. EPA*, 135 F.3d 791, 802 (D.C. Cir. 1998)).

The cited portion of *Shafer*, then, stands for two propositions. An expert agency may "consult[]" outside scientists "as part of its decision-making process" on a biological opinion. *Id.*And the fact that an expert agency has done that is no reason to deny the resulting biological opinion the ordinary deference courts accord any agency action under the APA. *Id.* The defendants here assert a distinct proposition: An expert agency may predicate a finding in its biological opinion entirely on deference to the findings of the action agency. The defendants' proposition just does not follow from *Shafer*'s two propositions.

The ESA and the relevant regulations required NMFS to determine whether an oil spill greater than one million barrels would be an effect of the proposed action. But NMFS set aside its own determination on that issue in favor of BOEM's. And NMFS provided no explanation for that decision to defer. That was contrary to the ESA.

2. Consistency with the Record

Agency action is arbitrary and capricious if it "runs counter to the evidence before the agency." *State Farm*, 463 U.S. at 43. Such is the case here. The BiOp concludes that an oil spill of more than one million barrels is not an effect of the proposed action. Yet in multiple places, the BiOp endorses the opposite conclusion: that an oil spill of more than one million barrels *is* an effect of the action. The BiOp does not explain these contradictions. "Unexplained inconsistencies" render agency action counter to the evidence. *U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 650 (D.C. Cir. 2016). The BiOp's conclusion that an oil spill of more than one million barrels is not an effect of the action is contrary to the evidence before NMFS.

As discussed, NMFS deferred to BOEM's determination that an extremely large oil spill is not an effect of the proposed action. *See* AR13746–47, AR14000. That conclusion was consequential. Because the BiOp found that an extremely large oil spill was not an effect of the proposed action, the BiOp did not address whether an extremely large oil spill would jeopardize the survival and recovery of protected species. In other words, the finding that the proposed action would not cause an extremely large oil spill was integral to the BiOp's findings that the proposed action would not jeopardize the survival and recovery of any species (at least after accounting for the RPA). If the BiOp had found that the proposed action would jeopardize the survival and recovery of additional species, that might have prevented the proposed action from happening—at least without substantial changes.

Curiously, though, several sections of the BiOp acknowledge that an extremely large oil spill is an anticipated effect of the action and must be analyzed as such. Consider the introduction to the section titled "Effects of the Action on Designated Critical Habitat":

In this section we analyze the effects of the proposed action on the identified essential physical and biological features of designated critical habitat for the

Northwest Atlantic DPS of loggerhead sea turtle and Gulf sturgeon. . . . As part of this analysis, we evaluate the effects of oil spills on loggerhead and Gulf sturgeon designated critical habitat. . . . Because we cannot discount the risk that a major spill will occur (see Section 8.8), our analysis of the effects of oil spills on loggerhead and Gulf sturgeon critical habitat includes our estimated median spill volume of the largest predicted spill (i.e., 1.1 million bbl).

AR 13780. So in this passage, the BiOp reports that NMFS "cannot discount the risk" that an oil spill of 1.1 million barrels "will occur" because that is the "estimated median spill volume of the largest predicted spill." *Id.* Accordingly, "the effects of the proposed action" on the designated critical habitats of Gulf sturgeon and loggerhead sea turtles should and do include the effects of an extremely large spill. *Id.* Yet elsewhere in the BiOp, NMFS says just the opposite: that an oil spill greater than one million barrels is so unlikely that it need *not* be considered an effect of the proposed action. This obvious contradiction goes unexplained. Making matters worse, this passage cites to Section 8.8 of the BiOp for the proposition that a spill of 1.1 million barrels must be considered because, the passage says, Section 8.8 explains that "we cannot discount the risk that a major spill will occur." *Id.* Yet Section 8.8 is where the BiOp announces that it will discount that very risk out of deference to BOEM. *See* AR13746–47. Neither section acknowledges this contradiction, much less explains it.

Another section of the BiOp contains the same anomaly. In "Effects of the Action on Species," NMFS estimates that between 367 and 1,200 Gulf sturgeon "will be exposed by spilled oil under the proposed action" because "a shorter duration spill is anticipated under the proposed action that is approximately one third the duration of DWH (30 days compared to 87 days) with one third of the volume of oil that could be spilled." AR13770. By NMFS's own account, "the amount released by the DWH event" was "4.9 million" barrels. AR13513. So a spill of one third the volume of DWH is a spill of more than 1.6 million barrels—an extremely large oil spill. Once

again, one part of the BiOp reports that an extremely large oil spill is an anticipated effect of the proposed action, while other parts insist that it is not. And the contradictions go unexplained.

The defendants concede that "NMFS referred to an extremely large oil spill as part of its effects analysis" in these two instances. ECF 175-1, at 11 n.5. But they try to downplay these analyses. They insist that "noting the mere possibility of such a spill does not equate to a finding that such a spill is reasonably certain to occur." Id. That is true as far as it goes. Noting that an extremely large oil spill might occur is compatible with denying that an extremely large oil spill is reasonably certain to occur. The problem is that these portions of the BiOp do not merely note that an extremely large spill is possible. They find that an extremely large spill is an anticipated effect of the action and analyze it accordingly. As many as 1,200 Gulf sturgeon "will be exposed by spilled oil" because a spill of one third the volume of DWH "is anticipated under the proposed action," AR13770 (emphasis added)—again, that is over 1.6 million barrels, see AR13513. The "effects of the proposed action" on the habitats of Gulf sturgeon and loggerhead sea turtles include the impacts of a 1.1-million-barrel spill "[b]ecause [NMFS] cannot discount the risk" that a spill that large will occur. AR13780 (emphasis added). These discussions do not occur in sections about mere possibilities, either. They occur in the sections concerning the "Effects of the Action on Species" and the "Effects of the Action on Designated Critical Habitat." And these findings were carried over into the "Integration and Synthesis for Species," see AR13836 (effects on Gulf sturgeon), and "Integration and Synthesis for Designated Critical Habitat," see AR13843 (effects on loggerhead habitat), AR13845 (effects on Gulf sturgeon habitat).

If NMFS had determined that an extremely large oil spill was a mere possibility, NMFS would have been free to discount that risk. But that is not what happened. NMFS designated the risk of an extremely large oil spill as an effect of the action. In doing so, NMFS necessarily found

an extremely large oil spill was reasonably certain to occur. The applicable regulations define "effects of the action" as "all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action but that are not part of the action." 50 C.F.R. § 402.02. And the regulations explain that "[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." Id. (emphasis added). In finding that an extremely large oil spill was an effect of the action, NMFS necessarily found in these two sections of the BiOp that an extremely large oil spill "is reasonably certain to occur" as a result of the proposed action. See id. Yet elsewhere in the BiOp, NMFS found an extremely large oil spill was unlikely to occur. The defendants' response to these contradictions grossly mischaracterizes the BiOp.

The defendants also contend that these contradictions are harmless. "[I]f anything," they say, these two discussions of the consequences of an extremely large oil spill "made the effects analysis more, rather than less, conservative." ECF 175-1, at 21 n.5. But that is not necessarily true. If an extremely large oil spill is an effect of the action, then NMFS needed to consider its effects on all protected species and habitats, not just a few. By limiting its analysis of these anticipated harms to one species and two species' habitats, NMFS would have made the effects analysis less conservative than it should have been, not more. Whatever the consequences, NMFS is not free to find that an extremely large oil spill is—and is not—an anticipated effect of the proposed action, without any contemporaneous explanation for the discrepancy. "Unexplained inconsistencies" like that are unlawful. See U.S. Sugar Corp., 830 F.3d at 650. Indeed, they are "the hallmark of arbitrary action." See Nat'l Parks Conservation Ass'n v. EPA, 788 F.3d 1134, 1145 (9th Cir. 2015) (quoting Sierra Club v. EPA, 719 F.2d 436, 459 (D.C. Cir. 1983)).

The plaintiffs also argue that the BiOp's finding that an extremely large oil spill was not an effect of the action ran contrary to other evidence. They claim that the agency's primary study—the Ji study—is best read as indicating such a spill was likely enough that it should have been treated as an effect of the action. And they claim that the Ji study missed, and NMFS failed to account for, the fact that historical spill data has limited value for predicting future spills because the risk of a catastrophic spill is increasing over time due to increased drilling, deeper drilling, and climate change. The Court need not "address[] all of the [plaintiffs'] complaints because, on remand, they can be aired and addressed in the renewed agency process." *Appalachian Voices*, 25 F.4th at 283 (quoting *Dow AgroSciences*, 707 F.3d at 475). Because the Court has found already that the finding at issue was counter to the evidence, the Court does not rule on these additional arguments.²

3. Smaller Catastrophic Spills

Finally, the plaintiffs contend that NMFS irrationally failed to consider the likelihood of smaller catastrophic spills and the consequences of those spills. The latter argument has merit.

The plaintiffs claim that NMFS "failed to contemplate the likelihood of any spill between 100,000 and 1,000,000" barrels. ECF 93-3, at 25. In fact, NMFS did contemplate the likelihood of such a spill. NMFS considered the probability of what BOEM dubbed "very large" spills: spills greater than 10,000 barrels. AR13746. In deference to BOEM, NMFS did not consider the risk of spills greater than one million barrels. *Id.* So the BiOp's analysis of the risk of "very large" spills covered spills between 10,000 barrels and one million barrels. In that analysis, NMFS adopted

one another.

24

² Because the Court does not reach the plaintiffs' challenges to the Ji study and does not consider the first declaration of Dr. Lubetkin in ruling on the cross-motions for summary judgment, the Court denies as moot the motions for the admission of extra-record evidence, ECF 177, 181, 184, 187, 192, 199, which solely concern these issues and aim to rebut Dr. Lubetkin's declaration and

(and explained why it adopted) BOEM's finding that two oil spills over 10,000 barrels were likely to occur in the 50-year timeframe for the BiOp, with a median spill volume of 100,000 barrels. AR13745–46. In considering the likelihood of spill between 10,000 and one million barrels and finding that there would be two spills with a median volume of 100,000 volumes, NMFS did "contemplate the likelihood of any spill between 100,000 and 1,000,000" barrels. *See* ECF 93-3, at 25.

The plaintiffs also claim that NMFS did not address "the discrete acute effects" of an oil spill of 100,000 barrels on protected species and habitats. See ECF 93-3, at 25; see also ECF 185, at 23 (asserting that there is "no part of the BiOp evaluating how populations might be affected by acute, widespread exposure to a 100,000 [barrel] spill"). "Agency action is arbitrary and capricious 'if the agency . . . entirely failed to consider an important aspect of the problem." Defs. of Wildlife v. U.S. Dep't of Interior, 931 F.3d 339, 345 (4th Cir. 2019) (quoting Defs. of Wildlife v. N.C. Dep't of Transp., 762 F.3d 374, 396 (4th Cir. 2014)). An expert agency's failure to analyze the impact of an anticipated effect of the proposed action on protected species is a failure to consider an important aspect of the problem. See, e.g., W. Watersheds Project v. Haaland, 69 F.4th 689, 710–11 (10th Cir. 2023); Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt., 698 F.3d 1101, 1124–25 (9th Cir. 2012); Helena Hunters & Anglers Ass'n v. Marten, 470 F. Supp. 3d 1151, 1178–79 (D. Mont. 2020).

The plaintiffs' argument goes like this: NMFS, following BOEM, anticipated that the proposed action would result in two very large oil spills with a median volume of 100,000 barrels. AR13746. But NMFS did not examine the effects each of those very large oil spills would have on protected species and habitats. And NMFS did not explain why it disregarded those anticipated spills in making its own, distinct determination of the impact oil spills would have on Gulf marine

life. In consequence, NMFS failed to consider an important aspect of the problem. *See* ECF 185, at 22.

A contrast helps illustrate what the plaintiffs are faulting NMFS for failing to do. As discussed above, to determine the effect of oil spills on Gulf sturgeon, NMFS considered how an extremely large oil spill would impact that species. AR13770–71. Simplifying slightly, NMFS reasoned that because the proposed action would result in a spill one third the volume of DWH, the anticipated spill would impact one third the number of Gulf sturgeon impacted by DWH. *Id.* That figure was 1,200 fish. *Id.* NMFS then used 1,200 fish as the total number of Gulf sturgeon that would suffer exposure to oil spills over the 50-year span of the BiOp. AR13774 (Table 119). Finally, NMFS predicated its determination of whether the proposed action would jeopardize the survival and recovery of Gulf sturgeon in part on this 1,200-fish estimate. AR13836–37. In this way, NMFS's jeopardy determination for the Gulf sturgeon was based in part on its estimate of the effects of a discrete, particular oil spill.

NMFS did not conduct a comparable analysis for the two largest spills NMFS acknowledged the proposed action would cause: the two very large spills with a median volume of 100,000 barrels. *See* AR13746. As the Gulf sturgeon discussion illustrates, that omission could be consequential. If NMFS had evaluated the impact of a very large oil spill on protected species and habitats in the way NMFS evaluated the impact of an extremely large oil spill on Gulf sturgeon, the factual findings underlying its jeopardy determinations would have changed. That, in turn, might have changed the jeopardy determinations themselves or any associated RPAs.

The BiOp acknowledges that NMFS did not analyze the effects on protected species and habitats of the two very large spills that NMFS, following BOEM, anticipated would occur. NMFS explained that "BOEM's analysis and estimates of future exposures and effects from oil spills is

not based on modeling or estimating the effects of [any] discrete, particular extreme spill." AR13746. And NMFS did not model or estimate the impact of the anticipated discrete spills on listed species either. In fact, nowhere did the BiOp's analyses of how oil spills would impact each species discuss how the two very large oil spills the BiOp predicts would impact those species. In briefing, the defendants concede that "NMFS did not directly use the estimates in Table 114"—that is, BOEM's predictions of how many oil spills of each volume would occur—"to quantify the consequences of oil exposure." ECF 191, at 16. Instead, NMFS performed different analyses on the basis of the data underlying BOEM's predictions, without considering BOEM's predictions themselves. *See id*.

Making matters worse, evidence in the record indicated that a spill of this magnitude (let alone two) could have swift, catastrophic consequences different in kind from the consequences of the release of the same volume of oil spread over the 50-year life of the BiOp—including the extinction of listed species. *See, e.g.*, AR61431; AR69708–20; AR80784; AR85801. Nevertheless, NMFS considered only whether the total number of exposures to oil over the 50-year lifespan of the BiOp would jeopardize the survival and recovery of each species. AR13774.

Moreover, NMFS did not explain why it did not consider the discrete, acute effects of the two very large oil spills it anticipated. This omission is particularly inexplicable in light of NMFS's consideration of the effects of discrete, extremely large oil spills on Gulf sturgeon and on the habitats of Gulf sturgeon and loggerhead sea turtles.

In sum, NMFS anticipated the proposed action would result in two very large oil spills. Yet NMFS did not analyze the discrete, distinctive effects a spill of that magnitude would have on listed species—let alone two spills of that magnitude. And NMFS provided no explanation for why its alternative oil spill analyses did not address the effects of the largest spills it anticipated.

Because NMFS entirely failed to consider this important aspect of the problem, the BiOp is arbitrary and capricious. *See Defs. of Wildlife*, 931 F.3d at 355.

B. Jeopardy Analysis

NMFS found that the proposed action would jeopardize the survival and recovery of one species: the Rice's whale. The plaintiffs argue that NMFS's jeopardy analyses for the Rice's whale and several other species are arbitrary and capricious in three ways: (1) the jeopardy analyses of the Rice's whale and the Gulf sturgeon assumed these species were at their pre-DWH populations, even though the record evidence and NMFS's own findings indicated that they were not; (2) NMFS failed to account properly for climate change; and (3) NMFS failed to consider separately how the proposed action would impact the recovery of each species in addition to its survival. The plaintiffs' first point is sound. Because that conclusion alone shows that the jeopardy analysis is unlawful, the Court does not evaluate the second or third.

"When it comes to protecting listed species, environmental context is critical." Appalachian Voices, 25 F.4th at 269 (citing Pac. Coast Fed'n of Fishermen's Ass'ns v. U.S. Bureau of Reclamation, 426 F.3d 1082, 1093 (9th Cir. 2005)). Accordingly, the third step in the formulation of a biological opinion is to "[a]dd the effects of the action and cumulative effects to the environmental baseline and[,] in light of the status of the species and critical habitat, formulate [an] opinion as to whether the action is likely to jeopardize the continued existence of [the] listed species." Id. at 271 (quoting 50 C.F.R. § 402.14(g)(4)). In other words, jeopardy analysis determines whether "jeopardy might result from the agency's proposed actions in the present and future human and natural contexts"—not "in a vacuum." Id. at 270. "In making this determination, the [expert agency] must 'use the best scientific and commercial data available." Id. at 264 (quoting 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(g)(8)).

Throughout the BiOp, NMFS acknowledged that the catastrophic DWH oil spill significantly reduced the populations of the listed species the proposed action would impact. Yet when it came time to determine whether the proposed action would jeopardize the survival and recovery of two of them—the Rice's whale and the Gulf sturgeon—NMFS assumed there were as many individuals of these species in 2020 as there were before that catastrophic spill in 2009. And NMFS did not explain why it assumed away the DWH population loss. Because NMFS failed to incorporate these population reductions into its jeopardy analyses, its jeopardy analysis of the Rice's whale and its no-jeopardy findings for the Gulf sturgeon are arbitrary and capricious.

The ESA demands that expert agencies incorporate the baseline environmental conditions and status of each species into the jeopardy analysis for each species. *Appalachian Voices*, 25 F.4th at 278. "[T]he agency must ensure that it analyzes the [proposed action] against the aggregate effects of everything that has led to the species' current status." *Id.* (quotation omitted). "This step is critical." *Id.* Failure to assess the impact of the proposed action against an accurate, complete account of the status quo ante renders the jeopardy findings arbitrary and capricious. *See id.* at 278–79. The reason is simple: "[W]hen baseline conditions or cumulative effects are already jeopardizing a species, an agency may not take action that deepens the jeopardy by causing additional harm. Put differently, if a species is already speeding toward the extinction cliff, an agency may not press on the gas." *Id.* at 279 (cleaned up). In doing so, agencies may not use data they know are out of date or inaccurate—at least not without saying why. "[W]hen an agency acknowledges that its data are either outdated or inaccurate, it should, at the very least . . . explain why it nevertheless chose to rely on the older data." *Dow AgroSciences LLC v. Nat'l Marine Fisheries Serv.*, 707 F.3d 462, 473 (4th Cir. 2013).

One reason BOEM reinitiated consultation was that "the status of some listed species or designated critical habitats may have been altered as a result of" DWH. AR14377. The BiOp's baseline and species background sections confirmed that intuition. The baseline section, for example, declared that "[t]here is no question that the unprecedented [DWH] event and associated response activities . . . have resulted in adverse effects on listed species and changed the baseline for the Gulf of Mexico ecosystem." AR13515. Yet NMFS failed to incorporate the post-DWH population baselines into its jeopardy analysis for at least the Rice's whale and the Gulf sturgeon.

Consider the BiOp's analysis of the population of the Rice's whale. According to the BiOp's species status findings, there were between 33 and 44 Rice's whales in the world before DWH. AR13418. Then DWH "heavily impacted" this miniscule Rice's whale population, "with an estimated 17 percent of the population killed, 22 percent of females exhibiting reproductive failure, and 18 percent of the population suffering adverse health effects." AR13419; *see also* AR40755, AR40768–69. Elsewhere, NMFS noted that DWH may even have reduced the population by as much as 22 percent. AR13518. The report the BiOp cited for this data found that the Rice's whale population would not recover from DWH for 69 years. AR40768.

The BiOp's jeopardy analysis for the Rice's whale briefly alluded to these findings, observing that the population "recently experienced a decline due to the [DWH] oil spill." AR13800. But then, as though DWH never happened, NMFS assumed for the sake of its jeopardy analysis that the population of the Rice's whale was 44 individuals—the high end of the BiOp's estimate of the pre-DWH population. *Id.*; *see also* AR13803 (reporting that the Rice's whale population "is extremely small (approximately 44 individuals)" and then "assuming stable population size of approximately 44 individuals" to determine how many Rice's whales would be killed by vessel strikes and assess the impact of those strikes on survival and recovery). NMFS

made the same assumption in the RPA. AR13847 (asserting that the Rice's whale "has very low population numbers (estimated at 44)"). NMFS thus predicated its jeopardy analysis on a population estimate that was, by NMFS's own account in the same BiOp, unjustifiably high.

What's more, NMFS offered no explanation for its decision to ignore its earlier findings about the damage DWH did to the Rice's whale population. Here is what NMFS said in the jeopardy analysis for the Rice's whale about its assumption that the population was 44:

The most recent estimate from 2009 estimates the population size at 33 individuals (Rosel 2016). Based on habitat model density estimates that incorporate visual survey data from 1992 to 2009, Roberts et al. (2016a) estimated 44 individuals, which is what we have focused on for our analyses. Given the best available scientific information, and allowing for the uncertainty in Gulf of Mexico [Rice's] whale occurrence in non-U.S. waters of the Gulf of Mexico, there are likely less than 100 individuals (Rosel 2016). While there is no information on the population trend, they are thought to have recently experienced a decline due to the DWH oil spill (Trustees 2016).

AR13800. This passage raises more questions than answers. But the main issue is this: Conspicuously absent is any acknowledgment of NMFS's earlier species status findings that DWH reduced the population of the Rice's whale by 17 percent, harmed reproductive fitness, and caused additional health problems for Rice's whales. That absence is all the more inexplicable because this passage cites the very study NMFS cited when it made those earlier findings: Trustees 2016. *See* AR13419.

The BiOp's analysis of the Gulf sturgeon population is marred by a similar discrepancy. According to the same study the BiOp cited for the impacts of DWH on the Rice's whale, that massive spill exposed 63 percent of Gulf sturgeon to oil across six of the fish's seven discrete populations. AR40555–56. Recovery, the report warned, "could take several decades or more." *Id.* That damage seemed likely to be consequential, because NMFS had concluded in 2009 that even "slight increases in estimated adult annual mortality . . . would shift [a] population from an

increasing trend into a decline." AR81550. The BiOp's initial factual findings took stock of this data. *See* AR13770.

Nevertheless, the BiOp's jeopardy analysis inexplicably assumed three of the fish's six impacted populations remained at their pre-DWH populations. AR13835 (citing AR13471 (Table 31)). And NMFS concluded that the proposed action was "expected to have minimal overall effects on the species" because of how large the Gulf sturgeon population was and because its population was stable or increasing. AR13837. But that population estimate and some of those population trends rested on pre-DWH figures as well—despite NMFS's earlier acknowledgment that even "slight increases in estimated adult mortality" would reverse the growth trend. *Compare* AR13471, *with* AR81550. Like the jeopardy analysis for the Rice's whale, the jeopardy analysis for the Gulf sturgeon rested on population data NMFS knew were not just out of date but did not account for the most significant event that had happened since the previous biological opinion.

Two cases illuminate why these failures to account for the population decline caused by DWH render the BiOp unlawful. *Defenders of Wildlife v. U.S. Department of the Interior* concerned a challenge to the jeopardy analysis in a 2018 biological opinion. 931 F.3d at 342. The biological opinion concluded, among other things, that the proposed natural gas pipeline would not jeopardize the survival and recovery of the rusty patched bumble bee ("RPBB"). *Id.* The plaintiffs contended that the biological opinion's optimistic conclusion rested on the expert agency's irrational overestimate of nest density, a proxy for the RPBB population. *Id.* at 349. The Fourth Circuit held that the jeopardy analysis was arbitrary and capricious because the estimate was "not based on the best available information and in fact ignore[d] evidence that the agency itself ha[d] developed." *Id.* For the Fourth Circuit, the "arbitrariness" of the expert agency's nest density estimate was "highlighted" by the fact that in 2017, the agency itself had found that a

variety of data indicated the bee's population "declined significantly," yet in the 2018 biological opinion, the agency projected the species population without considering those foreboding earlier findings. *Id.* at 350. Further, "[t]he BiOp [was] silent on why these projections [were] reasonable in light of the known and documented record of severely declining RPBB populations." *Id.* at 350–51. The fact that the biological opinion "ignored significant evidence that undermine[d] the reasonableness of its estimates—evidence that the agency itself has gathered" indicated that its no-jeopardy finding was arbitrary. *Id.* at 351.

The 2020 BiOp's jeopardy analysis for the Rice's whale and its no-jeopardy finding for the Gulf sturgeon are arbitrary on comparable grounds. Here, as in *Defenders of Wildlife*, the expert agency found that there was significant evidence the population of the species at issue had declined in recent years. Yet in both cases, the expert agency silently set those findings and their underlying evidence aside when it came time to determine whether the proposed action would jeopardize the species' survival and recovery, employing population estimates reflective of the species' status long before the biological opinion. So just as the Fourth Circuit held that the jeopardy analysis for the RPBB was arbitrary, this Court finds that the jeopardy analyses for the Rice's whale and the Gulf sturgeon are arbitrary as well.

A second case supports the same result. In *Center for Biological Diversity v. U.S. Forest Service*, the court found that the challenged biological opinion violated the ESA because it overestimated the population of grizzly bears in the area the project would impact. 687 F. Supp. 3d 1053, 1067–69 (D. Mont. 2023). Expert agencies, the court observed, have a duty to evaluate the current environmental baseline and the status of the species. *Id.* at 1067. That duty "prohibits an agency from disregarding available scientific evidence that is in some way better than the evidence it relies on." *Id.* at 1068 (quoting *Kern Cnty. Farm Bureau v. Allen*, 450 F.3d 1072, 1080

(9th Cir. 2006)). In the biological opinion at issue, the expert agency—FWS—estimated the 2020 grizzly population in the applicable area as 60 bears. *Id.* FWS calculated that figure by increasing the 2012 population (48 to 50 bears) by the estimated population growth rate, which it derived from reproduction data from individual bears. Id. The agency's calculation did not take account of other evidence: a one-third decline in the number of female bears detected between 2017 and 2020 that suggested several female grizzlies had died. Id. at 1069. This was despite the fact that FWS itself acknowledged female grizzly survival and reproduction were "very important" to the future of the species. Id. To the district court, this failure to account for evidence indicative of a decline in the female grizzly population was an irrational oversight. *Id.* By forming its population estimate in disregard of evidence that the female grizzly population had declined, the agency had "ignore[d] an important aspect of the problem that the agency itself acknowledge[d]." Id. And by providing no explanation for its decision to set this data aside, the agency compounded the problem. *Id.* The court held that the "agency cannot ignore critical data without explanation." *Id.* (citing *Conner v.* Burford, 848 F.2d 1441, 1454 (9th Cir. 1988)). It concluded that, "[b]ecause it did so, the FWS violated the ESA." Id.

NMFS's unexplained failure to account in its jeopardy analysis for its own findings that DWH had reduced the populations of the Rice's whale and the Gulf sturgeon (and the record evidence to the same effect) violates the ESA in much the same way. Here, as there, the expert agency tried to compensate for the absence of a contemporary count of the species at issue by extrapolating from older data. And here, as there, the agency made its estimate without taking account of information it had about significant species mortality since the last proper count. Just as FWS estimated the grizzly bear population by disregarding record evidence of significant female grizzly mortality between 2012 and 2020, so NMFS estimated the Rice's whale and Gulf

sturgeon population by disregarding its own findings and the underlying record evidence of significant, DWH-driven mortality between 2009 and 2020. Here, as there, the expert agency thus "ignore[d] an important aspect of the problem that the agency itself acknowledge[d]." *Id.* And here, as there, the expert agency provided no explanation for disregarding what it knew. So here, as there, the expert agency's failure to take proper account of evidence of population decline violates the ESA.

True, in *Center for Biological Diversity*, the problem was that the agency had not addressed record evidence of female grizzly mortality in its account of the environmental baseline and species status, whereas here, the problem is primarily that the agency did not carry forward its own findings about DWH-driven population decline from its account of the environmental baseline and species status to its jeopardy analysis. But if that distinction makes it a difference, it makes what NMFS did here worse, for NMFS actually found in the species status and environmental baseline analyses that DWH reduced the population of the Rice's whale and Gulf sturgeon, and then relied on pre-DWH population figures in determining whether the proposed action would jeopardize them. Together, these two cases indicate that the jeopardy analyses for the Rice's whale and the Gulf sturgeon are arbitrary and capricious.

The defendants and intervenor-defendants respond that NMFS had no choice. NMFS had to conduct its jeopardy analyses for the Rice's whale and the Gulf sturgeon on the basis of pre-DWH population data, they say, because there was no post-DWH population data. The defendants are so insistent on this point that they underlined it. *See* ECF 175-1, at 31 ("While NMFS considered post-Deepwater Horizon population estimates for most species, no such data were available for other species.").

There are two problems with this counterargument. The first is obvious: NMFS had the data, at least as to the Rice's whale. They relied on it right there in those prior parts of the BiOp. And it was included in the administrative record. To repeat: NMFS found earlier in the BiOp that DWH killed 17 percent of the Rice's whale population, led 22 percent of female Rice's whales to exhibit reproductive failure, and caused 18 percent of the population to suffer adverse health effects. AR13419; *see also* AR40755, AR40768–69. If NMFS did not have the right data to support this finding and the other findings discussed above, it could not (or at least should not) have made them. The only data NMFS needed to carry the findings it made in the species status and environmental baseline sections of the BiOp into the jeopardy analysis is the data it relied on in those earlier sections. Yet NMFS did not carry these findings forward.

Second, this counterargument is a post hoc rationalization. In the jeopardy analyses for the Rice's whale and the Gulf sturgeon, NMFS never said that it was using pre-DWH population data despite knowing DWH reduced the populations of these species because it did not have adequate data to estimate the post-DWH population with the precision it needed. In the explanatory paragraph quoted above, for instance, NMFS did not even acknowledge its earlier finding that DWH reduced the population of the Rice's whale by 17 percent, much less explain why the data supporting that finding was not good enough to justify including the finding in the jeopardy analysis. *See* AR13800. In the jeopardy analysis for the Gulf sturgeon, NMFS did not acknowledge that it was using pre-DWH data at all, let alone explain how it reconciled that data with the countervailing evidence in the record. This Court "may look only to contemporaneous justifications in reviewing the agency action." *Dow AgroSciences*, 707 F.3d at 467–68. Post hoc rationalizations like the ones the defendants are offering now are "impermissible." *See Appalachian Voices*, 25 F.4th at 274.

The defendants also try to argue that NMFS did account for the post-DWH decline in the Rice's whale population in its jeopardy analysis by "appl[ying] a qualitative approach." ECF 175-1, at 32. This claim is unsupported by the BiOp, is another impermissible post hoc rationalization, or both. *See Dow AgroSciencs*, 707 F.3d at 467–68; *Appalachian Voices*, 25 F.4th at 274. The sole evidence the defendants cite from the jeopardy analysis is the acknowledgment that Rice's whales "are thought to have recently experienced a decline due to [DWH]." *Id.* (quoting AR18000). What the defendants mean by labeling this "a qualitative approach" is not clear. But what is clear is that NMFS did not incorporate that concession into its jeopardy analysis in any way. The contemporaneous account NMFS offered was that NMFS "focused on" the estimate of 44 individuals, *see* AR13800, AR13803—to the unexplained exclusion of the other population data and its own earlier conclusion that the population had subsequently declined by 17 percent. The idea that the jeopardy analysis incorporated that earlier conclusion qualitatively is just not supported by the record. In consequence, the Court may not and does not accept it.

The defendants and intervenor-defendants also try to argue that it does not matter where in the BiOp NMFS accounted for the impacts of DWH as long as it accounted for them somewhere. The defendants, for instance, claim the Fourth Circuit has "recognized" that "the particular section of a BiOp containing NMFS's consideration of a factor 'is a distinction without a difference; the question is whether this factor was evaluated by the [agency], not what section of the BiOp it is in." ECF 191, at 20 (quoting *Appalachian Voices*, 25 F.4th at 271 n.9)). But the defendants strip that quotation of its context, extend it beyond its scope, and set it in conflict with the rationale and holding of the opinion it comes from.

In *Appalachian Voices*, the Fourth Circuit began its analysis of the biological opinion before it by emphasizing that "environmental context is critical." *Id.* at 269. If the expert agency

conducted its jeopardy analysis "in a vacuum," without taking account of "the present and future human and natural contexts," "a listed species could be gradually destroyed, so long as each step on the path to destruction was sufficiently modest." *Id.* (cleaned up) (citation omitted). "The [ESA] guards against this danger," the Fourth Circuit explained, "by requiring the [expert agency] to formulate its biological opinion in three primary steps." Id. First, the expert agency must review all relevant information available. Id. (quoting 50 C.F.R. § 402.14(g)(1)). Second, the expert agency must evaluate the current status of the listed species, the environmental baseline, the cumulative effects of other, non-federal human action, and the effects of the proposed action. Id. at 270 (quoting 50 C.F.R. § 402.13(g)(2)). Third, the expert agency "must add" these elements together "and, in light of the status of the species and critical habitat, formulate its opinion as to whether the action is likely to jeopardize the continued existence of the listed species." *Id.* at 271 (quoting 50 C.F.R. § 402.14(g)(4)) (emphasis in Appalachian Voices). "[F]or obvious reasons," the Fourth Circuit noted later, "simply reciting the activities and impacts that constitute the baseline" and then assessing jeopardy without addressing them "is not sufficient." Id. at 278 (cleaned up).

So *Appalachian Voices* is clear: The jeopardy finding must be made "in light of" the predicate findings about the status of the species, the environmental baseline, the cumulative effects, and the effects of the proposed action. *Id.* Applying that rule, the Fourth Circuit held that a biological opinion's jeopardy findings were arbitrary and capricious because they "failed to incorporate its environmental-baseline and cumulative-effects findings into its jeopardy determinations" for two species. *Id.* at 278. "On remand, the agency must ensure that it analyzes the Project against the aggregate effects of everything that has led to the species' current status," the court directed. *Id.*

An accurate reading of *Appalachian Voices* reveals that the defendants have the issue backwards. The fact that NMFS accounted for the impact of DWH in its assessment of the baseline conditions for these species does not absolve NMFS of the obligation to account for DWH in its jeopardy analysis. To the contrary: The fact that NMFS found DWH had reduced populations of these species and altered their population growth trends obligated the agency to incorporate those findings into its jeopardy analysis. *See id.* at 270–71, 278–79.

The footnote NMFS quotes is hardly to the contrary. In fact, it is not even from the relevant portion of the opinion. In the part of the opinion the footnote comes from, the Fourth Circuit held that the biological opinion did not properly evaluate the environmental baseline for two species. *See id.* at 271–75. The court began by noting that "the BiOp's evaluation of the environmental baseline for [one of the species] is sparse and scattered." *Id.* at 271. The footnote accompanying that sentence reads: "Only some of what follows is actually within the 'Environmental Baseline' section of the BiOp. But this is a distinction without a difference; the question is whether this factor was evaluated by the [expert agency], not what section of the BiOp it is in." *Id.* at 271 n.9 (citations omitted). Contra NMFS's assertion, this footnote does not mean the agency may predicate its jeopardy analysis on inaccurate or incomplete factual findings, so long as the agency got the facts right somewhere in the biological opinion. This footnote means that the biological opinion's analysis of the environmental baseline comprises all of the initial factual findings it makes about that topic at step two, not just the findings that fall within the section of the biological opinion labelled "Environmental Baseline." Nothing more.

NMFS expressly predicated its jeopardy analyses for the Rice's whale and the Gulf sturgeon on pre-DWH data about the populations and population trends of those species—failing to incorporate its own factual findings and evidence from the record that DWH had significantly

reduced their populations and population trajectories. NMFS's unexplained failure to incorporate these factual findings into the jeopardy analyses renders them arbitrary and capricious.

C. Reasonable and Prudent Alternative

Next, the plaintiffs challenge the BiOp's RPA.

If the expert agency finds that the proposed action would jeopardize the survival and recovery of a listed species, the agency must propose a reasonable and prudent alternative to the action that would prevent that jeopardy. See Dow AgroSciences, 707 F.3d at 473 (quoting 50 C.F.R. § 402.14(h)(3)); San Luis & Delta-Mendota Water Auth. v. Jewell, 747 F.3d 581, 636 (9th Cir. 2014); Pac. Coast Fed'n of Fishermen's Ass'ns v. U.S. Bureau of Reclamation, 426 F.3d 1082, 1085 (9th Cir. 2005). That duty has two sources. See Jewell, 747 F.3d at 636. First, the ESA requires that each agency ensure that agency action is not likely to jeopardize a species or its habitat; to fulfill that requirement, the expert agency "must warrant . . . that the RPA does not jeopardize the species or its habitat." Id. Second, under the APA, agency action is arbitrary and capricious if the agency "entirely failed to consider an important aspect of the problem," id. (citing State Farm, 463 U.S. at 43); "whether an RPA will prevent jeopardy or adverse modification of critical habitat is an important aspect of the problem," id. (citation omitted).

For the reasons that follow, the Court finds that the RPA is inadequate. But first, the Court rejects the intervenor-defendants' argument that the plaintiff organizations do not have standing to challenge the RPA.

1. Standing to Challenge the RPA

Intervenor-defendants API, EnerGeo Alliance, and NOIA contend that the plaintiffs lack standing to "make any claims regarding the Rice's whale." ECF 183, at 9–10. As these intervenor-defendants belatedly acknowledge, only one of the plaintiffs' claims actually requires standing

specific to the Rice's whale: count two, their challenge to the legality of the RPA. The Court finds that two of the plaintiff organizations, Sierra Club and Turtle Island Restoration Network, have standing to bring that claim regarding the RPA.

Under Article III of the United States Constitution, "[t]he judicial Power" extends only to cases or controversies. U.S. Const., art. III, § 2, cl. 1; *see TransUnion, LLC v. Ramirez*, 141 S. Ct. 2190, 2203 (2021). There is a case or controversy only if the plaintiff has standing to assert their claim. *TransUnion*, 141 S. Ct. at 2203. To establish standing, "a plaintiff must show (i) that he suffered an injury in fact that is concrete, particularized, and actual or imminent; (ii) that the injury was likely caused by the defendant; and (iii) that the injury would likely be redressed by judicial relief." *Id.* (citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560–61 (1992)).

"[E]nvironmental plaintiffs adequately allege injury in fact when they aver that they use the affected area and are persons for whom the aesthetic and recreational values of the area will be lessened by the challenged activity." Sierra Club v. United States Dep't of the Interior, 899 F.3d 260, 283 (4th Cir. 2018) (quoting Friends of the Earth, Inc. v. Laidlaw Env'tl Servs. (TOC), Inc., 528 U.S. 167, 183 (2000)). Environmental plaintiffs establish causation when they "show that the challenged action is 'in part responsible for frustrating' their ability to enjoy" the area. Id. (quoting Libertarian Party of Va. v. Judd, 718 F.3d 308, 316 (4th Cir. 2013)). And such plaintiffs establish redressability when they show that "granting the requested relief would at least mitigate, if not eliminate, the alleged harm." id. at 285.

The plaintiff organizations assert standing on behalf of their members. To assert standing on behalf of its members—associational standing—

an organization must allege that "(1) its own members would have standing to sue in their own right; (2) the interests the organization seeks to protect are germane to the organization's purpose; and (3) neither the claim nor the relief sought requires the participation of individual members in the lawsuit."

S. Walk at Broadlands Homeowners' Ass'n, Inc. v. OpenBand at Broadlands, LLC, 713 F.3d 175, 184 (4th Cir. 2013) (quoting Md. Highways Contractors Ass'n, Inc. v. Maryland, 933 F.2d 1246, 1251 (4th Cir. 1991)).

Without denying that the plaintiff organizations have standing to challenge the BiOp on other grounds, these intervenor-defendants argue that no plaintiff has "standing to make any claims regarding the Rice's whale." ECF 182, at 9. On their account, "in order to seek the remedy of vacatur to protect the Rice's whale (or ultimately challenge the merits of NMFS's 2020 BiOp related to the Rice's whale), Plaintiffs must show standing with respect to this specific claim." ECF 110, at 15. According to these intervenor-defendants, the plaintiffs have not borne that burden.

"[S]tanding is assessed based on the claims asserted and the type of injury alleged, not argument-by-argument." *Nat'l Fam. Farm Coal. v. U.S. EPA*, 966 F.3d 893, 910 (9th Cir. 2020) (citations omitted). The operative complaint includes three claims: (1) that the BiOp is arbitrary and capricious and contrary to the best available science, ECF 65-2, ¶¶ 143–56; (2) that the RPA is arbitrary and capricious and contrary to law, *id.* ¶¶ 157–63; and (3) that the ITS is arbitrary and capricious and contrary to law, *id.* ¶¶ 164–71. While the plaintiffs make arguments for counts one and three that concern the Rice's whale, the intervenor-defendants concede in their reply brief that only count two requires standing specific to the Rice's whale since the RPA concerns only the Rice's whale. *See* ECF 195, at 6. Accordingly, the only dispute about the plaintiffs' standing is about whether they have standing to challenge the RPA.

a. The Plaintiffs' Members

Two of the plaintiffs have standing to challenge the RPA, each on behalf of one of its members, Robert Wiygul and George Schmahl. Wiygul is a member of Sierra Club and has

represented the group as an attorney, for pay and pro bono. ECF 93-10, ¶ 4. He is 63 years old, and he has "been either visiting or living on the Gulf of Mexico from the Coastal Bend of Texas to the Florida Bight, for about 60 of those years." Id. ¶ 2. For the last 20 years, he has lived in Ocean Springs, Mississippi, which is connected to the Gulf via the Mississippi Sound. *Id.* He fishes on the Gulf at least monthly when weather conditions allow. *Id.* ¶ 8. "For the last 35 years or so," he has "been going to the federal OCS in the Gulf of Mexico to fish whenever [he] can, which in the past 4 years has been an average of once yearly." *Id.* He intends to continue to do so. *Id.* ¶ 10. At the time he filed his first declaration alongside the plaintiffs' motion for summary judgment in May 2022, he anticipated his next trip to the Gulf OCS would be later that month, once red snapper seasoned reopened. *Id.* ¶ 11. Wiygul also regularly boats on the OCS to see large animals. *Id.* ¶ 15. Although he has not seen a Rice's whale yet, seeing one "is a goal of [his]." Id. ¶ 17. And his "hope" to see one when he heads out is grounded in the whale's distribution in the Gulf: "There is always the chance" that Wiygul will see one because "the Rice's whale's core distribution area . . . [is] directly adjacent to the areas [he] use[s] for fishing." *Id.* ¶¶ 16–17. In fact, the opportunity to see the Rice's whale is one "incentive" for his boat trips to the region, and on each trip, he "spend[s] at least some time looking for them." ECF 185-2, ¶ 10.

Schmahl, who served at NOAA as the Superintendent of the Flower Garden Banks National Marine Sanctuary ("NMS")—a marine life preserve in the Gulf—is a member of Turtle Island Restoration Network. ECF 185-6, ¶¶ 1, 3. Since 1999, Schmahl has spent between 30 and 60 days a year in the Gulf boating, surfing, scuba diving, swimming, taking photographs, and conducting personal research. *Id.* ¶ 6. He still regularly visits Flower Garden Banks as a volunteer for NOAA. *Id.* Now that he is appropriately certified to dive, he estimates he will perform at least six volunteer research and resource management dives a year starting in the summer of 2024. *Id.*

He reports that his enjoyment of these aquatic activities in the Gulf "depends on a healthy and vibrant Gulf of Mexico where all components of the ecosystem can thrive, including the most vulnerable species like the Rice's whales." *Id.* ¶ 7. In particular, Schmahl "look[s] for these whales whenever [he is] in their habitat in the vicinity of Flower Garden Banks NMS." *Id.* ¶ 8. These searches for the Rice's whale are "integral to [his] enjoyment of being on the water." *Id.* He asserts: "Just the possibility that I might be able to spot one of these whales makes every trip worthwhile—not to mention far more exciting." *Id.* His determination to spot a Rice's whale in this area is well-founded: Much of the Flower Garden Banks—"[a]bout two-thirds of the 17 units in the Sanctuary"—include waters that are "partially or wholly within the . . . region where Rice's whales are most frequently seen." *Id.* In fact, he has seen "large whales" that might have been Rice's whales, but he was unable "to get close enough . . . to positively identify [any] as a Rice's whale." *Id.* Schmahl "will continue to look for Rice's whale[s]" on his next trip to the area and "every time after that." *Id.*

Wiygul and Schmahl have established a cognizable injury in fact: the impairment of their interest in seeing the Rice's whale. An "aesthetic interest in the observation of animals [is] a legally protected interest." *Hill v. Coggins*, 867 F.3d 499, 505 (4th Cir. 2017). Indeed, even a concrete "desire to . . . observe" a protected species "is undeniably a cognizable interest for purpose of standing." *Lujan*, 504 U.S. at 562–63. The invasion of that interest is an injury-in-fact sufficient for standing. *Hill*, 867 F.3d at 505. Wiygul and Schmahl attest that they would like to see the Rice's whale. The regularity of their past actions and the detail of their future plans distinguish their words from empty, vague aspirations. *Cf. Lujan*, 504 U.S. at 564 (cautioning that "some day intentions—without any description of concrete plans, or indeed even any specification of *when* the some day will be—do not support a finding of the 'actual or imminent' injury that our cases

require"). Each of them takes and will continue to take regular voyages on the Gulf in or near the area where the Rice's whale is most frequently seen for the purpose of seeing the Rice's whale. What's more, Schmahl has seen whales that may well have been Rice's whales—he just has never been able to approach the whales he has seen closely enough to verify their species. If, as the plaintiffs allege, the RPA is inadequate, then the proposed action, even as modified by the RPA, would jeopardize the survival and recovery of the Rice's whale—threatening its very existence. The dwindling and potential extinction of the Rice's whale population would impair their aesthetic interest in seeing the whale by putting this goal of their voyages permanently out of reach. So Wiygul and Schmahl have established that they have an injury sufficient for Article III standing: By inadequately protecting the Rice's whale from the jeopardy the proposed action would cause, the RPA impairs their aesthetic interest in observing the Rice's whale. See Japan Whaling Ass'n v. Am. Cetacean Soc., 478 U.S. 221, 230 n.4 (1986) (holding plaintiffs alleged an injury-in-fact sufficient for standing by alleging the challenged agency actions permitted whale harvesting that would impair plaintiffs' whale watching); Hill, 867 F.3d at 506 (holding plaintiffs established injury-in-fact from defendants' mistreatment of protected bears by establishing their "strong interest in observing the Zoo's bears living in conditions that do not violate the ESA," that they were "precluded from observing the bears living in [lawful] conditions because the bears are currently being mistreated," and that "they are willing and able to go back and visit the bears if the conditions that the bears live in are improved"); Oceana, Inc. v. Pritzker, 125 F. Supp. 3d 232, 241 (D.D.C. 2015) (holding plaintiffs established injury-in-fact sufficient for standing to challenge biological opinion as insufficiently protective of loggerhead sea turtles via declarations that harm to the turtles "threatens their enjoyment and study of those animals").

The plaintiffs also have established that the RPA is the cause of these injuries. They claim that by permitting the proposed action to proceed without measures sufficient to protect the Rice's whale from jeopardy, the RPA causes the diminution of the population and health of the Rice's whale, thereby impairing their interest in seeing the Rice's whale. The claim that a "BiOp permits an unlawfully excessive amount of harm to [protected species], which threatens [the plaintiffs'] enjoyment and study of those animals" is the archetypal causal claim sufficient for standing to challenge a biological opinion. *See Oceana*, 125 F. Supp. 3d at 241; *see also Hill*, 867 F.3d at 506.

Consider the Fourth Circuit's standing analysis in a case cited by these intervenor-defendants, *Sierra Club v. United States Department of the Interior*, 899 F.3d 260, 282–85 (4th Cir. 2018). In relevant part, Sierra Club and the Virginia Wilderness Committee challenged the National Parks Service's ("NPS") decision to issue a permit allowing the Atlantic Coast Pipeline to cross the Blue Ridge Parkway. *Id.* at 281. After holding that the plaintiffs had established an injury-in-fact—the impairment of their aesthetic interest in the beauty of an overlook through which the pipeline's construction and maintenance corridor would pass—the Fourth Circuit held that the plaintiffs had established causation as well. *Id.* at 283–84. The permit the plaintiffs challenged authorized the pipeline to cross the Parkway. *Id.* at 283. That crossing "then created the need for the nearby construction and maintenance corridor that would diminish the Parkway's scenic value." *Id.* In that way, "NPS enabled and virtually ensured the alleged harm to the Parkway's aesthetic value." *Id.* So, the court concluded, the challenged permit issuance caused the plaintiffs' aesthetic injury. *Id.* at 283–84.

The plaintiffs here have established causation on the same basis. In each case, the plaintiffs challenged an agency action that was the but-for cause of their aesthetic injury. Just as the *Sierra Club* plaintiffs challenged the issuance of the permit the pipeline needed to cross the Parkway,

here the plaintiffs challenge the RPA the action agencies needed to proceed with the proposed action. Just as by issuing the permit in *Sierra Club* "NPS enabled and virtually ensured the alleged harm to the Parkway[]," *id.* at 283, so by issuing the RPA here, NMFS enabled and virtually ensured the alleged harm to the Rice's whale. So here, as in *Sierra Club*, the plaintiffs have established that the agency action they challenge is the cause of their aesthetic injuries in the sense required for standing.

The plaintiffs also have established that a favorable decision would redress these injuries because it would mitigate the threat of jeopardy the proposed action will otherwise pose to the Rice's whale. See, e.g., Hill, 867 F.3d at 506 ("Plaintiffs claim that they are being deprived of a right to observe the bears living in a setting that does not violate the ESA . . . this can be redressed by an injunction directing the Zoo to maintain its bears in such a setting."); Oceana, 125 F. Supp. 3d at 241 ("They maintain that the BiOp permits an unlawfully excessive amount of harm to loggerheads, which threatens their enjoyment and study of those animals. Vacating the BiOp and directing NMFS to reinitiate consultation would redress that injury."). In Sierra Club, the Fourth Circuit held that the plaintiffs had established redressability because if "this Court were to invalidate the NPS permit as requested, the pipeline cannot exist in its proposed form . . . and would have to be re-authorized with a new permit or possibly a new route to proceed." Sierra Club, 899 F.3d at 284–85. Similarly, if this Court were to invalidate the RPA as requested, then the proposed action could not move forward in the form specified in the RPA. Either the proposed action could not proceed at all because, as NMFS initially found, it would jeopardize the survival and recovery of the Rice's whale, or the proposed action could proceed, but only with a more protective RPA that defused the threat the proposed action posed to the existence of the species. Either way, the plaintiffs' injuries would be redressed.

Finally, the plaintiffs have established the remaining two elements of associational standing, which are not in dispute. *See id.* at 282 n.9 (citing *Laidlaw Envt'l Servs.*, 528 U.S. at 180–81). The interests at stake for Wiygul and Schmahl are germane to the plaintiff organizations' purposes, which include the conservation of wildlife. *See* ECF 93-5, ¶¶ 3–4 (identifying Sierra Club as a "national non-profit organization . . . dedicated to exploring, enjoying and protecting the wild places of the earth" and addressing "a wide range of environmental issues, including wildlife conservation"); ECF 93-7, ¶ 3 (identifying Turtle Island Restoration Network as a "non-profit organization . . . dedicated to protecting and conserving marine wildlife"). And neither the claim asserted nor the relief requested requires the participation of these individuals in the lawsuit. *See Sierra Club*, 899 F.3d at 282 n.9 (finding "it is clear that . . . individual participation by [the plaintiff organizations'] members is unnecessary").

Two plaintiffs, Sierra Club and Turtle Island Restoration Network, have standing to bring count two on behalf of their members, Robert Wiygul and George Schmahl, respectively.

b. Counterarguments

The API intervenor-defendants respond with a slew of counterarguments. None avails.

First, these intervenor-defendants suggest that because no member of the plaintiff organizations attests that they have actually seen a Rice's whale in the wild, no member has suffered an injury sufficiently concrete for standing. That argument flies in the face of authorities finding that even an individual who has not been able to find a protected species has an aesthetic interest in seeing the species if they have tried to see it and will continue to seek it out. *See*, *e.g.*, *Ctr. for Biological Diversity v. EPA*, 861 F.3d 174, 183 (D.C. Cir. 2017) (holding member of plaintiff organization suffered injury-in-fact despite failure to encounter the protected species because he "plan[ned] to continue his trips in the 'hope' that he will 'see [the protected species] in

the wild"); Wishtoyo Found. v. United Water Conservation Dist., CV 16-3869-DOC (PLAx), 2017 WL 6940510, at *18 (C.D. Cal. Dec. 1, 2017) ("[S]everal district courts have rejected the argument that proof of having seen an endangered species is a requirement for injury in fact."); Nat'l Wildlife Fed'n v. Norton, 386 F. Supp. 2d 553, 560 (D. Vt. 2005) ("[A]ctual observation of a rare, endangered species is not the test for standing in ESA cases."). Perhaps aware of the weight of authority rejecting this argument, the intervenor-defendants ultimately appear to acknowledge that it would be enough for the plaintiffs to put forward a declaration from a member who "legitimately attempted to" see a Rice's whale. See ECF 195, at 6. With the declarations of Wiygul and Schmahl, who attest that they have sought to encounter the Rice's whale in the wild, the plaintiffs have done exactly that.

Second, the intervenor-defendants suggest that the plaintiff organizations lack standing because no member claims to have sought out the Rice's whale in an area where Rice's whales are likely to be found. This objection, too, goes to the injury-in-fact requirement. As the intervenor-defendants rightly point out, "a plaintiff claiming injury from environmental damage must use the area affected by the challenged activity." *Lujan*, 504 U.S. at 565–66 (quoting *Lujan v. Nat'l Wildlife Fed.*, 497 U.S. 871, 887–889 (1990)). According to the intervenor-defendants, Wiygul and Schmahl do not meet that requirement because neither man declares that he has searched for the Rice's whale in what is known as the "Rice's whale area."

Even though Wiygul and Schmahl have not searched for the Rice's whale in the Rice's whale area, they have looked for the species in areas where they might reasonably expect it to be found. The BiOp defines the Rice's whale area as "the area from 100- to 400- meter isobaths from 87.5° W to 27.5° N . . . plus an additional 10 km around that area." AR13542; *see also* ECF 147-1, at 2–3. The Rice's whale area is "the area where [Rice's] whales are primarily found." AR13847.

But it is not the only area where Rice's whales are found. AR13415–16. In fact, it is not even the only area where NMFS anticipated Rice's whales would be hit by vessels as a result of the proposed action. AR13609–13. Rice's whales have been sighted in the central and western Gulf, including as far west as the coast of Texas. AR13415. Further, NMFS's model of the species' distribution across the Gulf depicts meaningful species density west and south of the Rice's whale area, in addition to a very low but nonzero presence throughout the OCS. AR13416. Even though Wiygul and Schmahl have not searched for the Rice's whale in the Rice's whale area, they have searched for the species in areas where the BiOp indicates it may be found—well within the portion of the Gulf demarcated by the places the whale has been sighted before. See ECF 93-10, ¶¶ 16–17 (Wiygul looks for the Rice's whale when fishing in areas "directly adjacent" to "the Rice's whale's core distribution area"); ECF 185-6, ¶ 8 (Schmahl "look[s] for these whales whenever [he is] in their habitat in the vicinity of Flower Garden Banks NMS," an area that includes waters that are "partially or wholly within the . . . region where Rice's whales are most frequently seen"). All of which is to say that the two declarants have attested that they do use an area that would be affected by the challenged action—the area where the Rice's whale might be found now but would not be found any longer if it were to go extinct. Cf. Lujan, 504 U.S. at 565–66. So their ongoing bids to see the Rice's whale give rise to an aesthetic interest that would be impaired by the action at issue.

Third, the intervenor-defendants argue that *Strahan v. Secretary, Massachusetts Executive Office of Energy & Environmental Affairs* is persuasive authority for the proposition that the Wiygul and Schmahl declarations are insufficient to establish injury-in-fact. *See* Civ. No. 19-10639-IT, 2021 WL 9038570 (D. Mass. Nov. 30, 2021). It is not. In *Strahan*, the plaintiff sued Massachusetts under the citizen-suit provision of the ESA, claiming the state's licensing of the deployment of vertical buoy ropes in Massachusetts waters caused unlawful takes of endangered

North Atlantic right whales. *Id.* at *1. After a bench trial, the court held that Strahan had no standing to bring that claim. *Id.* at *10.

Strahan argued that he had standing in part because he was an "avid whale watcher." *Id.* at *4. But the court found there were severe problems with Strahan's credibility. *Id.* at *2. Among other things, Strahan "knowingly submitted a filing containing false information to the court in an effort to advance his litigation goals." *Id.* So the court prefaced its analysis of his claims about his interest in whale watching with the warning that his "goal-driven conduct does undermine Strahan's character for truthfulness in those circumstances where the facts could not easily be independently verified." *Id.* Indeed, the court found Strahan's "interests in what occurs in Massachusetts waters" to be merely "strategic." *Id.* at *3. With those problems with Strahan's credibility on the table, the court declined to "find Strahan's claim to be an 'avid whale watcher' for North Atlantic right whales . . . credible." *Id.* at *4. Strahan's testimony about this issue at trial had a litany of problems:

Strahan was vague and evasive about his whale watching activities. He asserted that he has "gone whale watching," with no specifics as to whether his purported whale watching had occurred in the last five years or thirty years ago, whether the claimed whale watching was by boat or from the land, and on which coast. He claimed further that "[e]very time I go to the Cape, or close to the coastline right in New Hampshire, we look for whales," again with no specifics. He asserted that he "looked in Boston Harbor right now today for right whales," and that he would be looking for right whales the next day in Boston Harbor (with no suggestion that Boston Harbor is a likely habitat for them), and that he was "going whale watching next week," with no details as to the supposed trip. At the same time, when asked if he had ever seen a North Atlantic right whale, he responded: "Well, you can't really see a right whale."

Id. In light of that testimony, "the court [did] not find as a factual matter that this amounts to 'whale watching' for North Atlantic right whales." *Id.*

The facts here could hardly be more different. Whereas Strahan could not say "whether his purported whale watching had occurred in the last five years or thirty years ago," *id.*, Wiygul and

Schmahl detail when their most recent trips occurred, when their next trips will be, and how often over the course of their lives they have made similar journeys. Whereas Strahan could not say whether he looked for whales by boat or on land, Wiygul and Schmahl spell out that they sought the Rice's whale at sea. Whereas Strahan could not say which coast he had looked from, Wiygul and Schmahl share the locations they have searched with near pinpoint precision. Whereas Strahan offered "no suggestion that Boston Harbor [was] a likely habitat for" the whales he claimed to be searching for, Wiygul and Schmahl provide evidence-based explanations for their decisions to search where they did—explanations supported by the BiOp and the record. And whereas the *Strahan* Court found the plaintiff's claims incredible as a matter of fact, here even the intervenor-defendants do not dispute the credibility of what Wiygul and Schmahl say about their attempts to find the Rice's whale. The only thing Strahan has in common with Wiygul and Schmahl is that he, like them, had not yet found his quarry. But the *Strahan* Court found it hard to believe he was really trying. *Strahan* is too factually distinct to support the intervenor-defendants' position.

Fourth, the intervenor-defendants argue the RPA is not the cause of Wiygul and Schmahl's injuries because they are fishing in areas "where there are no whales" and the actions they challenge would have no more than a negligible impact on the Rice's whale anyway. ECF 110, at 21. The Court has dispensed with their location-based critique already in addressing injury-in-fact; Wiygul and Schmahl have sought the Rice's whale in areas where it may well be found. Although the intervenor-defendants' argument about the impact of the challenged action is unclear, there can be no reasonable dispute that if the plaintiffs are correct that the RPA is unlawfully inadequate, then the proposed action has a significant impact on the Rice's whale—and hence significantly impairs the declarants' aesthetic interest in seeing the whale. To reiterate: In the BiOp, NMFS found that the proposed action would jeopardize the survival and recovery of the Rice's whale.

The RPA purports to prevent that jeopardy. If the plaintiffs are correct, then the RPA falls short. That means the proposed action puts the Rice's whale in jeopardy. And that jeopardy would deprive Wiygul and Schmahl of the chance to see a Rice's whale.

Fifth, the intervenor-defendants contend that no favorable decision from this Court is likely to redress the injuries Wiygul and Schmahl assert because the chances either man would see a Rice's whale are practically zero anyway. As the Court has said already, the factual premise of that argument is false. In any event, the legal premise is incorrect as well. A decision from this Court that the RPA is invalid would compel NMFS to either produce a new RPA adequate to prevent the proposed action from jeopardizing the Rice's whale or to conclude that the proposed action cannot continue. Either way, the risk of jeopardy to the Rice's whale—and hence the impairment of the declarants' aesthetic interest in seeing the species—"would be reduced to some extent if [the plaintiffs] received the relief they seek." *See Massachusetts v. EPA*, 549 U.S. 497, 526 (2007). That is enough for redressability in this context. *See id.*; *see also Carter v. Fleming*, 879 F.3d 132, 138 (4th Cir. 2018) (citing *Massachusetts v. EPA* for the proposition that "the redressability requirement [is] satisfied when the court's decision would reduce 'to some extent' plaintiffs' risk of additional injury"); *Equity in Athletics, Inc. v. Dep't of Education*, 639 F.3d 91, 100 (4th Cir. 2011) (same).

Sixth, the intervenor-defendants urge this Court to follow *Louisiana v. Haaland*, 86 F.4th 663 (5th Cir. 2023)—the final decision in the action API and Chevron brought in Louisiana to challenge the government's implementation of some of the terms of the now-defunct settlement in this case. *Louisiana* concerned whether the four environmental organizations who are plaintiffs in this case had standing to challenge the terms of a particular impending Gulf oil and gas lease sale. *Id.* at 665–66. In a three-page opinion, the Fifth Circuit held that they did not. *Id.* at 665–667. The

environmental organizations had argued that if the sale were allowed to proceed without the provisions API and Chevron had challenged, the resulting oil and gas activity would result in "the death of at least one Rice's whale"—impairing their recreational and aesthetic interests. *Id.* at 666. The Fifth Circuit rejected that theory of standing as resting on a "causal chain of events . . . so attenuated that the alleged harm is not 'certainly impending.'" *Id.* On the court's account, the environmental organizations would sustain the injury they feared only if the lease sale proceeded, someone bid on a block in the lease area that overlaps with Rice's whale habitat, the winning bidder actually commenced fossil fuel activity, a whale traversed the area, the fossil fuel activity killed that whale, and then a member of one of the organizations set out to see a Rice's whale. *Id.* at 666–67. That "sequence of events" seemed too attenuated to establish standing, particularly because the record in that case indicated that there was no significant risk of vessel strikes of Rice's whales outside the Rice's whale area, which the lease sale did not cover. *Id.* at 667.

Even though that case originated with this one, the standing questions differ. There, the question turned on the probable consequences for the Rice's whale of a single lease sale covering one portion of the Gulf outside the Rice's whale area. Here, the question turns on the probable consequences for the Rice's whale of all oil and gas activity in the Gulf. There, the record did not support the environmental organizations' factual claim that the lease sale was likely to result in any vessel strikes on any Rice's whales. Here, the record is clear: Absent a lawful RPA, the proposed action will jeopardize the survival and recovery of the Rice's whale as a species. So whether the Fifth Circuit was right or wrong to hold that the environmental organizations did not have standing to challenge the lease sale in dispute there, its reasoning does not imply that the environmental organizations do not have standing to challenge the RPA in dispute here. The scope

of the RPA sweeps far broader than any single lease sale and its stakes for the Rice's whale are far better supported by the record.

Seventh, the intervenor-defendants argue that Wiygul's updated declaration and Schmahl's declaration were untimely because they were filed "almost two years after the motion for summary judgment." ECF 195, at 8. Standing turns on "the facts at the time the complaint was filed." Laufer v. Naranda Hotels, LLC, 60 F.4th 156, 161 (4th Cir. 2023) (quoting Wild Va. v. Council on Env't Quality, 56 F.4th 281, 293 (4th Cir. 2022)). This rule is not about when evidence of those jurisdictional facts must be submitted, but rather about what period of time that evidence must concern. For that reason, courts have admitted declarations establishing standing as late in briefing as the reply brief, so long as the other party was not prejudiced by their belated submission. See Cmtys. Against Runway Expansion, Inc. v. FAA, 355 F.3d 678, 685 (D.C. Cir. 2004). In fact, the Fourth Circuit has held that a district court abused its discretion when it refused to hear new evidence on standing, even though that evidence was not presented until after the court had already granted partial summary judgment on the standing issue. Am. Canoe Ass'n v. Murphy Farms, Inc., 326 F.3d 505, 516 (4th Cir. 2003). The reason: "the paramount importance of achieving a correct judgment on the issue of Article III standing." Id. In any event, "[a] district court has discretion to accept an untimely affidavit." Lovelace v. Lee, 472 F.3d 174, 204 (4th Cir. 2006).

Here, the plaintiffs filed the updated declaration of Wiygul and the new declaration of Schmahl with their brief in opposition to the defendants' cross-motion for summary judgment and in support of their own. ECF 185-2 & ECF 185-6. As a result, the intervenor-defendants who take issue with these declarations had the opportunity to respond to them in their reply brief. And they did. ECF 195, at 6–9. Because the intervenor-defendants had a meaningful opportunity to respond to these declarations and availed themselves of that opportunity, they have not been prejudiced by

when the declarations were filed. In addition, the main reason these declarations were filed so long after the plaintiffs' motion for summary judgment is that when the defendants' initial brief in opposition to the plaintiffs' motion for summary judgment was due, the defendants moved to stay the briefing schedule, and, eventually, this case—postponing the completion of summary judgment briefing by two years. The amount of time that has elapsed is hardly the fault of the plaintiffs. For these reasons, the Court declines to set these declarations aside as untimely. In any case, were the Court limited to the first Wiygul declaration, the Court would still have found that the plaintiffs have standing to challenge the RPA for the same reasons outlined above.

Two plaintiff organizations—Sierra Club and Turtle Island Restoration Network—have standing to challenge the RPA on the behalf of their members, Wiygul and Schmahl, respectively. *See W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 484 (9th Cir. 2011); *Oceana*, 125 F. Supp. 3d at 241. The Court may consider the merits of count two.

2. The Challenge to the RPA

To satisfy the RPA requirement, the expert agency must include enough "analysis" to justify the agency's finding that the RPA will provide "sufficient protection against jeopardy." *Pac. Coast*, 426 F.3d at 1092. It is not enough for the RPA to include a "conclusory" assurance or to convey "that the agency believed the RPA would avoid jeopardy" to the species. *Id.* at 1092–93. The agency must "analyze *how*" the proposed alternative "will avoid jeopardy" to the species. *Id.* at 1093 (emphasis added).

Because NMFS found that the proposed action would jeopardize the survival and recovery of the Rice's whale, NMFS prepared an RPA. The RPA began by acknowledging the basis of the BiOp's jeopardy finding. The Rice's whale "has very low population numbers" and is "highly vulnerable to vessel strike mortality, effects of sound, and the combination of other stressors from

the proposed action." AR13847. Then came the proposed measures to mitigate jeopardy. To "reduce[] or avoid[] risk of lethal vessel interactions and reduce[] sound effects within the area where [Rice's whales] are primarily found," AR13850, the proposed RPA "implements a nighttime closure and 10 knot or less speed restriction during the day year-round to all oil and gas program vessels for the program duration in the [Rice's whale] area," AR13847. Next, NMFS laid out its rationale for this approach. "The RPA, as proposed, prevents jeopardizing the [Rice's whale] by mitigating risk in two ways: 1. Avoid or reduce mortalities and serious injuries from oil and gas related vessel strikes . . . and 2. Reduction of vessel noise impacts." *Id*. On that basis, NMFS concluded that "it is our biological opinion that the proposed action as revised by this RPA would not likely jeopardize the continued existence of the [Rice's whale]." AR13850.

For two independently sufficient reasons, the RPA is arbitrary and capricious. First, the RPA addressed only two of the five stressors identified in the BiOp, without analyzing whether or explaining why addressing these two stressors alone would be sufficient to prevent the proposed action from jeopardizing the survival and recovery of the Rice's whale. In the BiOp, NMFS found that five stressors caused by the proposed action threatened the survival and recovery of the Rice's whale: vessel strikes, vessel noise, seismic noise, marine debris, and oil spills. AR13796–97; AR13800. NMFS reiterated that finding in the opening paragraph of the RPA. AR13847. Yet the RPA addressed only two of these threats: vessel strikes and vessel noise. AR13850. So the RPA did not even purport to mitigate three of the five ways the proposed action would jeopardize the survival and recovery of the Rice's whale, let alone the acknowledged threat from the "combination" of these stressors. *See* AR13847.

This glaring gap demanded an explanation. Yet the RPA did not explain why mitigating these two stressors alone would be sufficient to prevent jeopardy to the Rice's whale. In fact, the

RPA did not even attempt to do so. The RPA's "analysis" was nothing more than two sparse sentences about what the proposed measures aspired to do ("avoid or reduce mortalities and serious injuries from oil and gas related vessel strikes" and "reduc[e] vessel noise") and a conclusory assurance that NMFS believed the measures would prevent jeopardy. AR 13850. "Although this language suggests . . . that the agency believed that the RPA would avoid jeopardy to the [species], this assertion alone is insufficient to sustain the BiOp and the RPA." See Pac. Coast, 426 F.3d at 1092. "The agency essentially asks that [the Court] take its word that the species will be protected if its plans are followed. If this were sufficient, the NMFS could simply assert that its decisions were protective and so withstand all scrutiny." Id. The law demands more. See id.; see also S. Yuba River Citizens League v. NMFS, 723 F. Supp. 2d 1247, 1267 (E.D. Cal. 2010) ("[A]lthough the BiOp properly concludes that the project . . . will partially reduce the impact of prior stressors, this is itself insufficient. Because the BiOp concludes that the project will continue to impose stressors on listed species without explaining why these stressors will not jeopardize the species, the BiOp's no-jeopardy conclusion is arbitrary and capricious."). The RPA's unexplained failure to account for multiple effects of the action that the BiOp itself identifies as threats to the survival and recovery of the species, individually and in combination, renders the RPA invalid. See Fla. Key Deer v. Brown, 364 F. Supp. 2d 1345, 1356–58 (S.D. Fla. 2005), aff'd sub nom. Fla. Key Deer v. Paulison, 522 F.3d 1133 (11th Cir. 2008).

The defendants argue that the BiOp adopted other measures to mitigate the stressors the RPA neglected, so the RPA did not need to address them. *See* ECF 175-1, at 42. But the BiOp found that the proposed action would jeopardize the survival and recovery of the Rice's whale *after* accounting for those protective measures. *See* AR13803–04. They do nothing to mitigate the jeopardy the BiOp found, which the BiOp attributed to all five stressors.

The defendants and intervenor-defendants also argue that NMFS had no obligation to mitigate every stressor to the Rice's whale the proposed action would cause. All NMFS had to do, they say, was develop an RPA "that avoids jeopardy and can be taken by the [action] agency." ECF 175-1, at 41. That is true as far as it goes. But to fulfill that duty, NMFS had to "analyze how" the proposed alternative "will avoid jeopardy" to the species. *Pac. Coast*, 426 F.3d at 1093. The RPA offered nothing more than a conclusory assurance that the RPA would prevent jeopardy.

In a belated bid to provide the explanation NMFS omitted, the defendants also claim NMFS determined that mitigating the risk of vessel strikes and vessel noise would be sufficient to prevent jeopardy because "vessel strikes posed the primary threat to the species because it was the only stressor associated with the proposed action that was likely to result in lethal injuries to the species." ECF 175-1, at 41. To be sure, vessel strikes are the only stressor NMFS identified in the jeopardy analysis as likely on their own to kill any individual Rice's whale. *See* AR13800. Yet NMFS never said that vessel strikes were the "primary threat" to the Rice's whale, let alone that because vessel strikes were the "primary threat," the RPA could prevent jeopardy simply by curtailing vessel strikes and reducing vessel noise—not in the RPA, and not earlier in the BiOp. That claim is an impermissible post hoc rationalization. *See Dow AgroSciences*, 707 F.3d at 467–68; *Appalachian Voices*, 25 F.4th at 274.

That claim is also in tension with the substance of the BiOp's analysis. NMFS found that of 27 threats to the Rice's whale, "four [were] the most significant: (1) sound, (2) vessel collisions, (3) energy exploration, (4) oil spills and oil spill response." AR13419. Among these four, none is singled out as more significant than the others. And NMFS did not mince words about the gravity of the danger the other stressors presented to the survival and recovery of the Rice's whale. *See* AR13801–04. In fact, NMFS found that as a result of "the combined effects of exposure to the

stressors produced by the produced action over the entire 50-year period," "all individual [Rice's] whales not killed by vessel strikes . . . are likely to experience chronic stress and behavior disruption associated with noise from the proposed action, significant masking, and hearing loss, all of which are expected to reduce the fitness of individuals by reducing their reproduction and/or survival." AR 13803 (emphasis added). NMFS expressly found that the proposed action would jeopardize the Rice's whale in light of the "combined stressors resulting from the proposed action," not any single stressor in isolation. AR13804.

The second problem with the RPA is that NMFS did not explain how the measures the RPA outlined would prevent jeopardy from the two stressors they targeted: vessel noise and vessel strikes. The RPA said nothing at all, quantitative or qualitative, about how much of the harmful vessel noise the proposed measures would eliminate. Nor did the RPA say anything about whether or to what extent the anticipated reductions in vessel noise would mitigate the jeopardy facing the Rice's whale. In fact, the jeopardy analysis suggested vessel noise would not even be a particularly significant stressor: The table listing the jeopardy-inducing stressors does not include vessel noise. *See* AR13800.

The problem is even more serious for vessel strikes. Earlier in the BiOp, NMFS found that as a result of the proposed action, 17 Rice's whales would be killed by vessel strikes and six would be injured. AR13609–13. NMFS then estimated that with the RPA measures in place, the proposed action would kill 12 Rice's whales and injure four of them. *Id.* However, NMFS never explained how killing 12 Rice's whales—between a quarter and a third of the assumed population of 44—was compatible with the survival and recovery of the species. And it is hard to see how NMFS could have. After all, NMFS observed in the jeopardy analysis that because the status of the Rice's whale population was so "precarious," "any effects that are expected to reduce the fitness of

individuals or result in mortality are of great concern." AR13803. NMFS even underscored that "the death of one female... would constitute the loss of approximately five percent of the breeding population, making population level effects likely." *Id.* The RPA's unexplained assurance that its measures are sufficient to prevent jeopardy is undercut by the BiOp itself.

The Fourth Circuit has recognized that this kind of discrepancy between a biological opinion's acknowledgment of the precarity of a population and its findings about the lethal impacts of the proposed action renders a no-jeopardy finding arbitrary. *See Defenders of Wildlife*, 931 F.3d at 352–53. The biological opinion at issue in *Defenders of Wildlife*—the case about the rusty patch bumblebee—maintained that the fatalities the proposed pipeline would cause would not jeopardize the survival and recovery of a population of RPBB. *Id.* at 352. Yet the biological opinion emphasized that the loss of a queen could "reduce the health of a metapopulation" (a collection of subpopulations) and warned that the species was "so imperiled that every remaining population is important." *Id.* (quotation omitted); *id.* at 348 n.3 (defining metapopulation). And the biological opinion acknowledged that the construction of the pipeline would kill eight queens and prevent the production of another 30. *Id.* at 352. Nevertheless, FWS concluded in that biological opinion that the construction of the pipeline would not jeopardize the survival and recovery of the RPBB. *Id.*

The Fourth Circuit found that optimistic conclusion arbitrary. *Id.* at 352–53. The biological opinion "fail[ed] to explain why it is that the loss of 38 potential queens does not endanger the survival of the Bath County RPBB population when the loss of a colony or overwintering queen could reduce the health of a metapopulation." *Id.* at 352. "Absent a reasoned discussion of the agency's apparently contradictory positions about the species," the court could "only conclude that

FWS acted arbitrarily in determining that the likely impacts of the [pipeline] on the RPBB will not jeopardize the species' continued existence and recovery." *Id.* at 352–53.

By the logic of *Defenders of Wildlife*, NMFS's determination that the proposed action as modified by the RPA would not jeopardize the survival and recovery of the Rice's whale is arbitrary on the same grounds. The expert agencies in both cases found that the populations of the listed species were on the edge of disaster. Just as FWS found that the overall RPBB population was so "imperiled" that all remaining populations mattered, Defenders of Wildlife, 931 F.3d at 352, so NMFS found that the population of the Rice's whale is so "precarious" that "any effects that are expected to reduce the fitness of individuals or result in mortality are of great concern," AR13803. Just as FWS found in the *Defenders of Wildlife* biological opinion that the loss of one queen would jeopardize the health of an RPBB population, id. at 352, so NMFS found in the 2020 BiOp that the loss of one female Rice's whale would jeopardize the health of a Rice's whale population, AR13803. The expert agencies in both cases concluded that the proposed action would kill more of the remaining populations than those critical numbers: in *Defenders of Wildlife*, 38 queens, 931 F.3d at 352, and here, after the RPA, 12 whales, AR13613. Nevertheless, both expert agencies asserted that the proposed action would not jeopardize the survival and recovery of the listed species. Just as FWS found that the construction of the pipeline would not jeopardize the RPBB, Defenders of Wildlife, 931 F.3d at 352, so NMFS found that the proposed action as modified by the RPA would not jeopardize the Rice's whale, AR13850. Neither agency explained how it reconciled that no-jeopardy finding with its prior analysis of the status of the species. See Defenders of Wildlife, 931 F.3d at 352–53; AR13850. Accordingly, just as the Fourth Circuit held that the no-jeopardy finding in the Defenders of Wildlife biological opinion was arbitrary, so this Court holds that the no-jeopardy finding in the 2020 BiOp's RPA is arbitrary.

The defendants protest that the proposed action, as modified by the RPA, would not result in 12 lethal vessel strikes on Rice's whales. Within the core area the Rice's whale inhabits year-round, they say, it would result in zero. As the defendants see it, because the anticipated 12 fatalities would occur outside this designated Rice's whale area, these casualties are too uncertain to be considered at all. *See* ECF 175-1, at 43–44 (citing AR13798 & AR13801). And indeed, in the jeopardy analysis, NMFS said it would disregard vessel strikes outside the Rice's whale area because of this uncertainty. AR13798, AR13801. So the defendants conclude that, properly understood, the proposed action as modified by the RPA would result in zero lethal vessel strikes—justifying the RPA's conclusion that the proposed measures would prevent the jeopardy that vessel strikes would otherwise create.

This counterargument is unsound. NMFS had a legal duty to incorporate the effects of the action into the jeopardy analysis. As the Fourth Circuit has recognized, "the Endangered Species Act requires the [expert agency] to '[a]dd the effects of the action and cumulative effects to the environmental baseline' when determining whether an action is likely 'to reduce appreciably the likelihood of both the survival and recovery of a listed species." *Appalachian Voices*, 25 F.4th at 278 (quoting 50 C.F.R. § 402.02). An effect of the action is something that "would not occur but for the proposed action" and that is "reasonably certain to occur." 50 C.F.R. § 402.02. NMFS found that the proposed action would result in 17 lethal vessel strikes on Rice's whales. AR13609; AR13612–13. NMFS further found that with the measures proposed in the RPA in place, the proposed action would result in 12 lethal vessel strikes on Rice's whales. AR13611; AR13612–13. So NMFS had a duty to incorporate these acknowledged effects into its jeopardy analysis. Perhaps NMFS could have declined to find that these dozen lethal vessel strikes outside of the Rice's whale area were effects of the action at all because it was not reasonably certain that they

would occur. But NMFS did not do that. Instead, NMFS found that these strikes—inside and outside the Rice's whale area—were effects of the action. AR13609–13. Having thus implicitly found that these strikes were "reasonably certain to occur," *see* 50 C.F.R. § 402.02, NMFS was not free to exclude them from the jeopardy analysis on the basis of uncertainty. The proposed action as modified by the RPA would result in 12 lethal vessel strikes and several sublethal strikes. So NMFS had to square that casualty count with its finding that the RPA would prevent jeopardy. Yet it did not.

Even if none of that were true, NMFS could not merely invoke uncertainty to evade all scrutiny of its decision to erase these anticipated fatal vessel strikes from its jeopardy analysis and the RPA. While "scientific uncertainty generally calls for deference to agency expertise," courts "nonetheless have a responsibility to ensure that the agency's decision is not arbitrary." *Greater Yellowstone Coal., Inc. v. Servheen*, 665 F.3d 1015, 1028 (9th Cir. 2011). For that reason, "[i]t is not enough for the [expert agency] to simply invoke 'scientific uncertainty' to justify its action." *Id.* (citing *State Farm*, 463 U.S. at 52). NMFS could not assume away all 12 fatal vessel strikes it anticipated outside the Rice's whale area on the basis of uncertainty. Rather, NMFS had to "rationally explain why the uncertainty" regarding those strikes "counsel[ed] in favor of" the specific assumption it adopted—that none of these strikes would occur—rather than some other conclusion (say, that some but not all anticipated strikes would occur). *See id.* NMFS did not.

The defendants also claim that NMFS concluded that the RPA measures would mitigate vessel strikes enough to prevent jeopardy because vessel strikes are primarily a function of vessel speed, which these measures would limit, and because the Rice's whale typically surfaces at night, when these measures would close the Rice's whale area to non-emergency vessel traffic. Those may well be good reasons to think the measures proposed in the RPA would reduce somewhat the

number of vessel strikes. But they shed little light on the dispositive question: whether the RPA measures would reduce the number of vessel strikes enough to prevent the proposed action from jeopardizing the survival and recovery of the Rice's whale. In any case, this claim is in some tension with the BiOp, which goes out of its way to mention that "there is some uncertainty in the effectiveness of the approach" because NMFS "lack[ed] information to estimate the extent to which a nighttime restriction in the mitigation area would effectively minimize vessel strike risk in the proposed mitigation area (i.e. the proportion of strikes occurring in nighttime versus daytime)." AR13609.

In sum: In the BiOp, NMFS found that "the entire small, isolated [population of Rice's whales] is expected to experience a reduction in fitness from combined stressors resulting from the proposed action." AR13804. In light of "these wide-ranging, combined multiple effects to the small and likely declining population of this species, we find that the proposed action is likely to jeopardize the continued existence of the [Rice's whale]." *Id.* In consequence, NMFS proposed an RPA to ensure jeopardy did not ensue. Yet that RPA addressed only two of the five stressors upon which NMFS based its jeopardy finding. And the RPA contained no explanation of why addressing only two out of five stressors was good enough. Making matters worse, the RPA did not explain how the measures it adopted would actually mitigate the risk of jeopardy arising from the two stressors they purported to assuage. For these reasons, the RPA is arbitrary and capricious.

D. Incidental Take Statement

The plaintiffs also challenge the BiOp's ITS.

Here is how an ITS fits into the overarching legal framework for a biological opinion. If the action agency anticipates that a proposed action may affect an ESA-listed species, then the action agency must consult with the applicable expert agency, which produces a biological opinion evaluating whether and to what extent the proposed action would impact those species. If the expert agency finds that the proposed action would jeopardize the survival and recovery of a listed species, then the expert agency must determine whether there are reasonable and prudent alternatives that would prevent that jeopardy. If there are no reasonable and prudent alternatives that would prevent jeopardy, then the proposed action would violate ESA § 7(a)(2).

However, if the expert agency identifies reasonable and prudent alternatives that would prevent jeopardy, the expert agency must consider a further question: whether and to what extent the proposed agency action is likely to result in the incidental "take" of members of a protected species. See 50 C.F.R. § 402.14(i); see also 16 U.S.C. § 1532(19) (defining "take" as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct"). ESA § 9 prohibits the taking of endangered or threatened species, save where "such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." 16 U.S.C. 1539(a)(1)(B). If the expert agency anticipates incidental take, then the agency must determine whether the anticipated incidental take would jeopardize the survival or recovery of the species. See Sierra Club, 899 F.3d at 269. If it would, then the proposed action would violate ESA § 7(a)(2). If the species at issue is a marine mammal, the expert agency also must determine whether the anticipated take would comply with the Marine Mammal Protection Act. The MMPA requires, in relevant part, "that there be no more than a negligible impact on the species." Ross I, 613 F. Supp. 3d at 340 (citing 16 U.S.C. §§ 1536(b)(4)(A)–(C), 1371(a)(5); 50 C.F.R. § 402.14(i)(1)). If the anticipated incidental take would impose more than a negligible impact on the species, then the proposed action would violate the MMPA.

If the expert agency anticipates incidental take and finds the anticipated incidental take would violate neither \S 7(a)(2) nor the MMPA, then the agency must produce an ITS to accompany the biological opinion. An ITS is a written statement that

- (i) specifies the impact of such incidental taking on the species,
- (ii) specifies those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize such impact,
- (iii) in the case of marine mammals, specifies those measures that are necessary to comply with section 1371(a)(5) of [the MMPA] with regard to such taking, and
- (iv) sets forth the terms and conditions (including, but not limited to, reporting requirements) that must be complied with by the Federal agency or applicant (if any), or both, to implement the measures specified under clauses (ii) and (iii).

16 U.S.C. § 1536(b)(4). Simply stated, "if take is reasonably certain, there must be an incidental-take statement, and that ITS must confirm that any take complies with both the ESA and the MMPA." *Ross I*, 613 F. Supp. 3d at 340. If the expert agency finds that the proposed action would have more than the negligible impact on a protected marine mammal permitted by the MMPA, then the proposed action violates § 7(b)(4).

"The amount of take set by the ITS creates a 'trigger' that, when reached, results in an unacceptable level of incidental take." *Sierra Club*, 899 F.3d at 269. When that trigger is pulled, the agencies must reinitiate consultation immediately. *Id.* at 270.

The plaintiffs argue the BiOp violates the ESA in three ways: failing to comply with the requirements of the ESA and the MMPA as to the anticipated taking of several whale species; failing to limit anticipated oil spill take; and failing to choose a rational surrogate for measuring the take associated with vessel strikes. The Court concludes the plaintiffs are correct about their second and third arguments and does not address the first.

1. Oil Spill Take

The plaintiffs claim that the ITS unlawfully fails to limit the incidental take NMFS anticipates from oil spills. Their argument is simple. An ITS must address all anticipated incidental take. The BiOp anticipates incidental take from oil spills. But the ITS does not address the anticipated incidental take from oil spills. Therefore, the ITS is unlawful.

The defendants contest only the premise that oil spill take is incidental take. They do not dispute that the BiOp anticipates take from oil spills. And they acknowledge that the ITS does not address the anticipated take from oil spills. But on their account, oil spill take is not "incidental take" at all. Federal regulations define "incidental take" as "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. NMFS determined that "oil spills are not a lawful activity." AR 87966 (originally AR 13853). As the defendants summarize their argument: "Because such take does not result from 'an otherwise lawful activity,' it does not constitute 'incidental take' within the meaning of 50 C.F.R. § 402.02, and therefore need not be addressed in an ITS." ECF 175, at 45.

Whatever else might be said about NMFS's position that oil spill take is not incidental take, it is inconsistent with NMFS's position that marine debris take is incidental take. In the ITS, NMFS lists marine debris as a source of incidental take. AR13854 (Table 132). Marine debris is expected to kill hundreds of sea turtles and injure thousands more—all designated as incidental take. *Id.* Yet by NMFS's own lights, discharging marine debris into the Gulf is as unlawful as discharging oil into the Gulf. *See, e.g.*, AR3628; AR3630; AR13733. NMFS recognized marine debris take as incidental take anyway. The reason is apparent enough: marine debris take is "take expected to result from the proposed action." AR13855. This "unexplained inconsistenc[y]" between the ITS's

approach to these comparable sources of take renders the ITS unlawful. *See U.S. Sugar Corp.*, 830 F.3d at 650.

The defendants argue that there is no inconsistency: All oil spill take results from unlawful activity, they say, whereas some marine debris take results from lawful activity. The Clean Water Act prohibits the discharge of harmful quantities of oil into the waters of the United States. AR13853; AR87966. "But not all marine debris," they say, "stems from prohibited, illegal 'discharge." ECF 191, at 27. The "accidental loss[] of debris into the marine environment," they claim, is legal. *Id.* (quotation omitted). So whereas no oil spill take results from lawful activity, some marine debris take results from lawful activity—and hence counts as incidental take.

There are two problems with this counterargument, either one of which would be enough to defeat it. The first is that it is inconsistent with the BiOp. In the BiOp, NMFS treated the accidental discharge of marine debris as unlawful. For instance, Appendix B to the BiOp identified protocols the action agencies would follow to reduce the risk of incidental take from marine debris. AR13961–63. One protocol is to require permit holders to post placards that warn participants in the permitted oil and gas activities about the legal status of the discharge of debris into the marine environment. *See* AR13962. Here is the second of the mandatory placards:

WARNING!

YOUR ACTIONS MAY SUBJECT YOU TO SEVERE LEGAL CONSEQUENCES!

The disposal and/or discharge of any solid waste anywhere in the marine environment (other than ground-up food particles) is strictly prohibited by U.S. Coast Guard and Environmental Protection Agency regulations. THIS INCLUDES MATERIALS OR DEBRIS ACCIDENTALLY LOST OVERBOARD.

The disposal of equipment, cables, chains, containers or other materials into offshore waters is prohibited by the Bureau of Safety and Environmental Enforcement (30 CFR 250.300(b)(6)). THIS INCLUDES MATERIALS OR DEBRIS ACCIDENTALLY LOST OVERBOARD.

AR13964. The placard—incorporated into the BiOp—could hardly be clearer: Discharging debris into the Gulf is illegal whether it is intentional or accidental. Similar statements appear elsewhere in the BiOp. *See, e.g.*, AR13733 (observing that federal regulations "require proactive avoidance of accidental loss of trash and debris"). There are minor exceptions, to be sure. The placard mentions "ground-up food particles." AR13964. And the BiOp acknowledges another carve out for trash broken down into particles no larger than 25 millimeters in diameter. AR13733. But these exceptions do not make the legal status of discharging debris into the Gulf any different than the legal status of discharging oil into the Gulf. As NMFS acknowledged in the BiOp and the defendants concede now, only the discharge of "harmful quantities" of oil is illegal. *See* AR13853 n.71 (observing that the CWA "prohibits discharges of harmful quantities of oil"); ECF 191, at 27.

In sum, the defendants' theory rests on the premise that the BiOp considered marine debris take to be incidental take because the accidental discharge of debris is legal. The BiOp expressly rejects the claim that the accidental discharge of marine debris is legal. The defendants' bid to

reconcile the inclusion of marine debris take with the exclusion of oil spill take is belied by the BiOp.

The second problem with the defendants' counterargument is that this basis for distinguishing oil spill take from marine debris take is an impermissible post hoc rationalization. There is no indication in the BiOp itself that NMFS considered marine debris take to be incidental take only because and to the extent that this debris was discharged lawfully. In fact, the BiOp treated all anticipated marine debris take as incidental take, not just the take from the very narrow category of lawfully discharged marine debris. *See* AR13733–34 (analyzing both legal and illegal discharge of debris into the Gulf as effects of the action with the potential to harm listed species); AR13854 (designating all marine debris take as incidental take, without distinguishing between debris discharged lawfully and debris discharged unlawfully); AR13857 (analyzing marine debris take of protected sea turtles as incidental take, without distinguishing between debris discharged lawfully and debris discharged unlawfully).

The exclusion of oil spill take from incidental take is inconsistent with the inclusion of marine debris take, and the defendants' post hoc bid to harmonize this inconsistency is untenable. The ITS is arbitrary and capricious.

2. Vessel Strike Surrogate

The plaintiffs also claim that the ITS uses an irrational surrogate for monitoring the number of individual animals taken by vessel strikes. They are correct.

An ITS must specify the "amount or extent of incidental take." *Appalachian Voices*, 25 F.4th at 281. Generally, the ITS must "identify the number of individual animals subject to take." *Id.* (citing 50 C.F.R. § 402.13(i)(1)). Sometimes, however, the ITS may instead use a "surrogate"—a correlated proxy for the number of individual animals. *Id.* A surrogate is permissible only if there

is a "causal link" between the surrogate and the variable it is supposed to track. *Sierra Club*, 899 F.3d at 276. The biological opinion must "(1) describe[] the causal link between the surrogate and take," "(2) explain[] why it is not practical" to express anticipated take "in terms of individuals of the listed species," and "(3) set[] a clear standard for determining when the level of anticipated take has been exceeded." *Appalachian Voices*, 25 F.4th at 281 (quoting 50 C.F.R. § 402.14(i)(1)(i)).

NMFS found that as a result of the proposed action, some animals would be harmed or killed by passing ships. In consequence, the ITS had to identify how many animals would suffer that fate and propose a measure for monitoring these takes. Rather than track how many individual animals are actually hit by ships, the ITS proposed to track a surrogate: the total number of kilometers vessels travel across the Gulf. AR87972. To justify that surrogate, the ITS briefly discussed the three factors identified above. NMFS asserted that the total distance ships have traveled across the Gulf "is causally linked to the take of listed species because an animal may be located within the track line of a vessel and at risk of vessel strike." *Id.* NMFS claimed that "[f]easible monitoring techniques for directly detecting the full extent of take (either lethal or nonlethal) of these species resulting from vessel strike do not exist." *Id.* And NMFS specified when it would conclude that actual take exceeded anticipated take: when "total reported annual vessel activity (averaged over three years) exceeds the projected average levels of annual vessel activity." *Id.*

The vessel strike surrogate "lacks a causal link" with actual vessel strikes. *See Sierra Club*, 899 F.3d at 276. How many protected animals are hit by ships depends on two variables: *how much* vessels travel and *where* they travel. The surrogate in the ITS accounts for only one: how much vessels travel. By ignoring vessel location, the surrogate disregards the reality that even a

little bit of vessel travel in a part of the Gulf dense with protected animals is likely to result in far more vessel strikes than a great deal of vessel travel in a part of the Gulf with few or no protected animals. In consequence, the surrogate predictably will fail to trigger the reinitiation of consultation even when the number of vessel strikes would demand it.

The vessel strike surrogate is particularly irrational in light of NMFS's own acknowledgment in the BiOp that the risk of vessel strikes to each species is a function of where vessels travel, not just how much they travel. See AR13597-621. To estimate how many vessel strikes the proposed action likely would cause to Rice's whales and sperm whales, NMFS calculated "vessel strike risk": the "co-occurrence of vessel traffic and animals." AR13598. Vessel strike risk is "spatially explicit": that is, it "take[s] into account the amount of vessel traffic . . . and its geographic distribution relative to the distribution and abundance of the species." Id. (emphasis added). The reason NMFS accounted for both the amount of vessel traffic and the location of vessel traffic relative to protected species is obvious: "The probability of a vessel collision depends" in significant part on "the distribution [and] abundance" of the species. AR13584. NMFS's distance-only surrogate is all the more baffling because, as the defendants themselves note in briefing, the ITS specifies that NMFS will track the total kilometers vessels have travelled by drawing on a data set that includes the routes those ships have taken. ECF 175-1, at 52 (quoting AR13586). In other words, NMFS has the data it would need to consider distance and location. By adopting a distance-only surrogate in the ITS, NMFS closed its eyes to what it saw earlier in the BiOp and to data it concededly had.

The defendants object that this critique sets the bar too high. A surrogate need only have some link to the variable it is supposed to track, they contend, and need not account for every factor that might be important to designing an optimal surrogate. True enough, a surrogate need

not be correlated perfectly with the underlying variable it is supposed to track. However, the total distance vessels have traversed across the Gulf is less rationally connected to the number of protected animals struck by vessels than other surrogates the Fourth Circuit has held lacked the requisite causal link. In Sierra Club, for example, the Fourth Circuit held that an ITS surrogate for monitoring incidental take of the Clubshell, an endangered mussel, violated the ESA because it lacked a causal link to actual take. Sierra Club, 899 F.3d at 275-76. FWS proposed to track Clubshell take by monitoring the loss of Clubshell habitat in a zone between 455 meters upstream of a particular bridge and 130 meters downstream of the bridge. Id. at 275. FWS justified that surrogate on the basis that the Clubshell population vulnerable to harm was located at the bridge. Id. Habitat loss upstream and downstream of the bridge would thus correlate with takes of Clubshell in the population near the bridge, at least to some degree. See id. Nevertheless, the Fourth Circuit held that this rough correlation did not constitute a causal link sufficient to sustain the surrogate. Id. at 275-76. In particular, the Fourth Circuit found that the ITS provided no good reason for limiting the geographic range to 455 meters upstream of the bridge and 130 meters downstream. *Id.* at 275. That alone made the surrogate defective. *Id.* at 275–76. The fact that loss of Clubshell habitat in that range would be roughly correlated with the take of Clubshells seems to have been irrelevant. See id. What mattered was that there was no good reason for limiting the geographic range of the surrogate to that part of the river. See id.

The vessel strike surrogate in the ITS here is more flawed than the surrogate the Fourth Circuit rejected in *Sierra Club*. Here, as there, the surrogate has some plausible correlation with the incidental take it is designed to track. Just as the loss of Clubshell habitat in the 585-meter range around the vulnerable population at the bridge would have some bearing on how many individual Clubshells had been taken, so the distance vessels have travelled across the Gulf may

well have some relationship to how many individual animals have been taken by vessel strikes. But here, as there, that weak relationship does not constitute an adequate causal link because the surrogate arbitrarily ignores information vital to tracking take. Just as focusing on the loss of Clubshell habitat in that range meant arbitrarily disregarding anticipated habitat loss elsewhere in the impacted river, so focusing on the distance vessels have travelled anywhere in the Gulf arbitrarily disregards where those vessels have travelled. And the relationship between the take and the surrogate is even more attenuated here. While the Clubshell habitat surrogate was somewhat narrower than the habitat of the Clubshell population at issue, the vessel strike surrogate counts vessel traffic over an area vastly wider than the Rice's whale area. And of course, just as the ITS in *Sierra Club* provided no explanation for limiting the surrogate to that 585-meter range, so the ITS here provides no explanation for focusing on distance travelled to the exclusion of vessel location. Under *Sierra Club*, the vessel strike surrogate challenged here is arbitrary.

The defendants also argue that the vessel strike surrogate did not have to account for the same considerations that informed the vessel strike risk analysis. "A surrogate serves a fundamentally different purpose than an effects analysis," they say. ECF 175-1, at 50. "An effects analysis uses the best available information to make a precautionary, predictive analysis of effects in order to ensure against jeopardy. A surrogate, by contrast, is a means of monitoring take as it actually occurs during the implementation of the action." *Id.* In other words, the defendants argue that because they serve different purposes, the effects analysis and the take surrogate need not consider the same variables.

This counterargument runs into two problems. For one, although these purposes are distinct, they are related. After all, the purpose of the vessel strike surrogate is to determine whether the number of vessel strikes that actually occurs exceeds the number of vessel strikes NMFS

anticipated as an effect of the action. *See, e.g.*, AR13625–31; AR87967. NMFS knew that how many protected species would be struck by ships was a function of both how much vessel traffic the proposed action would cause and where that traffic would occur relative to protected species. NMFS's unexplained decision to disregard location in monitoring that anticipated effect of the action was irrational. Second, no one is arguing that the vessel strike surrogate had to account for every variable that contributed to the effects analysis. All the plaintiffs contend—and all this Court finds—is that the vessel strike surrogate needed to track the second of the two most important considerations: vessel location. Vessel traffic without vessel location lacks the requisite "causal link" to vessel strike take. *See Sierra Club*, 899 F.3d at 276.

Here is where that leaves the ITS. An ITS may monitor incidental take by way of a surrogate. But that surrogate must be causally linked to actual incidental take. The distance ships have travelled anywhere in the Gulf is not sufficiently causally linked to the number of protected animals taken by vessel strikes to satisfy that requirement. Nor does the ITS contain a justification of NMFS's decision to ignore vessel location. Accordingly, the ITS "violates the Endangered Species Act." *See Sierra Club*, 899 F.3d at 276.

E. Remedy

The BiOp is unlawful. One issue remains: the remedy.

"Vacatur is the normal remedy under the APA, which provides that a reviewing court 'shall ... set aside' unlawful agency action." *Long Island Power Auth. v. FERC*, 27 F.4th 705, 717 (D.C. Cir. 2022) (quoting 5 U.S.C. § 706(2)). Accordingly, each time the Fourth Circuit has held a biological opinion unlawful, the Fourth Circuit has vacated it. *See Appalachian Voices*, 25 F.4th at 283; *Defenders of Wildlife*, 931 F.3d at 366; *Sierra Club*, 899 F.3d at 295; *Dow AgroSciences*, 707 F.3d at 475. The Fourth Circuit has ordered vacatur without regard to how disruptive that

remedy would be. *See, e.g.*, *Appalachian Voices*, 25 F.4th at 283 ("We recognize that this decision will further delay the completion of an already mostly finished Pipeline, but the Endangered Species Act's directive to federal agencies could not be clearer.").

True, the United States Court of Appeals for the District of Columbia Circuit has approved a different approach. In Allied-Signal, Inc. v. U.S. Nuclear Regulatory Commission, 988 F.2d 146 (D.C. Cir. 1993), the D.C. Circuit held that under certain circumstances, a court instead may remand unlawful action agency action without vacatur in the exercise of its equitable discretion. Id. at 150–51. Under Allied-Signal, "[t]he decision whether to vacate depends on the seriousness of the order's deficiencies (and thus the extent of doubt whether the agency chose correctly) and the disruptive consequences of an interim change that may itself be changed." Id. (quotations omitted). However, even under Allied-Signal, vacatur is the only permissible remedy when the agency decision is contrary to law, Sierra Club v. U.S. Army Corps of Eng'rs, 909 F.3d 635, 655 (4th Cir. 2018) (citing FCC v. NextWave Pers. Commc'ns Inc., 537 U.S. 293, 300 (2003)), the agency entirely failed to consider an important aspect of the problem, SecurityPoint Holdings, Inc. v. TSA, 867 F.3d 180, 185 (D.C. Cir. 2017) (citing State Farm, 463 U.S. at 43); City of Columbus v. Cochran, 523 F. Supp. 3d 731, 772 (D. Md. 2021), or the agency offered an explanation counter to the record, SecurityPoint, 867 F.3d at 185. See also Defenders of Wildlife, 931 F.3d at 345 (explaining that in the Fourth Circuit, a court must "vacate agency action if it is not based on a consideration of the relevant factors or where there has been a clear error of judgment") (cleaned up). In any event, the Fourth Circuit "has never formally embraced the Allied-Signal remandwithout-vacatur approach." Sierra Club, 909 F.3d at 655.

The relief the plaintiffs have requested has varied. In the supplemental complaint (which remains the operative pleading), they ask the Court to vacate the BiOp and remand the matter to

NMFS to prepare a new biological opinion. ECF 65-2, at 39. In their last summary judgment brief, they ask the Court instead to vacate only

the "Amount or Extent of Take" specified in the ITS (Table 132), as it applies *only* to agency actions offering or selling new leases and agency approvals of the following authorizations for new oil and gas development: initial and supplemental exploration plans, new and supplemental development operations coordination documents (DOCDs), and rights-of-way pipeline applications.

ECF 185, at 53. They ask that if the Court were to order this partial vacatur of the BiOp, the Court set a 2025 deadline for the completion of a new one. But they ask that if the Court were to remand the BiOp without vacatur, the Court hold NMFS to the timeline it claimed it would meet when it opposed the plaintiffs' motion to lift the stay: December 2024.

The defendants argue that if the Court were to find the BiOp unlawful, the Court should remand the matter to NMFS for proceedings consistent with the Court's opinion, without vacatur. They further argue that the Court may not and should not impose any deadline for the completion of a new BiOp. But they add that if the Court were to conclude otherwise and impose a deadline, the Court should adopt a deadline consistent with what NMFS most recently told the Court about when it can complete its work: "late winter or early spring 2025." ECF 191, at 41. They further ask that if the Court were to vacate the BiOp, the Court defer the effective date of vacatur and remand the matter to the agency in the interim. ECF 175-1, at 55.

Binding precedent requires the Court to vacate the BiOp. First, as noted, the Fourth Circuit has uniformly ordered the vacatur of arbitrary biological opinions without any indication that any other remedy was an option. *See Appalachian Voices*, 25 F.4th at 283; *Defenders of Wildlife*, 931 F.3d at 366; *Sierra Club*, 899 F.3d at 295; *Dow AgroSciences*, 707 F.3d at 475. Obviously enough,

78

³ The defendants argue that *Appalachian Voices* and *Dow AgroSciences* did not hold that vacatur was necessary, only that vacatur was "sufficient." ECF 191, at 35 n.10 (quoting *Appalachian Voices*, 25 F.4th at 283 & *Dow AgroSciences*, 707 F.3d at 475). The defendants misread these

that approach demands vacatur here. Second, this Court has found that the BiOp is unlawful because, among other things, NMFS acted contrary to law (e.g., deferring to the action agencies in defiance of its ESA obligation to make its own determination and adopting an incidental take surrogate lacking a causal link to the relevant take), NMFS failed to consider important aspects of the problem (e.g., how the two very large oil spills anticipated from the proposed action would impact listed species and how DWH reductions to the populations of the Rice's whale and Gulf sturgeon affected whether and to what extent the proposed action would jeopardize their survival and recovery), and NMFS offered explanations for its action that run contrary to the record (e.g., finding that an oil spill of more than one million barrels would not be an effect of the action). For those reasons, even if *Allied-Signal* were the law in this circuit—which it is not—this case involves three of the circumstances under which vacatur is mandatory under the law of the D.C. Circuit and the Fourth Circuit alike. *See Sierra Club*, 909 F.3d at 655; *Defenders of Wildlife*, 931 F.3d at 345; *SecurityPoint*, 867 F.3d at 185; *Cochran*, 523 F. Supp. 3d at 772. The BiOp must be vacated.

The BiOp should be vacated in full, not in part. When the Fourth Circuit has held that a biological opinion is unlawful, it has ordered complete vacatur, not partial vacatur. *See Appalachian Voices*, 25 F.4th at 283; *Defenders of Wildlife*, 931 F.3d at 366; *Dow AgroSciences*, 707 F.3d at 475. In *Sierra Club*, the Fourth Circuit vacated only the ITS—but that is because the

_

passages. In both cases, the Fourth Circuit was explaining why it was sufficient to rule on only a subset of the objections the plaintiffs made to the biological opinions they challenged. *See Appalachian Voices*, 25 F.4th at 283; *Dow AgroSciences*, 707 F.3d at 475. On the Fourth Circuit's account, because the arguments that it had considered persuaded the court that the biological opinions at issue were unlawful, it was "sufficient" to vacate those opinions—that is, the Fourth Circuit need not also consider whether the biological opinions were unlawful on the other grounds the plaintiffs put forward. In light of the Fourth Circuit's orders of vacatur, the plaintiffs' remaining arguments would be considered by the agency on remand. *Appalachian Voices* is particularly clear that vacatur is necessary because of "the Endangered Species Act's directive . . . [t]o halt and reverse the trend towards species extinction, whatever the cost." 25 F.4th at 283.

plaintiffs challenged only the ITS. *Sierra Club*, 899 F.3d at 281, 295. Here, the plaintiffs challenge the entire BiOp: its core analysis, the RPA, and the ITS. So the right remedy is complete vacatur.

The parties' arguments and the supporting record buttress the conclusion that complete vacatur is the appropriate remedy. The defendants argue persuasively that in this case, there is no practical distinction between vacatur and partial vacatur; even the partial vacatur of the single component of the ITS the plaintiffs target would amount to the vacatur of the entire BiOp under another name. The plaintiffs inadvertently confirm that conclusion. Despite their belated bid to narrow their request for relief, the plaintiffs repeatedly reveal that even if the Court were to vacate only the part of the ITS the plaintiffs target, that effectively would vacate much if not all of the BiOp. For instance, they concede that "[t]he only way to remedy" a number of the errors the Court has found "would be to issue an entirely different ITS and make entirely new jeopardy determinations"—all but wiping away the BiOp. ECF 185, at 59. What's more, the partial vacatur the plaintiffs request does not correspond to the claims they brought. The plaintiffs challenged the BiOp, the RPA, and the ITS. The Court has found all three unlawful for some of the reasons the plaintiffs advanced. Yet the plaintiffs now seek the vacatur of one subpart of the ITS. And of course, the plaintiffs requested the complete vacatur of the BiOp in the operative complaint. The plaintiffs' proposed partial vacatur does not track the problems they identified with the BiOp. The remedy is complete vacatur, not partial vacatur.

That leaves the timing of vacatur. Typically, vacatur is immediate. *See Appalachian Voices*, 25 F.4th at 283; *Defenders of Wildlife*, 931 F.3d at 366; *Sierra Club*, 899 F.3d at 295; *Dow AgroSciences*, 707 F.3d at 475. However, as the defendants point out (and the plaintiffs do not dispute), a court need not order immediate vacatur; instead, a court may defer vacatur to a particular date and remand the matter to the agency to begin to correct it in the meantime. *See*,

e.g., AARP v. U.S. EEOC, 292 F. Supp. 3d 238, 241 (D.D.C. 2017) (vacating challenged rules and "stay[ing] the mandate until January 1, 2019" in order "to avoid the potential for disruption"); Coal. to Protect Puget Sound Habitat v. Army Corps of Eng'rs, 466 F. Supp. 3d 1217, 1226–27 (W.D. Wash. 2020) (vacating challenged permit but staying vacatur in part for 60 days), aff'd, 843 Fed. App'x 77, 80 (9th Cir. Feb. 11, 2021) (affirming this approach as a "carefully crafted . . . hybrid remedy that reasonably balanced the competing risks of environmental and economic harms"); Mont. Env't Info. Ctr. v. Haaland, CV 19-130-BLG-SPW, 2022 WL 4592071, at *13–14 (D. Mont. Sept. 30, 2022) (vacating challenged environmental impact statement but deferring vacatur for 19 months to give agency chance to remedy defects); see also Friends of Earth, Inc. v. EPA, 446 F.3d 140, 148 (D.C. Cir. 2006) (ordering district court to vacate challenged action but observing district court has "remedial discretion" to stay vacatur long enough for agency to redress defects).

Here, immediate vacatur appears likely to disrupt oil and gas activity in the Gulf without necessarily mitigating the dangers to listed species. Vacating the BiOp months before a replacement is ready "could delay or inhibit many oil and gas industry activities in the [Gulf] because companies that continue operations without an ESA exemption would risk violation of Section 9 of the ESA." ECF 176-2, ¶ 4. "Without an operative BiOp and ITS for all activities that could incidentally 'take' ESA-protected species, [BOEM and BSEE] would likely request a site-specific consultation with NMFS on each plan and permit submitted for approval," but "individual consultations on each and every BOEM or BSEE plan or permit in the absence of the 2020 programmatic BiOp would quickly become unworkable." *Id.* ¶ 6. Immediate vacatur likely also would disrupt efforts to keep workers safe and prevent serious accidents. *Id.* ¶ 7. As an earlier opinion in this case acknowledged, "the impact of Plaintiffs' requested relief—to vacate the 2020

biological opinion as arbitrary and capricious—stretches far beyond the local economic interests" in the Gulf. ECF 62, at 11–12. And as other courts have recognized, vacating a biological opinion voids authority for the proposed action and the accompanying measures to protect listed species. *See Nat'l Wildlife Fed'n v. NMFS*, 839 F. Supp. 2d 1117, 1129 (D. Or. 2011); *Nat'l Wildlife Fed'n v. NMFS*, 184 F. Supp. 3d 861, 949 (D. Or. 2016). That is true here, too. *See* ECF 176-1, ¶¶ 11, 13, 22.

Ironically, immediate vacatur also is likely to stall the completion of a replacement biological opinion. With the 2020 BiOp suddenly vacated, NMFS and associated agencies likely would have to "consult on individual OCS oil and gas plans and permits in the interim," which "would siphon Bureau and NMFS staff time away from completing the reinitiated consultation, thereby delaying the new BiOp." ECF 176-2, ¶ 9. Delaying the replacement of this unlawful BiOp serves no one.

Deferring vacatur would reduce these risks while ensuring that the unlawful BiOp does not remain on the books indefinitely. *See, e.g., AARP*, 292 F. Supp. 3d at 241. In the time between the issuance of this opinion and vacatur, NMFS would be able to continue its ongoing work on a new biological opinion with the benefit of this Court's ruling on the defects of the previous one. With a date certain for the vacatur of the 2020 BiOp, NMFS would be able to assess for itself how to balance the competing imperatives of completing the new biological opinion and planning for any period between the vacatur of the 2020 BiOp and the promulgation of a new one. Whereas immediate vacatur may leave officials with an "unexpected burden" and pressure them to develop "a rushed, under-resourced, and ad hoc" alternative, ECF 176-2, ¶ 10, deferred vacatur would enable them to plan for the changes ahead and thereby mitigate any potential disruption.

The Court finds that the BiOp should be vacated effective December 20, 2024. The plaintiffs brought this challenge to the BiOp nearly four years ago. They moved for summary judgment more than two years ago. The BiOp is, as they have claimed, unlawful. Meanwhile, BOEM and BSEE requested to reinitiate consultation with NMFS to reconsider the BiOp in October 2022. ECF 176-1, ¶ 4. NMFS originally agreed to conclude that consultation by September 1, 2024. *Id.* ¶ 7. NMFS later represented that it would issue a new or revised biological opinion in December 2024. ECF 161-1, ¶ 14. Now NMFS says completion has slipped to "at least until the end of 2024," ECF 176-2, ¶ 9, if not "until late winter or early spring 2025," ECF 176-1, ¶ 10. By even the defendants' most pessimistic projections, then, a new biological opinion will be ready not long after December 2024. If NMFS believes it cannot complete a new biological opinion by the date vacatur takes effect, NMFS will have months to prepare for the transition period. The regulated parties, like the intervenor-defendants, also may avail themselves of this extra time to prepare for the transition. Deferring vacatur of the BiOp until mid-December strikes the appropriate balance between the importance of getting this unlawful agency action off the books and the public interest in a predictable, managed transition to a new biological opinion. Of course, NMFS need not complete its work on the new biological opinion by December 20. But whether it does or does not, the 2020 BiOp will be vacated on that day.

For these reasons, the Court will order the 2020 BiOp vacated effective Friday, December 20, 2024. On remand, NMFS must "address not only the flaws [the Court] identified but also any additional matters that may be raised on remand" by the plaintiffs. *See Appalachian Voices*, 25 F.4th at 283 (quoting *Dow AgroSciences*, 707 F.3d at 475).

IV. Conclusion

The plaintiffs' motion for summary judgment is granted on the terms described above. The other motions for summary judgment are denied. The motions for the admission of extra-record evidence are denied as moot. The BiOp is vacated effective December 20, 2024. A separate order follows.

Date: August 19, 2024

Deborah L. Boardman United States District Judge