

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA**

SOUTH CAROLINA COASTAL CONSERVATION LEAGUE, et
al.,

Plaintiffs,

v.

WILBUR ROSS, in his official capacity as the Secretary
of Commerce, et al.,

Defendants.

Civ. No. 2:18-cv-3326-RMG
(Consolidated with 2:18-cv-3327-RMG)

**REPLY IN SUPPORT OF
PLAINTIFFS' MOTION FOR A
PRELIMINARY INJUNCTION**

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APA	Administrative Procedure Act
BiOp	Biological Opinion
BOEM	Bureau of Ocean Energy Management
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
IAGC	International Association of Geophysical Contractors
IHA	Incidental Harassment Authorizations
MMPA	Marine Mammal Protection Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NRDC	Natural Resources Defense Council
PEIS	Programmatic Environmental Impact Statement

ADMINISTRATIVE RECORD CITATIONS

The Administrative Record produced by Federal Defendants assigns each document numbered pages, using consecutive Bates numbers. Plaintiffs cite to specific documents using only the direct Bates-numbered page with the prefix “AR.” Documents cited herein can be found using the following Bates numbers:

TGS Comments to NMFS Re: IHAs	AR 689-754 (ECF 154-11)
IHA Decision Memorandum	AR 854-864 (ECF 154-19)
Federal Register Notice, Issuance of Final IHAs	AR 865-978 (ECF 154-20)
ESA Section 7 Handbook	AR 979-1293 (ECF 154-21)
Biological Opinion	AR 1970-2365 (ECF 155-16)
Request for IHA – Ion	AR 3296-4015 (ECF 155-19)
Environmental Assessment	AR 7083-7180 (ECF 158-1)
List of References – IHAs	AR 7193-7234 (ECF 158-3)

INTRODUCTION

Seismic surveys in the Atlantic are anything but routine. As NMFS itself admits, “[t]he spatial and temporal scale of the planned surveys is unprecedented . . . , prompting concerns about widespread effects to marine mammals.” AR 857. The imminence and significance of that harm—as well as the grievous legal errors in NMFS’s agency action—are why nine conservation organizations, ten states, including South Carolina, and 16 South Carolina municipalities and small businesses have challenged NMFS’s action here.

Plaintiffs are likely to succeed on each of several claims on the merits, any one of which supports an injunction. First, NMFS’s claim that one-third of the population of a marine mammal species—including endangered species—is a “small number” of animals under the MMPA is irrational. Defendants can cite no case where a court has found one-third of a population to be a “small number.” That error is compounded by NMFS’s claim that it need not consider the effects of five surveys taking place at the same time and place in assessing whether there will be more than a “negligible impact” on marine mammals. NMFS’s MMPA analysis elevates the administration’s goal of promoting offshore drilling at the expense of the MMPA’s protective purpose; no deference is due when an agency ignores the fundamental purpose of a statute.

NMFS’s violations of the ESA similarly cannot be salvaged by a plea for deference and a pile of improper post hoc declarations by NMFS employees purporting to provide “expert opinions” that the agency complied with the law. NMFS cannot rationally defend its unjustified use here of an outdated assumption that underestimates harm to critically endangered right whales in place of the model it recently employed to assess harms from seismic surveying in the Gulf of Mexico. Nor can NMFS bolster its analysis of the potential impacts to listed species from overlapping or repetitive surveys with declarations outside the administrative record. NMFS’s use of these declarations is a telling concession that its record analysis is deeply flawed.

NMFS’s suggestion that the agency can shortcut the NEPA review process because there is no scientific controversy is belied by its statements, the statements of the government’s own Marine Mammal Commission, and those of many experts on whom NMFS’s analysis relied. Nor can NMFS avoid its obligation to conduct a full EIS by pointing to a programmatic EIS that is outdated and of limited value.

Despite Defendants’ characterization of this as a routine matter, the stakes are grave. Leading experts—on whose work the scientific community, including NMFS, relies—have described the significant, imminent harm that seismic surveys will cause. Their testimony, combined with Federal Defendants’ own admissions, establishes that irreparable harm to marine mammals and Plaintiffs’ members is likely if these actions go forward. And the Court need look no further than the docket sheet to see that the public interest and balance of harms support Plaintiffs’ requested relief. The Atlantic coast—its states, its towns, and its communities—stands united in opposition to seismic airgun blasting and the imminent risk it poses to marine life.

For the above reasons and those discussed below, Plaintiffs respectfully ask the Court to enjoin NMFS’s incidental harassment authorizations.

ARGUMENT

I. Plaintiffs Are Likely to Succeed on the Merits of Their Claims.

A. NMFS’s Harassment Authorizations Violate the MMPA.

1. NMFS’s Interpretation of “Small Numbers” Is Irrational and Contrary to Statutory Purpose.

Defendants wrongly insist that this Court must defer to NMFS’s irrational and unlawful interpretation of “small numbers,” which permits each applicant to harass up to one-third of a marine mammal population. ECF 221 at 24-25; ECF 212 at 27. They ignore that *Chevron* deference does not apply here, where NMFS is simply “granting permits, not acting in a way that

would have precedential value.” See ECF 124-1 at 10 n.4 (quoting *High Sierra Hikers Ass’n v. Blackwell*, 390 F.3d 630, 648 (9th Cir. 2004)); see also *Sierra Club v. U.S. Dep’t of the Int.*, 899 F.3d 260, 287 (4th Cir. 2018) (“[A]gency decisions that are not precedential and binding within the agency itself generally do not qualify for *Chevron*.”). Even if NMFS’s interpretation is owed *Chevron* deference, it can be upheld only if it is a reasonable construction that is consistent with the statute’s purposes. *Yi v. Fed. Bureau of Prisons*, 412 F.3d 526, 534 (4th Cir. 2005); *Andrews v. Riggs Nat’l Bank of Washington (In re Andrews)*, 80 F.3d 906, 909 (4th Cir. 1996) (instructing that ambiguous statutory term must be construed “to give it the meaning most consistent with the statute’s purpose”). NMFS’s interpretation here plainly is not.

Defendants criticize Plaintiffs’ use of dictionary definitions to guide this Court’s analysis, ECF 221 at 24-25, 27; ECF 212 at 28-29, but that criticism ignores basic tenets of statutory construction. Undefined terms are given their ordinary meaning, as stated in the dictionary. *Johnson v. Zimmer*, 686 F.3d 224, 232 (4th Cir. 2012). When a term is susceptible of many meanings, the meaning that “can most fairly be said to be . . . [the] most harmonious with [the statute’s] scheme and the general purposes that Congress manifested” must be chosen. *Id.* at 235 (citation omitted). Though Defendants argue that the parties’ “dueling definitions” of “small” undermine Plaintiffs’ claim, ECF 221 at 28 n.13, the definitions Defendants cite do not support their interpretation of “small numbers.” To say that “small numbers” are those that have “comparatively little size,” as NMFS does, *id.*, supports only the proposition that the agency may adopt a proportional interpretation of small—a point Plaintiffs have not challenged in this motion. It provides no answer as to whether the proportion selected here is reasonable.

To answer that question, this Court must look to the MMPA. *Adler v. Comm’r*, 86 F.3d 378, 380-81 (4th Cir. 1996) (“[W]e best implement the intent of Congress by construing the

statute in a way that gives effect to its purpose.”). Defendants have offered *no* explanation for how authorizing each applicant to take up to one in three members of a marine mammal population is consistent with the MMPA’s protective intent.¹ Instead, Federal Defendants contend that purpose is only relevant in assessing whether an activity has a “negligible impact.” ECF 221 at 28-29. But just like the negligible impact standard, the “small numbers” limitations must be interpreted in a manner that gives effect to the MMPA’s purpose. *See CBD v. Salazar*, 695 F.3d 893, 903-04, 906-07, 915 (9th Cir. 2012). Industry Defendants claim that NMFS’s interpretation of “small numbers” here must be reasonable because the agency has previously authorized harassment of approximately 80 percent of a given marine mammal population. ECF 212 at 27-28. Far from demonstrating reasonableness, this past practice reveals that NMFS has wrung all meaning from the “small” in “small numbers.”² That NMFS has previously authorized harassment of high proportions of marine mammal populations does not make its conduct lawful.

Defendants make no purpose-based argument for NMFS’s interpretation because there is no such argument to make. Congress enacted the MMPA to protect marine mammals and encourage their development “to the greatest extent feasible.” 16 U.S.C. § 1361(2), (6). Accordingly, the MMPA’s “default provision” prohibits “the taking of even a single marine mammal,” *NRDC v. Evans*, 279 F. Supp. 2d 1129, 1152 (N.D. Cal. 2003), with a limited exception for activities that will interfere with only “small numbers” of marine mammals, 16 U.S.C. § 1371 (a)(5)(A)(i), (a)(5)(D)(i). If Defendants are right that 33 percent is a “small number,” then as few as three applicants could take the entire population of a stock or species

¹ Notably, in comments to the agency, one industry defendant admitted that “[i]t does not appear to be the intent of Congress to set a 30% limit.” AR 000742.

² NMFS’s unreasonably high proportional thresholds also result in the authorization of takes that are not, as an absolute matter, small. *See* ECF 124-1 at 12 n.6.

each year—an outcome that defies the MMPA’s purpose.

Defendants ineffectively attempt to explain away the cases that support Plaintiffs’ argument. Though *Evans* “predated” *Salazar*, 695 F.3d at 893, ECF 212 at 28 n.13, the *Salazar* opinion repeatedly quoted and endorsed its analysis. See 695 F.3d at 903-04, 910-11, 913-14. And Federal Defendants’ dismissal of the many Copyright Act cases holding that amounts higher than 10 percent are not “relatively small number[s]” as irrelevant because of “different statutory purposes,” ECF 221 at 30 n.15, ignores that both statutes rely on the phrase “small number[s]” to define the bounds of a limited exception to a general rule. These cases—which relied on the phrase’s plain meaning, ECF 124-1 at 12—thus provide meaningful guideposts. In their attempts to dismiss the significant weight of authority cited by Plaintiffs, neither Federal nor Industry Defendants explains why any of these cases were wrong.³

The sole justification NMFS provides for its interpretation is that, because the statute uses the word “small,” Congress must also have contemplated “medium” and “large” numbers of marine mammal takes. But there is no textual or logical basis for NMFS’s approach. The words “medium” and “large” do not appear in the statute, and NMFS can point to nothing indicating Congress intended an approach akin to shirt sizing in setting forth a standard to protect marine mammals. Defendants instead beat the drum of deference, ECF 212 at 27, essentially arguing that, because “small numbers” is ambiguous, *any* interpretation offered by NMFS is reasonable. But even if deference were due, “the presence of some uncertainty does not expand *Chevron*

³ Industry Defendants respond to Plaintiffs’ argument that common usage of the phrase “small numbers” does not support NMFS’s interpretation by analogizing marine mammal harassment to voter turnout. ECF 212 at 29 n.15. But 33 percent of voters is a “small number” only compared to the societal goal of high turnout—that is, against a baseline of 100. By contrast, the MMPA sets baseline takes at zero. If voter turnout were governed by a statutory scheme that aimed to *prevent* turnout, no reasonable person would describe 33 percent as a “small number” of voters.

deference to cover virtually any interpretation.” *Cuomo v. Clearing House Ass’n, LLC*, 557 U.S. 519, 525 (2009). NMFS’s interpretation of “small numbers” cannot be reconciled with the ordinary meaning of “small” or the MMPA’s protective purpose, and thus is unreasonable.

2. NMFS’s Negligible Impact Analyses Are Arbitrary.

To defend NMFS’s “negligible impact analyses,” Defendants respond to arguments Plaintiffs did not advance and fail to rebut arguments Plaintiffs did make. Plaintiffs do not assert that the MMPA requires a “cumulative impacts” analysis. ECF 221 at 31-32. And NMFS’s interpretation of “specified activity” is irrelevant. *See id.* at 30-31. No matter how NMFS defines “specified activity,” the agency’s decision to evaluate “impact” in a vacuum, analyzing each survey based on the false assumption that it will precede the others, is irrational and violates the APA’s requirement for “reasoned decisionmaking.” *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 52 (1983).

Federal Defendants’ argument that the five surveys are “future, unrelated actions” defies common sense. ECF 221 at 32. Whatever the timing of the surveys, it is impossible that all five will be first. By conducting five independent negligible impact analyses, each time treating the other four surveys as “future” activities, NMFS has evaluated an impact that cannot match reality, and has failed to conduct a reasoned analysis of the impact that *will* occur.

Had NMFS considered the surveys as they will actually take place—that is, sequentially or simultaneously—it would have been forced to grapple with the fact that, for marine mammals in the area, the impact of a second—and each successive—survey will compound the impact of the first. *See* 83 Fed. Reg. 63,268, 63,284 (Dec. 7, 2018) (“[W]e recognize . . . that the aggregate impacts of the five surveys will be greater than the impacts of any given survey.”). But by evaluating each in isolation, it failed to do so, and thus failed to conduct reasonable negligible impact analyses. Moreover, NMFS’s conclusion that the five surveys are “unrelated” is itself

unreasonable: the agency approved the five surveys at the *same* time, through the *same* administrative proceeding, in one Biological Opinion and one Environmental Assessment.

NMFS's failure to account for the effects of simultaneous or preceding surveys in any of its five negligible impact analyses invalidates its conclusions. As the agency has itself acknowledged, even "fairly minor" impacts could "be more than negligible when measured against a baseline that includes a significant existing take." 54 Fed. Reg. 40,338, 40,342 (Sept. 29, 1989). In a boxing match, it would make little sense to predict the impact of a fifth-round punch without considering the effects of punches landed in the first four rounds. But for the marine mammals in the path of the five seismic surveys, NMFS repeatedly pretends that every survey is the first round of a match perpetually returning to the opening bell.

Defendants argue that "no case[] require[d]" NMFS to "assess future, unrelated actions under the MMPA." ECF No. 221 at 32. But countless cases require agency action to be the "product of reasoned decisionmaking." *State Farm*, 463 U.S. at 52. Even if they did not, the purpose and structure of the MMPA dictate the same result. As Federal Defendants themselves argue, the negligible impact analysis is meant to ensure that "NMFS cannot authorize an action . . . if it will lead to the extinction of a species." ECF No. 221 at 28-29. NMFS's rationale would allow the agency to do just that, authorizing limitless applicants to take an entire population each year, so long as each individual applicant's take, in isolation, would have a negligible impact. That approach fails to give effect to the MMPA's protective purpose and is unlawful. *Conservation Council for Haw. v. NMFS*, 97 F. Supp. 3d 1210, 1221 (D. Haw. 2015).

Defendants cannot rely on "the companion NEPA and ESA analyses" to fulfill NMFS's obligations under the MMPA. ECF No. 221 at 32. Compliance with one environmental statute "does not overcome an agency's obligation to comply with environmental statutes with different

purposes.” *Wash. Toxics Coal. v. EPA*, 413 F.3d 1024, 1032 (9th Cir. 2005), *abrogated on other grounds by Env'tl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075 (2015); *see Salazar*, 695 F.3d at 913. Even if it could, NMFS’s ESA and NEPA analyses do not fulfill its responsibilities here. The MMPA requires NMFS to determine, for each marine mammal population that will be harassed, that such harassment will have a negligible impact. 16 U.S.C. § 1371(a)(5)(D)(i)(I). Neither NMFS’s ESA nor NEPA documents analyze the impact of the five surveys on all relevant species. NMFS’s ESA analysis addresses only five of the 34 marine mammal populations covered by the MMPA’s protections, *compare* AR 2030, *with* AR 913-15. NMFS’s NEPA analysis similarly fails to analyze the aggregate impact of seismic surveys on many species, including at least two—the clymene dolphin and pantropical spotted dolphin—for which the agency has authorized instances of takes that amount to more than 50 percent of the population. *See* AR 7153-60.

Nor do a few paragraphs in response to public comments discharge the agency’s responsibilities. *Contra* ECF 221 at 32-33. NMFS set out a multi-factor framework for making its negligible impact determinations based on a combination of qualitative and quantitative factors, and conducted its negligible impact analyses by applying that framework to each of the five surveys *in isolation*. *See* 83 Fed. Reg. at 63,362-68. NMFS cannot take up 14 pages of the Federal Register with a section titled “Negligible Impact Analyses and Determinations” that nowhere considers the true impact of the actions it has authorized, and then point to a general statement in its response to comment, *id* at 63,284, as fulfilling that duty.⁴

Plaintiffs’ argument is simple: NMFS cannot ignore reality and still comply with the

⁴ NMFS’s post hoc declarations purporting to contain new impact analyses must be rejected under *Dow AgroSciences LLC v. NMFS*, 707 F.3d 462 (4th Cir. 2013). *See infra* at 11-13; *Env'tl. Def. Fund, Inc. v. Costle*, 657 F.2d 275, 286 (D.C. Cir. 1981).

demands of reasoned decisionmaking. *State Farm*, 463 U.S. at 52. Plaintiffs are likely to show that NMFS’s negligible impact determinations are arbitrary and therefore unlawful.

B. The Biological Opinion Violates the ESA.

1. NMFS Violated Its Obligations to Rely on the “Best Available Science” and Rationally Explain Its Decisions.

Five months before issuing the Biological Opinion, NMFS acknowledged that “[s]tudies of marine mammals in the wild and in experimental settings *do not support*” use of a 160-decibel (dB) threshold for predicting harassment and applied a new approach that “better reflect[ed] . . . available scientific information,” consistent with the “best available science.” 83 Fed. Reg. 29,212, 29,247-48 (June 22, 2018) (emphasis added) (proposed rule for Gulf of Mexico seismic surveys). Defendants have not contested that, if used here, the approach applied in the Gulf of Mexico would have yielded far higher take estimates for critically endangered right whales. *Id.* at 29,248; ECF 124-1 at 19.⁵ Nonetheless, NMFS irrationally relied on the outdated 160-dB threshold to assess impacts and mitigation measures in the Biological Opinion and failed to consider whether use of the newer model would have altered its conclusions—a plain violation of its obligation to consider the best available science and rationally analyze the seismic surveys’ impacts on endangered species. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. §§ 402.02, 402.14(g), (h).

Defendants assert that NMFS discussed this issue in response to public comment and found that the 160-dB threshold was more “conservative” than its Gulf of Mexico approach. ECF 221 at 35-36. But that conclusion was based on the fact that the new model “resulted in lower

⁵ NMFS’s 160-dB threshold assumes that right whales exposed to noise at levels of 160 dB or higher are harassed. By contrast, the model employed by NMFS in the Gulf of Mexico in June of last year assumes 10 percent of migrating baleen whales are harassed at 120 dB, 50 percent are harassed at 140 dB, and 90 percent are harassed at 160 dB. *See* Ex. 1 at 46-48 (Wood *et al.* (2012) study). In 2013, NMFS predicted that an approach like the one used in Wood *et al.* (2012) would likely cause “a moderate to large increase in the number of predicted [baleen whale] behavioral harassment takes.” Ex. 2 at 4-16; *cf.* Suppl. Tyack Decl. ¶¶ 17-20.

numbers of estimated takes for the majority of species” than the 160-dB threshold in the Gulf of Mexico. *Id.* at 35. The new model recognizes that takes of migrating baleen whale (such as right whales) occur at noise levels far below the 160-dB threshold. Unlike in the Gulf of Mexico, which has no migrating baleen whales, 83 Fed. Reg. at 29,248, using the model’s more protective approach here, where right whales are at risk, would have resulted in far higher estimates of right whale harassment. *See supra* n.5. NMFS’s failure to acknowledge—let alone analyze—this issue violates the ESA and APA. *Dow*, 707 F.3d at 473.

Federal Defendants next argue that NMFS’s Gulf of Mexico decision is not yet final and thus the agency has not concluded that model is best, ECF 221 at 35-36, ECF 221-1 ¶ 17, but NMFS cannot rely on an admittedly outdated approach merely because it has not elsewhere finalized a decision to rely on a new one. *See Intertribal Sinkyone Wilderness Council v. NMFS*, 970 F. Supp. 2d 988, 1001 (N.D. Cal. 2013) (finding NMFS need not await finalization of criteria in a separate decision in order to apply them). Nor was NMFS’s choice of the admittedly flawed 160-dB threshold without any comparative analysis of the purportedly superior new model “an issue of developing science.” ECF 221 at 36. “If anything, an acknowledgment that [an] assumption is flawed would seem to necessitate more explanation of why the assumption was used.” *Dow*, 707 F.3d at 472. The ESA requires the use of the best *available* science; “[e]ven if the available . . . data were quite inconclusive, [the agency] may—indeed must—still rely on it at that stage.”⁶ *Sw. Ctr. for Bio. Diversity v. Babbitt*, 215 F.3d 58, 60 (D.C. Cir. 2000).

NMFS’s contention that it can only rely on assumptions that were current at the time it received the applications, or more than a year ago when it published its draft rule, 83 Fed. Reg. at

⁶ Federal Defendants note that in 2013, another court upheld a 160-dB threshold. ECF 221 at 34. But given that acoustic science is continually evolving, the agency must reconsider even long-held approaches when new information undermining them emerges. ECF 221-1 ¶ 16.

63,286; ECF 221-1 ¶ 17, is wrong. The ESA requires use of the best available science at the time NMFS makes its decision, not when it began to consider an issue. *See, e.g., Sierra Club*, 899 F.3d at 273) (“best available science” standard requires agency to consider data presented after the application); AR 1009-10 (outlining standard in ESA Consultation Handbook). Here, the agency had more than five months after *publishing* its Gulf of Mexico proposed rule to consider its consequences. NMFS offers no explanation for failing to do so here.

The ESA and APA prohibit an agency from relying on a 160-dB threshold that it concluded was not the best available science only months before, and from ignoring a potentially superior model. NMFS’s failure to rationally consider the best science available violates both statutes. *See Greenpeace v. NMFS*, 80 F. Supp. 2d 1137, 1150 (W.D. Wash. 2000) (holding unlawful BiOp that “ignored relevant factors and admittedly failed to develop projections based on information that was available”).

2. Federal Defendants Cannot Fill Gaps in the Biological Opinion’s Analysis with Litigation Affidavits.

Federal Defendants primarily defend NMFS’s analysis of the potential impacts of overlapping or continuous seismic surveys with over 100 pages of new declarations and exhibits prepared solely to defend the Biological Opinion in this litigation. *See* ECF 221-1 to 221-4. As NMFS itself explained, this issue is significant because seismic surveys will have “the greatest [potential] impact . . . if animals are more frequently disturbed and have little time for recovery between disturbances.” AR 2191.⁷

But “post hoc rationalizations of the agency . . . cannot serve as a sufficient predicate for agency action.” *Am. Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490, 539 (1981); *see also*

⁷ Notably, Federal Defendants never address this formal Conservation Recommendation of the Biological Opinion.

Citizens to Pres. Overton Park, Inc. v. Volpe, 401 U.S. 402, 419 (1971). The Fourth Circuit rejected a prior NMFS effort to supplement a lengthy, but legally deficient, biological opinion with litigation affidavits, noting that such affidavits “amount to *post hoc* rationalizations . . . traditionally . . . found to be an inadequate basis for review.” *Dow*, 707 F.3d at 468 (internal quotation marks omitted). NMFS’s litigation declarations include “supplemental maps” and new calculations from a NMFS biologist, *see* ECF 221-3 ¶¶ 3, 7, 11, Exs. 1, 2A-L, and a 28-page declaration from the author of the Biological Opinion “summariz[ing]” and “clarify[ing]” portions of the analysis, *see* ECF 221-4 ¶ 40.⁸ Given the lengthy Biological Opinion here, this Court should reject NMFS’s attempt to paper over flaws in the record with new analysis, calculations, and maps. *See Dow*, 707 F.3d at 468 (holding that it can “hardly be argued that the administrative record was so lacking in explanations as to necessitate reliance on a litigation affidavit in conducting judicial review”).

Even if these affidavits were allowable, they highlight, rather than cure, NMFS’s inadequate analysis of the potential for impacts from overlapping or sequential surveys. The “supplemental maps” and calculations presented in the Meadows declaration—which purport to illustrate spatial patterns of surveys and how they interact with right whales, ECF 221-3 ¶¶ 3, 7, 11—do not plug the holes in the record. Though they contain depictions of right whale locations by month, they do not impose tracklines over these locations, and provide no information about whether right whales (or other listed species) could be exposed to more than one survey simultaneously, or to one survey following another in rapid succession.

⁸ NMFS’s litigation affidavits also offer agency officials’ “expert opinions” that the agency’s analyses complied with the law. *See, e.g.*, ECF 221-1 at ¶ 25. While NMFS may counter Plaintiffs’ evidence of irreparable harm, it clearly cannot offer expert testimony on the ultimate legal issues in this case. Yet NMFS’s brief cites these declarations 14 times in its merits arguments, and only 6 times in its harm section. *See generally* ECF 221.

Federal Defendants take issue with Plaintiffs’ statement that NMFS “did not know where seismic vessels would be at any given time,” ECF 124-1 at 20, by attempting to distinguish NMFS’s statement that there is “temporal and spatial uncertainty of seismic vessels and cetaceans,” ECF 221 at 40. Semantics aside, the fact remains that NMFS does not know how surveys may overlap or follow each other in rapid succession, and what impact they will have on listed species if they overlap or are sequential. Federal Defendants attempt to cobble together the necessary analysis by citing statements in the Biological Opinion about density of listed species, *id.* at 37-38; passages suggesting that it knew how transect lines for surveys are set, length of transect lines, and water depths, *id.*; and unsupported assumptions regarding the movements of animals and vessels that it used to guess about exposures, *id.* at 39. These disconnected record cites do not save NMFS’s analysis. None of these passages—alone or together—demonstrate that NMFS addressed “the greatest impact” from overlapping or sequential surveys in an area: exposing animals repeatedly to seismic blasting. AR 2191.⁹

Federal Defendants have effectively acknowledged the Biological Opinion’s defects by filing lengthy supplemental materials that *still* do not address repeat exposures by surveys in quick succession or overlapping surveys. Plaintiffs are likely to succeed on this claim.

3. NMFS Failed to Address the Environmental Baseline and Cumulative Effects.

The ESA requires NMFS to ensure that seismic blasting, when added to harm caused by

⁹ The Patterson and Harrison affidavits confirm that, at best, NMFS considered additive exposure in its Biological Opinion, not the problem of one survey following another in rapid succession. *See* ECF 221-4 ¶ 24 (discussing only aggregate impacts, not repeat or chronic exposure from back-to-back surveys); ECF 221-1 ¶ 19 (same), *but see id.* ¶ 20 (noting possibility that multiple vessels may operate in the same time period). Harrison offers new theories regarding companies’ “operational parameters” that she contends make it unlikely marine mammals will be exposed to overlapping surveys. *Id.* ¶ 19. These theories boil down to unsupported assertions that, because both vessels and marine mammals move, there is no reason for concern.

actions in the environmental baseline, will not jeopardize any species. *NWF v. NMFS*, 524 F.3d 917, 924 (9th Cir. 2008). Despite Defendants’ assertions that the agency “fully evaluated” the impacts of the environmental baseline, “[s]tating that a factor was considered . . . is not a substitute for considering it.” *Getty v. Fed. Sav. & Loan Ins. Corp.*, 805 F.2d 1050, 1055 (D.C. Cir. 1986) (holding a “conclusory recitation” did not meet requirement to “consider” a factor).

Defendants point to a series of disconnected and generalized statements as supplying the analysis the ESA requires, ECF 221 at 42-43, but the passages NMFS invokes do not survive scrutiny. The Biological Opinion’s two-paragraph “discussion” of Navy training simply recognizes that the Navy’s activities will “result in instances of temporary and permanent threshold shift to” whales and turtles and dismisses these impacts as “temporary.” AR 2111-12. Reciting these general effects is a far cry from considering the effects of seismic blasting in combination with them. NMFS nowhere analyzes, for example, how “a total of 26,482 [annual] instances of harassment” by Navy sonar, Ex. 3 at 642, combined with an additional 7,524 instances of harassment by seismic blasting in the same waters, AR 2187, will impact a population of sperm whales numbering as few as 2,288 animals, AR 2071. NMFS contends that it is not required to “rigidly” add up these takes, but that is beside the point. The agency must “evaluate the impact of an agency’s action ‘in light of the environmental baseline’” even if the Biological Opinion “does not numerically add the takes from different sources together.” *Mayo v. Jarvis*, 177 F. Supp. 3d 91, 137 (D.D.C. 2016) (emphasis added) (quoting *Oceana, Inc. v. Evans*, 384 F. Supp. 2d 203, 230 (D.D.C. 2005)), *vacated in part and aff’d in part sub nom. Mayo v. Reynolds*, 875 F.3d 11 (D.C. Cir. 2017). NMFS did not do so here.¹⁰

¹⁰ That the Navy biological opinion “acknowledges” the ongoing consultation on the seismic permits, ECF 221 at 43 n.23, is irrelevant to the question of whether NMFS adequately

Federal Defendants invoke *Defenders of Wildlife v. Norton*, CIV.A.99-927(ESH), 2003 WL 24122459 (D.D.C. Jan. 7, 2003), *see* ECF 221 at 42, but that case undermines their argument. That court upheld a baseline analysis that “summarize[d] the nine previous [biological opinions] that it had issued regarding actions . . . that were likely to have an effect on the Sonoran pronghorn,” and detailed “the predicted impacts of each.” 2003 WL 24122459, at *4. The agency’s discussion of the Navy’s activities in this Biological Opinion does no such thing.¹¹ Defendants point to statements reciting the regulatory requirement to consider the baseline, ECF 221 at 44, but these statements do not show any *analysis* of the combined effects of seismic surveys when added to this baseline. *See, e.g.*, AR 2179. NMFS must actually apply information about the status of the species and the environmental baseline in its jeopardy analysis; simply parroting its legal obligations does not suffice. *See Pac. Coast Fed’n of Fishermen’s Ass’n v. U.S. Bureau of Reclamation*, 426 F.3d 1082, 1091-92 (9th Cir. 2005) (holding that if an agency could “implicitly” conclude an action will avoid jeopardy, “NMFS could simply assert that its decisions were protective and so withstand all scrutiny”).

NMFS’s failure to analyze the effects of seismic blasting in combination with other activities in these same waters renders the Biological Opinion arbitrary and capricious.

4. The Biological Opinion Fails to Analyze the Entire Action That NMFS Approved.

In responding to Plaintiffs’ argument that the Biological Opinion unlawfully authorizes

considered the effects of the Navy’s training here. *See NWF v. NMFS*, 254 F.Supp.2d 1196, 1215 (D. Or. 2003).

¹¹ NMFS’s two-paragraph conclusion in its baseline section merely states that “[a]ssessing the aggregate impacts of these stressors on species is difficult and, to our knowledge, no such analysis exists” and observes that the baseline is “impacting species in different ways.” AR 002112. These statements are excuses, not analysis.

an action NMFS did not analyze—abandonment of the 90-kilometer (km) buffer for right whales in favor of a “comparabl[y] protecti[ve]” 47-km closure—Federal Defendants confirm how important the 90-km buffer is to NMFS’s no-jeopardy determination for right whales. *See* ECF 221 at 45 (closure will “drastically reduce the number of right whales that would be exposed to seismic activity across all five IHAs.”).¹² Yet NMFS concedes that the Biological Opinion authorizes applicants to pursue, at a future date, a halving of this buffer with no set criteria to determine what would make it comparably protective for right whales. ECF 221 at 45-46.

Federal Defendants posit that NMFS could not analyze the jeopardy consequences of the 47-km closure because “it did not have an alternative proposal in hand.” *Id.* at 46. Setting aside the significant question of how any such measure could be comparably protective given NMFS’s acknowledgment of “relatively high densities [of right whales] up to 80 kilometers offshore in certain locations,” *see id.* at 12, the agency has conducted its jeopardy analyses based only on its 90-km closure for right whales, *see generally* ECF 221-3. The agency could have done the same analysis for a “comparable” 47-km closure, but did not. Instead, NMFS deferred such analysis to a future black-box process.

Federal Defendants have not even attempted to rebut any of the cases cited in Plaintiffs’ opening brief. Instead, NMFS suggests that if it decides to approve such a plan and that plan will cause “effect[s] to right whales not considered in the BiOp,” ECF 221 at 46, it may reinstate consultation, *id.* This is an improper use of the reinitiation process, which allows NMFS to consider “new information” that “reveals effects of the action that may affect listed species . . . in

¹² *See also* ECF 221 at 44 (NMFS’s “conclusion about whether survey activity is likely to jeopardize ESA-listed species . . . is contingent upon implementation of” the closure (emphasis added)). As with all of its ESA arguments, NMFS has produced new post hoc rationalizations of the alleged efficacy of the 90-km closure for right whales. *See* ECF 221-3 ¶ 15.

a manner or to an extent not previously considered” or reconsider effects on listed species “[i]f the identified action is subsequently modified.” *See* 50 C.F.R. § 402.16 (b), (c). Reliance on these reinitiation triggers is inappropriate here; reinitiation is not a safety valve for considering information that an agency was aware of when it issued its Biological Opinion.

NMFS’s approval here is a lose-lose for species and the public. Under its approach, NMFS can conclude, in secret, that an alternative proposal allowing surveying as close as 47 km to shore achieves “comparable protection[s]” for right whales and avoid reinitiation of consultation. Or NMFS can reinitiate consultation on the effects of halving its closure as it claims it will do, while seismic surveying continues. Either approach—reinitiation of consultation down the road, or a conclusion that an alternative achieves “comparable protection”—could allow the agency to avoid judicial or public scrutiny on potential impacts to highly endangered right whales should NMFS reduce the 90-km buffer.

Because NMFS authorized applicants to apply for an alternative plan allowing surveying just 47 km offshore, NMFS was required to analyze the implications of such a plan on jeopardy to listed species. NMFS’s failure to do so is unlawful. *See, e.g., Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 521 (9th Cir. 2010) (NMFS must consider “effect of the entire agency action”) (citation and quotation marks omitted); *CBD v. Rumsfeld*, 198 F. Supp. 2d 1139, 1153-55 (D. Ariz. 2002) (vacating biological opinion that allowed Army to continue action but deferred review of mitigation plan necessary to alleviate actions’ harm).

C. NMFS’s Failure to Prepare an EIS Violates NEPA.

Federal Defendants seek to rely on an outdated programmatic EIS and mischaracterize the significance standards that cabin NMFS’s analysis to avoid preparing a new EIS. NMFS’s own statements that the authorized surveys are “unprecedented” and “controversial,” AR 856-57, belie its Finding of No Significant Impact (FONSI) based on an inadequate EA.

BOEM’s five-year-old programmatic EIS cannot immunize the inadequacies in NMFS’s analysis here. Federal Defendants argue that “neither the passage of time nor the development of new methodologies necessarily render a programmatic EIS stale,” but “intervening changes” not previously analyzed *do* require a new EIS. *Ass’n of Pub. Agency Customers, Inc. v. Bonneville Power Admin.*, 126 F.3d 1158, 1184 (9th Cir. 1997).¹³ An agency cannot rely on a programmatic EIS that does not consider significant new information. *See Blue Mts. Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1214 (9th Cir. 1998) (holding the Forest Service could not tier to a prior EIS when an intervening fire created new circumstances). Federal Defendants assert NMFS “thoroughly evaluated” all new information in the EA, ECF 221 at 48, but that document fails to evaluate critical topics, including issuance in 2016 of NMFS’s new “Ocean Noise Strategy” for integrated management of the cumulative impacts of noise exposure, and NMFS’s recent acknowledgment that the 160-dB harassment threshold is not supported by emerging scientific evidence. This situation is thus unlike that in *Bonneville Power Administration*, which involved a months-old EIS and no intervening information. 126 F.3d at 1184.

Federal Defendants challenge Plaintiffs’ reliance on the “significance” factors that control NMFS’s analysis, ECF 221 at 50, but the presence of just one or two regulatory “significance” factors can “militate strongly in favor of” preparing an EIS. *Friends of Back Bay v. U.S. Army Corps of Eng’rs*, 681 F.3d 581, 589 (4th Cir. 2012). Here, several factors underscore the need for an EIS.

Impacts on Endangered Species. Federal Defendants wrongly argue that an action is

¹³ Federal Defendants claim the Court should defer to NMFS on whether a new EIS was necessary. Not so. As the D.C. Circuit has explained, “the court owes no deference to [an agency’s] interpretation of NEPA or the [NEPA] regulations because NEPA is addressed to all federal agencies and Congress did not entrust administration of NEPA to [one agency] alone.” *Grand Canyon Trust v. FAA*, 290 F.3d 339, 342 (D.C. Cir. 2002).

significant under NEPA only when it threatens an endangered species “as a whole,” ECF 221 at 63-64. The seismic surveys *do* threaten entire species. *See infra* 24-27. But a project need not jeopardize an entire species to be significant. *See* 40 C.F.R. § 1508.27(b)(9); *Makua v. Rumsfeld*, 163 F. Supp. 2d 1202, 1218 (D. Haw. 2001) (“Clearly, there can be a significant impact on a species even if its existence is not jeopardized.”). Instead, actions “likely” to adversely affect members of an endangered species trigger this factor. *See Cascadia Wildlands v. U.S. Forest Serv.*, 937 F. Supp. 2d 1271, 1283 (D. Or. 2013) (holding project may have significant effect on environment where project will “likely adversely affect” northern spotted owl); *Klamath-Siskiyou Wildlands Ctr. v. U.S. Forest Serv.*, 373 F. Supp. 2d 1069, 1080-81 (E.D. Cal. 2004) (same). Here, NMFS admits endangered whale species and threatened or endangered sea turtle species “are likely to be adversely affected by the proposed action.” AR 2051-91, 2180.¹⁴

Highly Controversial Effects. Federal Defendants concede “high scientific controversy” triggers a need for further analysis. ECF 221 at 52-53. Such controversy exists here. Leading experts, whose work is cited in the agency’s record dozens of times, AR 7193-7234, submitted comments on the proposed harassment authorizations, ECF 124-50, and have filed declarations with this Court disagreeing with the agency’s analysis. Other comments in the record, including from the federal government’s independent Marine Mammal Commission and several state

¹⁴ *Greater Yellowstone Coalition v. Flowers*, 59 F.3d 1257 (10th Cir. 2004), on which Federal Defendants rely, is not to the contrary. There, the court found that “further assessment of impacts in an EIS . . . [was] unlikely to be productive,” given that the uncertainty in impacts did not stem “from a lack of thoroughness in investigating potential impacts.” *Id.* at 1276. The opposite is true here given NMFS’s inadequate analysis of the impacts on threatened and endangered species. *See supra* 9-17. Defendants’ attempt to distinguish the Ninth Circuit’s decision in *NRDC v. Winter*, 518 F.3d 658 (9th Cir. 2008), *see* ECF 221 at 52 n.25, fares no better; here, as there, endangered whale species and threatened or endangered sea turtle species “are likely to be adversely affect[ed] by the proposed action,” AR 002051-91, 002180; *see Winter*, 518 F.3d at 692, *rev’d on other grounds* 555 U.S. 7 (2008).

environmental agencies, express similar scientific concerns. *See* ECF 124-48; AR 3874-91. The controversy here is nothing like that in *Greenpeace Action v. Franklin*, 14 F.3d 1324, 1334-35 (9th Cir. 1992), cited by Federal Defendants, in which the court held that scientific controversy could not be established post hoc; it is exactly the type of scientific disagreement that requires an EIS. *See Nat'l Parks Conservation Ass'n v. Semonite*, No. 18-5179, 2019 WL 983691, at *6-8 (D.C. Cir. Mar. 1, 2019).

Highly Uncertain and Unique, Unknown Risk. Federal Defendants accuse Plaintiffs of “manufactur[ing] uncertainty,” ECF 221 at 54-55, but NMFS itself has described the surveys as “unprecedented” in “spatial and temporal scale” for the Atlantic. AR 857. And despite Defendants’ claim that the risks are “well-understood,” ECF 221 at 54, the record is filled with NMFS’s own characterizations of the science as uncertain. *See, e.g.*, AR 2168 (“[T]here is still considerable uncertainty as to whether or not [marine mammals’ behavioral] responses have consequences for [their] fitness.”); AR 2027 (“[T]here are many unknowns in assessing impacts of sound.”). The unique size and scale of the authorized surveys demonstrate that an EIS is required. *See Ocean Mammal Inst. v. Gates*, 546 F. Supp. 2d 960, 979-80 (D. Haw. 2008) (holding uncertainty about the effects of sonar on marine mammals required an EIS), *modified in part* No. 07–00254, 2008 WL 2020406 (D. Haw. May 9, 2008).

Cumulative Significant Impacts. Federal Defendants argue the seismic surveys will not have a cumulatively significant impact because NMFS “did not expect substantial physical overlap between the surveys.” ECF 221 at 54. But NMFS conducted a flawed analysis of the effects of multiple surveys, *see supra* 11-13, and failed to make a proper determination that the surveys, combined with impacts from other activities, will not have cumulatively significant impacts, *see supra* 13-15. Thus, an EIS is required. *See North Carolina v. FAA*, 957 F.2d 1125,

1131 (4th Cir. 1992) (agencies’ refusal to prepare EIS “is arbitrary and capricious if its action might have a significant environmental impact”); ECF 124-1 at 28.¹⁵

Plaintiffs are likely to prove that NMFS’s failure to prepare an EIS violated NEPA.

II. Seismic Airgun Blasting Will Cause Acoustic Disruption and Injury to Marine Mammals and Irreparable Harm to Plaintiffs.

A. Harassment and Hearing Loss Are Irreparable and Likely to Occur.

Federal Defendants concede seismic surveys will harm marine wildlife. They will disrupt marine mammal migration, feeding, and communication. ECF 221-2 ¶ 28 (“[H]arassment is expected to occur.”); 83 Fed. Reg. at 63,276. They will injure marine mammals, in some cases permanently. ECF 221-2 ¶ 28 (“[A]uditory injury is anticipated.”) (“[F]in whales are likely to experience PTS [permanent threshold shift.]”). They will displace fish and invertebrates. AR 7151 (“[T]he most likely impact to prey . . . is temporary avoidance of habitat.”).

Unable to deny that harm will occur, Defendants mischaracterize Plaintiffs’ burden, arguing that irreparable injury “must be measured at the *species* level,” ECF 221 at 18; ECF 212 at 16. Federal Defendants cite three district court opinions from the Ninth Circuit, but fail to disclose that, since those cases were decided, the Ninth Circuit has rejected the species-level harm standard. In *Cascadia Wildlands v. Scott Timber Co.*, faced with an argument that plaintiffs failed “to prove irreparable harm to the species as a whole,” Br. of Def.-Appellants at 42, No. 17-35038, the Ninth Circuit held “the district court correctly required harm to [plaintiff’s] interest in individual members of the marbled murrelet species as opposed to the entire species,” 715 F. App’x 621, 624 (9th Cir. 2017). One year later, when NMFS again argued that plaintiffs must

¹⁵ NMFS’s inadequate analysis of the cumulative impacts and incremental effects of the authorized survey further undermines its attempt to tier to BOEM’s PEIS. See *Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 997 (9th Cir. 2004); *Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 896 (9th Cir. 2002).

show “extinction level risks to the listed species,” the Ninth Circuit again held that the ESA “protect[s] the remaining members of a species” and “[h]arm to those members is irreparable.” *NWF v. NMFS*, 886 F.3d 808, 818 (9th Cir. 2018).

Industry Defendants’ argument that not all environmental harm warrants relief, ECF 212 at 16, ignores that seismic airguns will cause the exact harm the MMPA and ESA expressly aim to prevent. Irreparable harm is measured “by reference to the purposes of the statute being enforced.” *E.g.*, *NWF*, 886 F.3d at 818; *Sierra Club v. Marsh*, 872 F.2d 497, 502-03 (1st Cir. 1989). The ESA and MMPA protect vulnerable wildlife populations against human interference, including from the sublethal effects of harassment and injury. *See TVA v. Hill*, 437 U.S. 153, 184 (1978) (describing ESA’s goal “to halt *and reverse* the trend toward species extinction.” (emphasis added)); 16 U.S.C. §§ 1532(19) (defining prohibited ESA “take” to include harassment, harm, and injury); 1361(2) (declaring marine mammals “should not be permitted to diminish below their optimum sustainable population”), 1362 (defining MMPA “harassment” to include “any act” with “the potential to disturb a marine mammal . . . by causing disruption of behavioral patterns”). Both statutes employ “incremental steps” to meet their goals, including “protecting the remaining members of a species.” 886 F.3d at 818. “Harm to those members is irreparable” because it makes “the task of preserving that species . . . all the more difficult.” *Id.* (quoting *FCC v. Rosboro Lumber Co.*, 50 F.3d 781, 785 (9th Cir. 1995)). This case is therefore distinct from those cited by Industry Defendants, ECF 212 at 17, n.8, that involve abundant species not singled out by Congress for protection.¹⁶

¹⁶ Nor does *Water Keeper Alliance v. U.S. Department of Defense*, 271 F.3d 21 (1st Cir. 2001) support Industry Defendants’ position. The court concluded that mere “assertions” and “vague concerns” about harm to members of an endangered species, without “a more concrete showing,” were insufficient. *Id.* at 34. Here, there is compelling evidence of likely harm.

Defendants’ arguments ignore that “[t]he question of irreparable injury does not focus on the significance of the injury, but rather whether the injury . . . is irreparable—that is, whether there is any adequate remedy at law.” *Sierra Club v. Martin*, 71 F. Supp. 2d 1268, 1327 (N.D. Ga. 1999); *see also Big Country Foods, Inc. v. Bd. of Educ.*, 868 F.2d 1085, 1088 (9th Cir. 1989) (party must show threat of irreparable injury “irrespective of the magnitude of the injury”). Courts have long found acoustic harassment and injury to protected marine species to constitute irreparable harm. *See* ECF No. 124-1 at 29-30 (citing cases). Industry Defendants dismiss these cases because they were decided before *Winter v. NRDC*, 555 U.S. 7 (2008), ECF 212 at 15, but that case clarified only the likelihood, not the *type*, of harm necessary to obtain preliminary relief. The *Winter* decision itself refers repeatedly to acoustic harassment and injury and nowhere concludes that such harm is not irreparable. *E.g.*, 555 U.S. at 19-20. As stated in *Evans*, “the certain harassment and possible injury of marine mammals . . . , many of them endangered, plainly cannot be remedied by money, and is likely to be long lasting.” 279 F. Supp. 2d at 1188. Similarly, even temporary interference with reproduction by members of an endangered species is irreparable harm. ECF 124-1 at 31-32 (discussing *Sierra Club v. Von Kolnitz*, No. 2:16-CV-03815-DCN, 2017 WL 3480777, at *6 (D.S.C. Aug. 14, 2017) and *Red Wolf Coal v. N.C. Wildlife Res. Comm’n*, 2:13-CV-60-BO, 2014 WL 1922234 at *9 (E.D.N.C. May 13, 2014)).

Industry Defendants allege that “80 years” of seismic surveys have occurred “without any evidence of impacts.” ECF 212 at 12. But substantial scientific evidence confirms that loud, repetitive sounds from seismic surveys disturb whales and other marine life, interfering with their ability to communicate, interrupting their feeding, and displacing them from preferred habitat and migration routes. *See* 83 Fed. Reg. at 63,276; 124-3 ¶ 14 (describing multiple studies); Suppl. Rice Decl. ¶ 10. Though Dr. Gisiner asserts that seismic surveying cannot be

harmful because some whale populations in other areas are growing, ECF 214 ¶ 114, he ignores important differences in context. Suppl. Kraus Decl. ¶¶ 13-15; Suppl. Nowacek Decl. ¶¶ 14-19. He also ignores that not all whale populations thrive in the presence of seismic surveys; in announcing its preliminary determination that the Gulf of Mexico Bryde's whale—a baleen whale that lives in a region subjected to intense seismic surveying—is “in danger of extinction,” NMFS summarized the conclusion of biologists, including six NMFS employees, that “noise associated with seismic surveys” is a “high severity” threat and “is likely to eliminate or seriously degrade the population.” 81 Fed. Reg. 88,639, 88,643, 88,650 (Dec. 8, 2016).

Finally, Industry Defendants state that no harm will occur because seismic surveys have “regularly” occurred in the region “without any evidence of harm.” ECF No. 212 at 13. Industry cites past surveys that resulted in a total of 152 days of seismic activity over five years in an area stretching from southern Brazil to north of Newfoundland, many of which used only two or four airguns with combined discharge volumes many times smaller than the smallest array authorized here. Any argument that these past surveys demonstrate that 850 combined days of surveying between Delaware and Florida in a single year will cause no harm is disingenuous at best.

There is no serious debate that the approved surveys will harass thousands of marine mammals and cause permanent hearing loss for some. This alone is irreparable harm.

B. Right Whales and Beaked Whales Are Likely to Suffer Population-Level Harm.

Even if Plaintiffs were required to prove “species-level harm,” they have done so for right whales and beaked whales. “Ecology is not a field within the unique expertise of the federal government.” *Sierra Forest Legacy v. Sherman*, 646 F.3d 1161, 1185-86 (9th Cir. 2011). Courts need not defer “to federal agencies’ positions concerning irreparable harm.” *San Luis & Delta-Mendota Water Auth. v. Jewell*, 969 F. Supp. 2d 1211, 1215 (E.D. Cal. 2013); see *Am. Rivers v.*

U.S. Army Corps of Eng'rs, 271 F. Supp. 2d 230, 258-59 (D.D.C. 2003). This Court can, and should, make its own assessment of the likelihood of harm.

Right whales. Plaintiffs' opening brief presented the opinion of Dr. Scott Kraus, one of the world's foremost experts on North Atlantic right whales. Dr. Kraus described underwater noise as a "serious, demonstrated stressor" on the population. ECF 124-2 ¶ 23. He explained that health assessments of female right whales show many are barely healthy enough to reproduce, "indicating that additional stressors that reduce body condition will push them below any ability to reproduce." *Id.* ¶ 30. Exposure to seismic airgun noise will induce physiological stress in female right whales, reducing their ability to produce calves. *Id.* These opinions were underscored by Dr. Douglas Nowacek, a bioacoustician and expert on right whales and the effects of ocean noise. Dr. Nowacek explained that scientists have documented behavioral responses to seismic surveys in bowhead whales—the closest known relative to right whales—at received sound levels of 120 dB and lower. ECF 124-3 ¶¶ 25, 28. NMFS's 90-km seasonal closure will not protect right whales on the calving grounds from sound at similar levels, and "will not prevent airguns from ensonifying prime right whale habitat to the point where right whale behavior is significantly affected." *Id.* ¶¶ 18-19; *see* Suppl. Nowacek Decl. ¶¶ 8-9, 11-12.

Dismissing these expert opinions as "rhetoric," Defendants invoke NMFS's conclusions that right whales will be largely protected by the seasonal closure of coastal waters, and that any exposures that do occur will be isolated and temporary. ECF 212 at 18-19; ECF No. 221 at 18-19. These conclusions are owed no deference. As Dr. Nowacek explained, both assertions rely on the assumption that right whales will not be disturbed by sound levels below 160 dB—an assumption that is belied by direct evidence that seismic surveys disrupt bowhead whales at sound levels far below this threshold, as well as the model NMFS itself recently employed in the

Gulf of Mexico. ECF 124-3 ¶¶ 18-19, 25, 28; *supra* 9-11.

Industry Defendants’ other arguments—that Plaintiffs’ experts should not be trusted because they hold research permits that authorize right whale harassment, and that Dr. Gisiner believes right whales are “on an upward trajectory,” ECF 214 ¶ 80—carry little weight. Dr. Kraus and Dr. Nowacek’s research permits are different in kind. Suppl. Nowacek Decl. ¶¶ 20-23; Suppl. Kraus Decl. ¶¶ 16-18. Moreover, Dr. Gisiner’s assessment of the right whale population, offered without citation, is out of step with the scientific community *and* Federal Defendants. Suppl Kraus Decl. ¶¶ 4-7.

Beaked whales. Plaintiffs also presented testimony from two leading beaked whale experts, Dr. Peter Tyack and Dr. Andrew Read, about harm to beaked whales from repeated displacement and the risk of stranding.¹⁷ Dr. Read explained that concentrated and sustained seismic blasting in prime beaked whale habitat will repeatedly displace whales from their main food source, with significant long-term consequences for the population. ECF 124-4 ¶¶ 37-39.

Defendants argue a three-month closure of prime habitat to seismic surveys will protect these whales, ECF No. 221 at 20, but fail to respond to Dr. Read’s explanation of why that closure will not protect a species that is present in the area year-round, ECF 124-4 ¶¶ 47-48. As Industry Defendants themselves aptly argued in comments to the agency, “time-area restrictions do not, on their face, reduce take” of resident species, and “[c]oncentrating all the survey effort in this area over nine months instead of 12 is not necessarily better.” AR 716-17.

Widely accepted evidence shows that beaked whales exhibit strong, persistent responses to a broad range of anthropogenic noise, including some with output that, like seismic, is

¹⁷ Defendants attack Dr. Tyack as showing only a possibility of strandings, ignoring his determination that a population-level impact is more likely than not. *See* ECF 124-6 ¶ 33. Nonetheless, this Court need not conclude fatal strandings are likely to find irreparable harm.

predominantly in the low frequencies. Suppl. Read Decl. ¶¶ 4-8; Suppl. Tyack Decl. ¶¶ 11-13.¹⁸ Industry Defendants simply ignore this evidence in claiming that Dr. Read’s opinion is built on the “spurious hypothesis” that beaked whales will react negatively to low-frequency seismic noise because they do so in response to mid-frequency sonar. ECF No. 212 at 22-24. They also contradict Federal Defendants, who characterized beaked whales as “a particularly behaviorally sensitive species in response to noise exposure” and opined that “[t]he likely consequences [of seismic surveying] are considered high for beaked whales due to the combination of known acoustic sensitivity and expected residency patterns.” 83 Fed. Reg. at 63,286, 63,365.¹⁹

C. The Harassment and Injury of Wildlife Will Harm Plaintiffs’ Members.

Plaintiffs’ members’ substantial interests in marine mammals are threatened by the authorized seismic surveys. Plaintiffs’ members have observed, *see* ECF 124-8 ¶ 15, 124-13 ¶¶ 4-5, 124-15 ¶ 7, 124-31 ¶¶ 4-5, and have plans and desires to observe, *see* ECF 124-10 ¶ 8, 124-13 ¶ 6, 124-18 ¶ 8, 124-31 ¶¶ 7-9, beaked whales and right whales along the Atlantic coast. Harm to these animals, including displacement and decreased reproduction, *see supra* 24-27, will interfere with Plaintiffs’ members’ ability to see and research these species, *see, e.g.*, ECF 124-13 ¶ 8, 124-15 ¶¶ 15-16, 124-31 ¶¶ 14-15; *NWF*, 886 F.3d at 822 (holding because “[f]ewer

¹⁸ Industry Defendants’ demand for direct, uncontroverted evidence is contrary to sound science. In assessing complex scientific evidence, courts have long recognized that “an evaluation of causation requires [experts] to exercise judgment about the import of [scientific] studies and to consider them in context.” *In re Roundup Prod. Liab. Litig.*, No. 16-MD-02741-VC, 2018 WL 3368534, at *7 (N.D. Cal. July 10, 2018). Plaintiffs’ declarants are leading experts in their fields. Their opinions depend on their expert assessments of what the science demonstrates, and it is entirely appropriate for this Court to credit those assessments. *See NWF*, 886 F.3d at 823.

¹⁹ Industry Defendants further assert that Dr. Read’s opinion rests on a belief that multiple surveys will occur in the same area at the same time, which new developments have made unlikely. ECF No. 212 at 25. But Dr. Read’s conclusions about population-level harm are based on the cumulative impacts of repeated exposure on the ability to forage and reproduce, not on his belief that multiple surveys will occur simultaneously. Suppl. Read Decl. ¶¶ 9-14.

salmon mean fewer opportunities to see them,” “fewer salmon directly harm” plaintiff); *see also Red Wolf Coal.*, 2014 WL 1922234, at *9 (holding “harm to plaintiffs and their group members through the unauthorized taking of red wolves is also irreparable”).

Federal Defendants dismiss these injuries as a mere “possibility” because NMFS expects the surveys to have only limited impacts. *See* ECF 221 at 19-20. But NMFS’s conclusions regarding irreparable harm are not entitled to deference. *See Jewell*, 969 F. Supp. 2d at 1215. And even temporary displacement of beaked whales—a harm Federal Defendants do not contest—will irreparably injure Heather Foley and Danielle Waples, who both conduct research on these whales in an area that will be subjected to concentrated seismic surveying. *See* ECF 124-13 ¶ 8, 124-15 ¶¶ 15-16, 124-31 ¶¶ 14-15.²⁰

D. Harm from Seismic Surveying Is Likely and Imminent.

Injury is “sufficiently immediate” if Plaintiffs are “likely to suffer irreparable harm before a decision on the merits can be rendered.” *Boardman v. Pac. Seafood Grp.*, 822 F.3d 1011, 1023 (9th Cir. 2016); *see Sun Microsystems, Inc. v. Microsoft Corp.*, 333 F.3d 517, 525 (4th Cir. 2003) (stating preliminary relief seeks “to prevent irreparable harm during the pendency of [the] lawsuit”), *abrogation on other grounds recognized by Bethesda Softworks, LLC. v. Interplay Entm’t Corp.*, 452 F. App’x 351 (4th Cir. 2011). Plaintiffs must present not a certainty, but a likelihood of irreparable harm. *See Pashby v. Delia*, 709 F.3d 307, 329 (4th Cir. 2013)

²⁰ A plaintiff need not show that an area is the *only* place to pursue an aesthetic or research interest. *Contra* ECF 212 at 25. The “logical extension” of that argument would be “that a plaintiff can never suffer irreparable injury resulting from environmental harm . . . as long as there are other areas . . . that are not harmed.” *All. for the Wild Rockies v. Cottrell*, 632 F.3d 1127, 1136 (9th Cir. 2011). Moreover, the waters off Cape Hatteras offer habitat uniquely suited to Plaintiffs’ members’ research. *See* ECF 124-4 ¶ 27; Suppl. Read Decl. ¶ 15. The seismic surveys planned for the North Carolina coast will irreparably harm Plaintiffs’ members by “mak[ing] it harder” for researchers to find and study these whales. *See, e.g.*, ECF 124-31 ¶ 14.

(rejecting argument that plaintiffs “failed to show irreparable harm because none of them proved that they were certain to suffer injury”).

Though Defendants characterize Plaintiffs’ harm as “speculative,” government officials have repeatedly stated that BOEM permits are imminent. *See, e.g.*, Ex. 4 (quoting government statement, at a March 2019 presentation to IAGC, that “we wouldn’t work really really hard to get the [Atlantic] seismic permits out, if it was an area that wasn’t going to be available [for drilling]”); Suppl. Bernard Decl. ¶ 6 (describing statement of Walter Cruickshank, Acting Director of BOEM, to Congress that “if an IHA is indeed approved, then we’ll be able to issue [OSCLA] permits very promptly”). Permits are likely to issue, and boats will be poised to begin surveying, imminently. By contrast, a decision on the merits remains months away at minimum. Though Federal Defendants recently filed an administrative record, a dispute over the adequacy of that record is likely. *Id.* ¶¶ 8-11. Only after such a dispute is resolved may the parties file, and this Court decide, detailed cross-motions for summary judgment. Defendants nowhere allege seismic surveying will not commence in that time. Plaintiffs’ motion is not premature and seeks protection from harm likely to occur during this case.

III. The Balance of Equities and the Public Interest Favor Injunctive Relief.

Plaintiffs have shown that, absent an injunction, seismic surveys in the Atlantic will imminently and irreparably harm protected marine species and Plaintiffs themselves. Once such a showing has been made, “[t]he equitable scales are *always* tipped in favor of the . . . species.” *Red Wolf Coal. v. U.S. Fish & Wildlife Serv.*, 210 F. Supp. 3d 796, 806 (E.D.N.C. 2016) (emphasis added); *see TVA*, 437 U.S. at 194; *see also S.C. Dep’t of Wildlife & Marine Res. v. Marsh*, 866 F.2d 97, 100 (4th Cir. 1989) (stating if there is irreparable harm to the environment, the balance of harms usually favors an injunction).

The equities would favor an injunction even if this Court reweighed the balance. Industry

Defendants cannot tip the scales with unspecified economic losses they will allegedly suffer if the status quo is maintained while this case is decided. A delay in “reaping” the purported “economic benefits” of industrial activities does not outweigh permanent environmental harm. *Ohio Valley Env'tl. Coal. v. U.S. Army Corps of Eng'rs*, 528 F. Supp. 2d 625, 632 (S.D.W. Va. 2007). Nor do possible additional administrative duties for NMFS. *Summers v. Adams*, No. CV 3:08-2265-CMC, 2008 WL 11347422, at *1 (D.S.C. Dec. 11, 2008) (finding balance of harms tilted in favor of plaintiffs where government alleged only “delay in implementation” and “some degree of related expense and administrative inconvenience”).

The public interest, too, strongly favors an injunction. The hundreds of thousands of comments NMFS received opposing seismic surveying in the Atlantic are powerful indicia of the public’s opposition. The only countervailing interest that NMFS offers—that of surveying the Atlantic Outer Continental Shelf, ECF 221 at 58—is far from urgent and will not be permanently impeded by a temporary injunction.

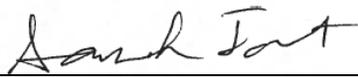
CONCLUSION

Because Plaintiffs have demonstrated they are likely to succeed on their claims that NMFS has violated the MMPA, the ESA, and NEPA, risking irreparable harm to hundreds of thousands of animals and Plaintiffs’ members alike, and because the balance of the harms and public interest tilt heavily in their favor, Plaintiffs respectfully request that the Court enjoin NMFS’s incidental harassment authorizations.

Dated: March 25, 2019

Respectfully submitted,

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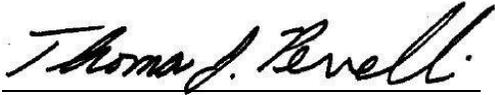


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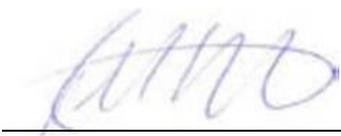
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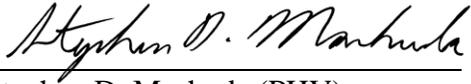
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