

United States Court of Appeals
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued February 24, 2023

Decided June 16, 2023

No. 22-5238

MAINE LOBSTERMEN’S ASSOCIATION,
APPELLANT

STATE OF MAINE DEPARTMENT OF MARINE RESOURCES,
ET AL.,
APPELLANT-INTERVENORS

v.

NATIONAL MARINE FISHERIES SERVICE, ET AL.,
APPELLEES

Consolidated with 22-5244, 22-5245, 22-5246

Appeals from the United States District Court
for the District of Columbia
(No. 1:21-cv-02509)

Paul D. Clement argued the cause for appellant Maine Lobstermen’s Association. With him on the briefs were *Mary Anne Mason, Jane C. Luxton, James Y. Xi, Ryan Steen, and Jason Morgan*.

Paul S. Weiland and *Brian Ferrasci-O'Malley* were on the briefs for intervenor-appellant State of Maine Department of Marine Resources.

Alfred C. Frawley IV and *Thimi R. Mina* were on the briefs for intervenor-appellant District 4 Lodge of the International Association of Machinists and Aerospace Workers, Local Lodge 207.

Samuel P. Blatchley was on the briefs for intervenor-appellant Massachusetts Lobstermen's Association.

H. Christopher Bartolomucci was on the brief for *amicus curiae* Maine State Chamber of Commerce in support of appellants.

John M. Formella, Attorney General, Office of the Attorney General for the State of New Hampshire, and *Christopher G. Aslin*, Senior Assistant Attorney General, were on the brief for *amicus curiae* State of New Hampshire in support of appellants.

Sommer H. Engels, Attorney, U.S. Department of Justice, argued the cause for federal appellees. With her on the brief were *Todd Kim*, Assistant Attorney General, and *Andrew C. Mergen*, *Rachel Heron*, and *J. Brett Grosko*, Attorneys.

Kristen Monsell argued the cause for intervenor-appellees Conservation Law Foundation, et al. With her on the brief were *Erica A. Fuller* and *Jane P. Davenport*.

Before: KATSAS and RAO, *Circuit Judges*, and GINSBURG, *Senior Circuit Judge*.

Opinion for the Court filed by *Senior Circuit Judge* GINSBURG.

GINSBURG, *Senior Circuit Judge*: The National Marine Fisheries Service licenses fisheries in federal waters. In doing so, the Service must comply with the Endangered Species Act (ESA). That Act requires the Service to prepare an “opinion,” commonly known as a biological opinion, “detailing how the [fishery] affects” any endangered or threatened species. 16 U.S.C. § 1536(b)(3)(A). Using “the best scientific and commercial data available,” the Service’s opinion must determine whether the federal fishery is “not likely” to jeopardize the survival of a protected species. *Id.* § 1536(a)(2).

In this case, we decide whether, in a biological opinion, the Service must, or even may, when faced with uncertainty, give the “benefit of the doubt” to an endangered species by relying upon worst-case scenarios or pessimistic assumptions. We hold it may not. The ESA and the implementing regulations call for an empirical judgment about what is “likely.” The Service’s role as an expert is undermined, not furthered, when it distorts that scientific judgment by indulging in worst-case scenarios and pessimistic assumptions to benefit a favored side.

I. Factual and Regulatory Background

This case arises from the Service’s efforts to protect the North Atlantic right whale from mankind in general, and lobstermen in particular. We begin by providing some background.

A. The North Atlantic Right Whale

The North Atlantic right whale is distinguished by an enormous mouth, a black stocky body, and the lack of a dorsal fin.

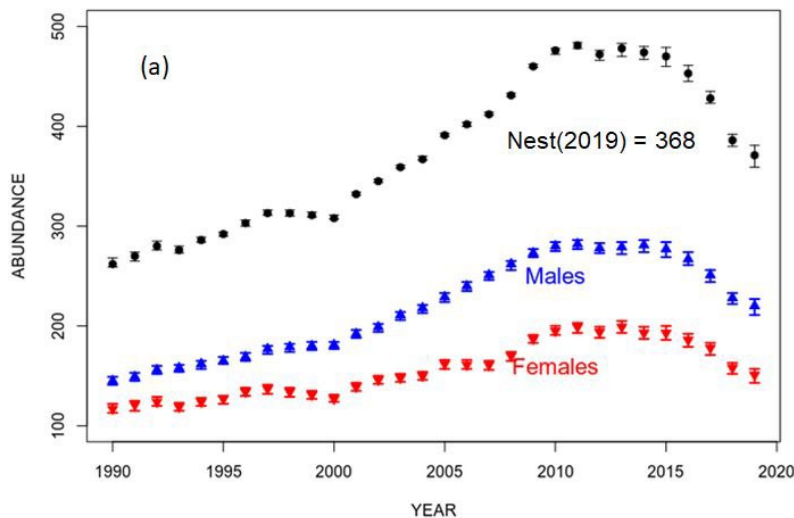
It feeds by “taking in huge drafts of water filled with small copepods, krill, and other zooplankton.” Eric Jay Dolin, *Leviathan: The History of Whaling in America* 21 (2007).



“Right whales are migratory mammals.” *Defs. of Wildlife v. Gutierrez*, 532 F.3d 913, 915 (D.C. Cir. 2008). The whale’s range includes the coastal waters of the eastern United States and Canada, but it occasionally wanders as far as Iceland and Norway. Although the whale’s range is broad, the Service has designated its “critical habitat,” *see* 16 U.S.C. § 1532(5)(A), as the whale’s traditional foraging grounds in the Gulf of Maine and the Georges Bank, and its calving grounds in the warm waters of the southeastern U.S. 81 Fed. Reg. 4838 (2016), *codified at* 50 C.F.R. § 226.203.

The North Atlantic right whale has been listed as endangered for almost as long as the Government has kept a list. *See* 35 Fed. Reg. 18,319, 18,320 (1970). For several years, the whale population recovered slowly, peaking at almost 500 in 2011. Its recovery has since stalled, however; a recent Service assessment puts the number of right whales left at only 368. *See* North Atlantic Right Whale (*Eubalaena glacialis*): Western Atlantic Stock 17–19 (May 2022), <https://perma.cc/UW24-7TQ2>.

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Several factors may explain the recent downward trend. The availability of food is one of them. To sustain its massive body, an adult right whale must feed upon dense groups of copepods. In the past, the Gulf of Maine provided an ample supply. Following abrupt warming of the Gulf in 2010, however, the whale's favorite prey is no longer as abundant. Right whales need large stores of blubber to calve, so having less food has led to a decline in the birth rate. Less food has also altered the whale's migratory patterns; the Service has seen "a shift of right whales out of habitats such as the Great South Channel and the Bay of Fundy, and into [other] areas such as the Gulf of St. Lawrence in the summer and [waters] south of New England and Long Island in the fall and winter." *See also* Leah M. Crowe et al., *In Plane Sight: A Mark-Recapture Analysis of North Atlantic Right Whales in the Gulf of St. Lawrence*, 46 *Endangered Species Research* 227, 243 (2021) (showing the Gulf of St. Lawrence "is currently an important habitat for approximately 40% of this species from the beginning of May to December"). This is significant because the

migration into Canada has made the whale more likely to get entangled in the heavy fishing gear used to harvest Canadian snow crab.

Indeed, most right whales die from vessel strikes or entanglement in fishing gear. Entanglement may also reduce calving rates. Whether and to what extent the federal lobster fishery is responsible for hampering the right whale population is the question at the heart of the scientific controversy giving rise to this litigation.

B. The Agency Actions

In 2017, 17 right whales were killed by vessel strikes and fishing gear, five found in the United States and a dozen in Canada, leading the Service to declare an “unusual mortality event” for the whale under the Marine Mammal Protection Act (MMPA). 16 U.S.C. § 1421c. At the same time, a new study documented the whale’s sudden decline. *See* Richard M. Pace, III, et al., *State-Space Mark-Recapture Estimates Reveal a Recent Decline in Abundance of North Atlantic Right Whales*, 7 *Ecology and Evolution* 8730, 8739 (2017). The Service responded by taking action under the ESA and the MMPA.

1. The biological opinion

In light of the new study and the elevated number of right whale deaths, the Service reinitiated a formal consultation under § 7 of the ESA for fisheries that may harm the right whale, including the lobster fishery. *See* 50 C.F.R. § 402.16(a)(1)–(2). The Service administers both the ESA and federal fisheries, so the consultation occurred in-house: The Sustainable Fisheries Division consulted with the Protected Resources Division, the former being the division that manages

federal fisheries, the latter being the experts in protecting marine mammals.

In a typical consultation, an agency proposes an action and the Service prepares a “biological opinion” documenting the effects of the action. 50 C.F.R. § 402.14(h). If the Service finds the action will likely “jeopardize” a protected species by appreciably reducing its chance of surviving, then the Service proposes “reasonable and prudent alternatives,” if there are any, that reduce the increased risk of extinction. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(h)(2). The action agency then has three choices: It may implement the proposed alternative(s), end the action, or ask the politically accountable Endangered Species Committee for an exemption from the ESA. 16 U.S.C. § 1536(e), (g).

That is not what happened here, however. Instead, as we explain below, after finding the lobster and related Jonah crab federal fisheries kill an unsustainable number of right whales, the Service avoided a finding of jeopardy by redefining the action at issue.

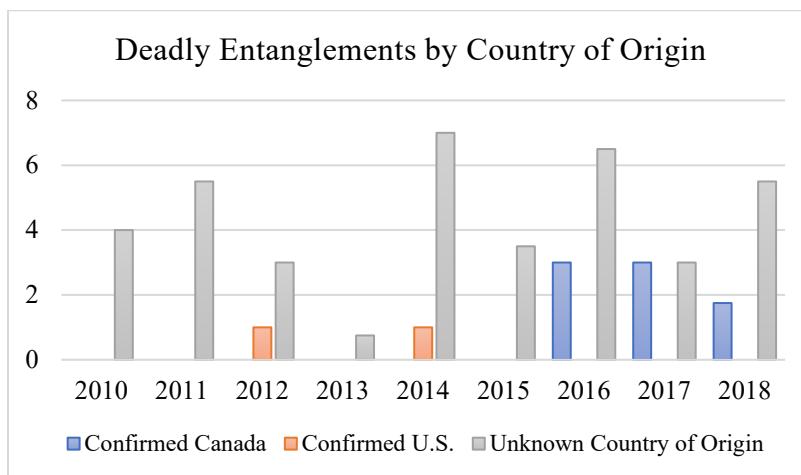
a. The Service concluded the federal lobster fishery kills many right whales

In the biological opinion, the Service’s first task was to describe the “reasonably certain” effects of the fisheries on the right whale. 50 C.F.R. § 402.02. It began with this preliminary qualification, quoting the legislative history of the 1979 ESA amendments:

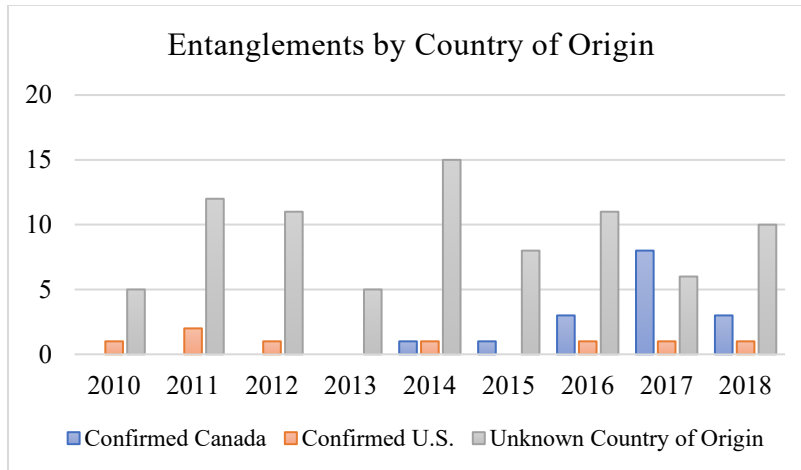
Data are limited, so we are often forced to make assumptions to overcome the limits in [sic] our knowledge. Sometimes, the best available information may include a range of values for a particular aspect under consideration or dif-

ferent analytical approaches may be applied to the same data set. When appropriate in those cases, the uncertainty is resolved in favor of the species We generally select the value that would lead to conclusions of higher, rather than lower, risk to endangered or threatened species. This approach provides the “benefit of the doubt” to threatened and endangered species.

Quoting H.R. Conf. Rep. No. 96-697, at 12, reprinted in 1979 U.S.C.C.A.N. 2572, 2576. The Service then summarized the data on right whale entanglements beginning in 2010, when there was a “regime shift” in the Gulf of Maine. From 2010 to 2018, there were two documented right whale deaths or serious injuries (likely deaths)¹ from entanglement known to have originated in the United States. On the other hand, as the charts below show, most documented deadly and non-deadly entanglements cannot be traced with confidence to a particular country (or, for that matter, to a type of fishing gear).



¹ Because serious injuries are likely deaths, 50 C.F.R. § 216.3, we treat them as deaths for the remainder of our opinion.



The Service also believes most right whale deaths are undocumented. *See* Richard M. Pace et al., *Cryptic Mortality of North Atlantic Right Whales*, 3 Conservation Sci. and Practice 1, 6 (2021) (estimating less than half of whale carcasses are documented). From disparities in the documented number of seriously entangled and dead whales, the Service infers these unseen deaths disproportionately result from entanglement; whales suffering from chronic entanglement may lose buoyancy and sink to their deaths. *See id.* at 2–3, 6–7.

The Service faced the unenviable task of dealing with these known unknowns. To do so, the Service made certain disputed assumptions about the unknown data and the unseen deaths. After making these assumptions, the Service concluded the fishing gear used in the lobster and Jonah crab federal fisheries kills about 46 North Atlantic right whale each decade, which would decimate the right whale population in less than ten years. The Service also estimated that federal fisheries entangle more than nine percent of right whales each year. To

reach this estimate, the Service put aside the data on confirmed entanglements and relied instead upon a “scarring analysis” from a 2019 study, noting “This approach provides the benefit of the doubt to the species and a more conservative estimate of total right whale entanglements.”

b. The Service found no jeopardy by relying upon a “Conservation Framework”

While the Service drafted the biological opinion, it also prepared a “Conservation Framework” announcing the Service’s commitment to reducing right whale entanglements in federal fisheries, in four specific phases, to near zero by 2030. The Service concluded these targets were “necessary to ensure the goals of the ESA, namely survival and recovery of the species, are met.”

Despite the need for the Framework, and despite finding the lobster fishery kills an unsustainable number of right whales, the Service found federal fisheries were unlikely to jeopardize the right whale. In order so to find, the Service projected the effects of the fishery over five decades assuming the decreases in risk promised by the Framework are realized. In making these projections, the Service, “[w]hen dealing with data uncertainties . . . utilized metrics representing the worst case scenario. Consequently,” it acknowledged, “model outputs very likely overestimate the likelihood of a declining population.”

In response to public comments criticizing the Service’s assumptions, the Service said it “recognize[d] that the assumptions may be considered pessimistic,” but said it had no choice: “[G]iven Congressional guidance on implementation of the ESA,” the Service said, “we need to give the benefit of the doubt to the species.” The congressional “guidance” repeatedly

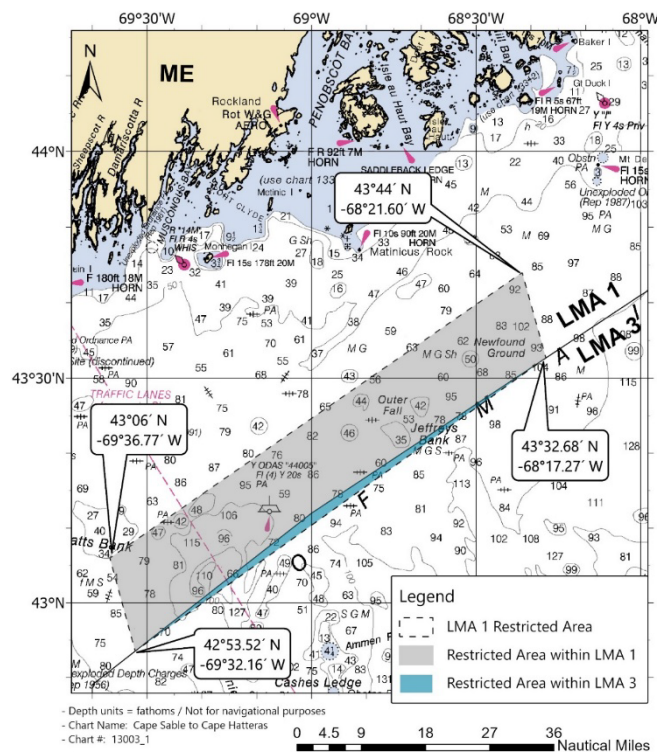
referenced by the Service was a single sentence in a 1979 conference report, to wit: “This language continues to give the benefit of the doubt to the species, and it would continue to place the burden on the action agency to demonstrate to the consulting agency that its action will not violate Section 7(a)(2).” H.R. Conf. Rep. No. 96-697, at 12, *reprinted in* 1979 U.S.C.C.A.N. 2572, 2576.

2. The phase one rule

Soon after issuing the biological opinion, the Service promulgated a final rule implementing the first phase of the Framework and amending the “take reduction plan” for the right whale under the MMPA. *See* 86 Fed. Reg. 51,970 (2021), *codified at* 50 C.F.R. § 229.32; *see also* 16 U.S.C. § 1387(f). The phase one rule requires lobstermen to mark their ropes, add weak links or use weak ropes, and increase the number of traps they use for each “trawl.”² 86 Fed. Reg. at 51,972–74. The rule also includes seasonal fishing restrictions; for example, it bans fixed buoy lines from October through January in the vast restricted area of the Gulf of Maine shown below. *Id.* at 51,972–73.

² “A trawl consists of two or more traps attached to a single ground-line, with at least one, but most often two, surface lines.”

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C. The Lawsuits

Conservation groups and the lobstermen sued the Service from opposite flanks, challenging both the biological opinion and the phase one rule.

1. The conservation groups' lawsuit

The district court granted summary judgment to the conservation groups. *See Ctr. for Biological Diversity v. Raimondo*, 610 F. Supp. 3d 252, 269–71 (D.D.C. 2022). For reasons not relevant here, the court held that (1) the Service's

incidental take permit in the biological opinion did not comply with the ESA and the MMPA, *id.* at 268–71, and (2) the phase one rule was not stringent enough to meet the goals of the MMPA. *Id.* at 279. The Service did not appeal.

2. The lobstermen's lawsuit

In the separate action brought by the Maine Lobstermen's Association, other lobstermen groups and Maine's Department of Marine Resources intervened as plaintiffs, while conservation groups intervened as defendants. This time, the district court entered summary judgment for the Service. *Maine Lobstermen's Ass'n, Inc. v. Nat'l Marine Fisheries Serv.*, No. CV 21-2509 (JEB), 2022 WL 4392642, at *15 (D.D.C. Sept. 8, 2022). The lobstermen and Maine appealed.

3. The remand

While these appeals were pending, the district court gave the conservation groups their remedy: the court ordered the rule amended by December 9, 2024, to comply with the goals of the MMPA. 2022 WL 17039193, at *3 (D.D.C. Nov. 17, 2022). The court also remanded the biological opinion so the Service could address the allegedly defective incidental take statement. *Id.* In light of this remand, the Service decided to accelerate the timeline for the third phase of the Framework by merging it with the second phase.

D. The Consolidated Appropriations Act

A few weeks after the district court ordered the Service to promulgate a new rule by December 9, 2024, the Congress enacted the Consolidated Appropriations Act. Pub. L. No. 117-328, 136 Stat. 4459 (2022). Section 101(a) of Division JJ of that law provides:

[F]or the period beginning on the date of enactment of this Act and ending on December 31, 2028, the [phase one rule] shall be deemed sufficient to ensure that the continued Federal and State authorizations of the American lobster and Jonah crab fisheries are in full compliance with the [MMPA] and the [ESA].

Paragraph (a)(2) of § 101 requires the Service to promulgate new rules “that take effect by December 31, 2028.” The Act also appropriates money to accelerate the deployment of “innovative” (i.e., ropeless) fishing gear. *Id.* § 203(a)(1).

II. Jurisdiction

Before reaching the merits, we must decide whether the appeals present a live case or controversy. If they do not, then we lack power to hear the case under Article III of the Constitution.

A. The Lobstermen Have Standing

We first consider the question of constitutional “standing,” which a plaintiff must establish at the outset of its suit. “In essence the question of standing is whether the litigant is entitled to have the court decide the merits of the dispute or of particular issues.” *Warth v. Seldin*, 422 U.S. 490, 498 (1975). The analysis of standing to sue “in no way depends on the merits.” *Id.* at 500. When determining standing, therefore, “we assume the merits in favor of the plaintiff.” *Waterkeeper All. v. EPA*, 853 F.3d 527, 533 (D.C. Cir. 2017).

“[T]o 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.” *TransUnion LLC v. Ramirez*, 141 S. Ct. 2190, 2203 (2021). An association may establish standing on behalf of injured members. *Hunt v. Washington State Apple Advert. Comm’n*, 432 U.S. 333, 343 (1977).

The lobstermen’s standing to challenge the phase one rule is self-evident, as they are the “object of the action.” *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 561 (1992). According to the Service, (i) the phase one rule will cost lobstermen \$50 to \$90 million over the first six years. This concrete, particularized pocketbook injury gives the lobstermen a stake in the outcome of the suit. (ii) The harm is caused by the defendant Service, which promulgated the rule, and (iii) it may be redressed by the court; should the lobstermen prevail, we may vacate or remand the rule, giving them relief from enforcement, or at least a chance on remand to pursue their case against the rule free of the Service’s alleged legal errors.

For related reasons, the lobstermen have standing to challenge the biological opinion. The finding of no jeopardy in the biological opinion depends upon the Service keeping the phase one rule, which as we just explained, harms the lobstermen. So long as the biological opinion stands, either the rule must stand or the fishery must close. Although the proximate cause of the pocketbook injury is the rule, Article III standing does not follow the causation principles of tort law; an injury may be “fairly traceable” to an agency action that is not “the very last step in the chain of causation.” *Bennett v. Spear*, 520 U.S. 154, 168–69 (1997). A biological opinion is a paradigmatic example. A biological opinion “has a powerful coercive effect on the action agency”: federal agencies and their employees risk civil and criminal penalties for the incidental “taking” of a species if they ignore a biological opinion, so they rarely if ever do. *Id.* at 169–70. This “virtually determinative effect” makes the

pocketbook injury fairly traceable to the biological opinion. *Id.* at 170. A ruling for the lobstermen could “remove this barrier” to lifting the rule, which is enough for standing to challenge it. *Duberry v. District of Columbia*, 924 F.3d 570, 583 (D.C. Cir. 2019).

Last, the Maine Lobstermen’s Association has associational standing to bring suit on behalf of its injured members. The Association explains that the suit is germane to its purposes, and there is no reason individual lobstermen must participate in the suit. *Hunt*, 432 U.S. at 343. Because the Association has standing to sue on behalf of its members, we do not need to consider the standing of the intervenors. *Bowsher v. Synar*, 478 U.S. 714, 721 (1986).³

B. The Appeals Are Not Moot

After the Consolidated Appropriations Act became law, the Service moved to dismiss these appeals as moot. In a declaration attached to the Service’s motion, Michael Pentony, the Service’s Greater Atlantic Regional Administrator, explains that because of the intervening law, the Service will no longer adhere to the timeline and targets set out by the Framework for the lobster and Jonah crab fisheries. Pentony also notes the Service will support the next rule with a new formal consultation and biological opinion. Because of these intervening events, the Service argues the appeals are now moot and must be dismissed.

³ The conservation groups challenge the lobstermen’s standing to bring count two of the complaint, challenging the Framework. We do not reach count two, so we do not address our power to hear this claim.

1. The Consolidated Appropriations Act does not moot the appeals

According to the Service, the Consolidated Appropriations Act ratifies the phase one rule and insulates it from challenge. “Where Congress enacts intervening legislation that definitively resolves the issues a litigant seeks to put before us,” the Service argues, “the claims are moot and we are precluded from deciding them.” *Nuclear Energy Inst., Inc. v. EPA*, 373 F.3d 1251, 1309 (D.C. Cir. 2004).

Here, unlike in the cases cited by the Service, the intervening law does not resolve the issues before us. The Act provides the phase one rule “shall be deemed sufficient” to ensure the lobster fishery’s compliance with the ESA and the MMPA until 2029. The Service concedes “sufficient” does not usually mean “necessary.” Rather, the ordinary public meaning of “sufficient” here is “[a]dequate” for complying with the ESA and MMPA. *Black’s Law Dictionary* (11th ed. 2019). This ordinary meaning is consistent with the evident purpose of the Act, *viz.*, to postpone the deadline set by the district court, giving the lobstermen more lead time. *Cf. Digital Realty Tr., Inc. v. Somers*, 138 S. Ct. 767, 777 (2018) (considering the “purpose and design” of a law to corroborate the meaning of the text). The Act is thus best read to set a temporary ceiling, not a floor, for compliance by the lobster and Jonah crab fisheries. The lobstermen do not argue the rule is not “adequate” to comply; they argue the rule goes too far, not that it does not go far enough. If, as the lobstermen claim, the federal lobster fishery is not the problem, then the phase one rule is not the solution. No law allows the Service to keep in place a useless rule. The Act therefore does not resolve the issues before us.

The Service’s plan to do a new consultation in the future is also of no moment. A future plan does not moot present

claims. The agency's conduct has not ceased. Indeed, counsel for the Service told us during oral argument the Fisheries Division continues to rely upon the biological opinion when "granting permits for the fishery," which confirms the biological opinion remains an operative decisional document in an ongoing permitting process affecting the lobstermen.

2. The Service's remaining arguments for dismissal are unavailing

The Service's remaining arguments belong in a merits brief, not in a motion to dismiss. In its motion, the Service argues the lobstermen have forfeited their claim against the rule. The Service also argues the lobstermen may get no relief from the rule because the lobstermen complain only about errors in the biological opinion, not in the rule. The Service further argues the phase one rule was promulgated under the MMPA, and so, the phase one rule does not depend upon the biological opinion.

Before we address these arguments, a preliminary observation is in order: These arguments have nothing to do with intervening events, so they are not about mootness at all. Rather, they go to the merits, as even the conservation groups concede.

The Service, moreover, did not raise these merits arguments in its opening brief, so they are forfeited. *Al-Tamimi v. Adelson*, 916 F.3d 1, 6 (D.C. Cir. 2019); *see also Solomon v. Vilsack*, 763 F.3d 1, 13 (D.C. Cir. 2014) ("[T]he Secretary has—in a word—forfeited his forfeiture argument here."). The Service, to be sure, did say, in the background section of its opening brief, that the lobstermen "do not challenge the Rule in this appeal." This fleeting assertion, however, was belied by the Maine Lobstermen's brief, which clearly challenged the

rule, arguing it was infected by the errors in the biological opinion. As the Service conceded during oral argument, it also did not raise in its opening brief the “specific argument” that the MMPA is an independent basis for the rule:

COURT: Your defense of the rule in your briefing seems to rest entirely on the biological opinion and not on some independent ground or through MMPA process.

COUNSEL: We haven’t advanced a specific argument . . . in our briefing as to the rule because we didn’t see that they had made a separate argument specific to the rule.

The Service blames the lobstermen for the forfeiture, but the lobstermen preserved their claim at every turn. Count four of the Maine Lobstermen’s complaint claims the rule is unlawful because, they say, it flows from or relies upon the biological opinion. The lobstermen sought summary judgment on count four, making this argument. The district court held count four was “properly pled” and then rejected the claim on the merits. *Maine Lobstermen’s Ass’n*, 2022 WL 4392642, at *14. On appeal, the lobstermen continue arguing the rule should be set aside because the rule is allegedly “infect[ed]” by the legal and analytical errors in the biological opinion. The lobstermen, unlike the Service, have thus preserved their argument.

In any event, these forfeited arguments are irrelevant to count one of the Maine Lobstermen’s complaint, which is directed at the biological opinion, not the rule. For purposes of count one, it is of no moment that the phase one rule was promulgated under the MMPA, not the ESA. The Service’s substantive rules must always be promulgated under a different law: Section 7 does not grant the Service any substantive rulemaking power in its role as a consulting agency, and “[i]t is axiomatic that an administrative agency’s power to promulgate leg-

isulative regulations is limited to the authority delegated by Congress.” *Bowen v. Georgetown Univ. Hosp.*, 488 U.S. 204, 208 (1988). This does not, however, affect the plaintiffs’ standing to sue or the merits of their claim. As we have explained, the biological opinion injures the lobstermen not because it authorizes the rule (it does not), but because “it has a powerful coercive effect on the action agency.” *Spear*, 520 U.S. at 169. That coercive effect injures the lobstermen even if the rule is a valid exercise of the agency’s discretion under the MMPA.

III. The Merits

On the merits, we decide whether the Service must (or even may) indulge in worst-case scenarios and pick “pessimistic” values in order to give “the benefit of the doubt” to the species. We begin with an overview of the text, structure, and history of § 7. We then consider the Service’s arguments.

A. The ESA Does Not Require a Substantive Presumption in Favor of the Species

Section 7 imposes some duties on the action agency (here the Fisheries Division), and other duties on the Service (here the Protected Resources Division). The action agency must ensure an action is “not likely to jeopardize the continued existence of” a protected species. 16 U.S.C. § 1536(a)(2). A key term limiting this duty is “likely.” *Id.* We give the term its “ordinary, contemporary, common meaning.” *Food Mktg. Inst. v. Argus Leader Media*, 139 S. Ct. 2356, 2362 (2019).

In 1979, when the term was added to the ESA, “likely” meant “probable” or “[i]n all probability.” *Black’s Law Dictionary* 834 (5th ed. 1979). Indeed, elsewhere in the ESA, the Service has read “likely” to mean “more likely than not.”

Alaska Oil & Gas Ass'n v. Pritzker, 840 F.3d 671, 684 (9th Cir. 2016). We see no reason to depart from that usage. Section 7, therefore, requires the action agency to avoid acts that will more likely than not jeopardize a species. No more, and no less.

In so doing, the action agency must “use the best scientific and commercial data available.” 16 U.S.C. § 1536(a)(2). This empirical mandate ensures the law is not “implemented haphazardly, on the basis of speculation or surmise,” and thus “avoid[s] needless economic dislocation produced by agency officials zealously but unintelligently pursuing their environmental objectives.” *Spear*, 520 U.S. at 176–77.

So far, we have described the role of the action agency. How about the Service? The Service must consult with the action agency and provide expert “assistance.” 16 U.S.C. § 1536(a)(2). The Service must then write an opinion “detailing how the agency action affects the species.” *Id.* § 1536(b)(3)(A). Lastly, the Service must (“shall”) issue a license permitting incidental harm to a species if the Service concludes the action or the incidental take “will not” violate § 7 (and, in the case of endangered marine mammals, 16 U.S.C. § 1371(a)(5)). *Id.* § 1536(b)(4). The Service’s role is thus a limited one. The Service must lend expert assistance to the action agency, make a prediction about effects and, if the agency cannot reject the null hypothesis (no jeopardy) as unlikely, then grant a license. For our purposes, what matters is that the core of the Service’s remit in the decisionmaking process is to “form a scientific judgment.” *Massachusetts v. EPA*, 549 U.S. 497, 534 (2007). Nothing in § 7 requires “distorting the decisionmaking process by overemphasizing highly speculative harms” whenever the available data is wanting. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 356 (1989) (holding NEPA does not require a “worst case analysis”).

Statutory history reinforces this reading of the text. Before 1979, the ESA provided that agencies must “not jeopardize” a protected species. 16 U.S.C. § 1536 (1976). This absolute negative proved a blunt instrument. In the famous “snail darter” case, the Supreme Court halted work on a dam that had cost \$100 million (in 1978 dollars) to save “a relatively small number of three-inch fish among all the countless millions of species extant.” *TVA v. Hill*, 437 U.S. 153, 172 (1978). This waste was ordained, held the Court, by the “institutionalized caution” of the ESA, which admitted of “no exception.” *Id.* at 173, 194. Under this absolute veto, agencies had to “prevent the loss of any endangered species, regardless of the cost.” *Id.* at 188 n.34 (cleaned up). The result was “breathtaking”: A “newly discovered species of water spider or amoeba” could spell the end of any public or private action touched by the hand of the federal government. *Id.* at 203–04 & n.13 (Powell, J., dissenting). More to the point, under an absolute negative, scientific uncertainty could paralyze government, or force industry “to spend billions to save one more fish.” *Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208, 233 (2009) (Breyer, J., concurring in part and dissenting in part).

In 1979, the Congress lightened the load to avoid paralysis. Among other changes, the Congress replaced “do not jeopardize” with the tentative “is not likely to jeopardize,” and required “each agency” to rely only upon “the best scientific and commercial data available,” not the best data possible. Pub. L. No. 96–159, § 4, 93 Stat. 1225, 1226. This history shows the Congress did not want economic activity stopped in its tracks whenever complete data was lacking. After all, “[d]ecisions regarding endangered species are often characterized by insufficient data” and “considerable uncertainty.” Nat’l Research Council, *Science and the Endangered Species Act* 157 (1995). To say uncertainty is a reason to veto a federal

action is to say that many valuable activities must cease, even if the risk of jeopardy is not “likely,” but speculative.

B. The Service’s Biological Opinion Was Arbitrary and Capricious as Well as Contrary to Law

On appeal, the Service argues the “relevant text says nothing about how an agency must handle uncertainties in the data,” and this silence means the Service had discretion to do what it did here. What is not prohibited, the Service reasons, is permitted; the only limitation being the highly deferential arbitrary and capricious standard of review for agency predictions “at the frontiers of science.” *Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 103 (1983).

We have seen this line of argument before. Without mentioning the case, the agency is, in substance, asking us to adopt an “aggressive reading of *Chevron* [that] has more or less fallen into desuetude.” *Buffington v. McDonough*, 143 S. Ct. 14, 22 (2022) (Gorsuch, J., dissenting from the denial of certiorari). Under this version of *Chevron*, “silence” gives an agency wide latitude. *Loper Bright Enterprises, Inc. v. Raimondo*, 45 F.4th 359, 368 (D.C. Cir. 2022), *cert. granted*, No. 22-451, 2023 WL 3158352 (U.S. May 1, 2023). *But cf. Entergy Corp.*, 556 U.S. at 223 (“[S]ometimes statutory silence, when viewed in context, is best interpreted as limiting agency discretion.”).

The district court bought the gambit, even as it purported to avoid a “deference debate.” *Maine Lobstermen’s Ass’n*, 2022 WL 4392642, at *6. The court made only a cursory analysis of the text before declaring the question one of policy, not law. *Id.*; *cf. Pereira v. Sessions*, 138 S. Ct. 2105, 2120 (2018) (Kennedy, J., concurring) (“This analysis suggests an abdication of the Judiciary’s proper role in interpreting federal statutes.”). At the same time, the district court held nothing “com-

pels the agency's conservative policy towards resolving such scientific uncertainty," and noted the Service "may revisit that policy at any time." *Maine Lobstermen's Ass'n*, 2022 WL 4392642, at *6; *see also Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 983 (2005). In effect, the district court deferred to the Service's interpretation under *Chevron*, without saying so.

There are several problems with this *sub rosa Chevron* argument.

1. The Service's litigation position is inconsistent with the record

First, the argument does not line up with what the Service said during the agency proceeding. Nowhere in the record does the Service admit it was favoring right whales over lobstermen for reasons of "policy," not law. Quite the opposite. When answering public comments the Service blamed the Congress, insisting that "Congressional guidance on implementation of the ESA,"—that is, the legislative history—required it to deal in worst-case scenarios because "we need to give the benefit of the doubt to the species." In other words, "need" means must. Nor is this the first time the Service has said its hands are tied by legislative history. In other biological opinions, the Service has similarly claimed its presumption is a "direction from the U.S. Congress." *See, e.g., ESA Section 7 Consultation No. F/NER/2012/01956* 201 (2013), available at <https://repository.library.noaa.gov/view/noaa/27911>. The Service has even enshrined this reading of legislative history in its *Endangered Species Consultation Handbook* 1-7 (1998), <https://perma.cc/FN22-UXCV>, which it expressly followed here.

For 80 years it has been a clear precept of administrative law that an agency action "may not stand if the agency has mis-

conceived the law.” *SEC v. Chenery Corp.*, 318 U.S. 80, 94 (1943). Furthermore, “deference to an agency’s interpretation of a statute is not appropriate when the agency wrongly believes that interpretation is compelled by Congress.” *Peter Pan Bus Lines, Inc. v. Fed. Motor Carrier Safety Admin.*, 471 F.3d 1350, 1354 (D.C. Cir. 2006) (internal quotation marks omitted). Here, the Service misconceived the law, wrongly claiming the legislative history of the ESA had ordained—if legislative history could ever ordain—a precautionary principle in favor of the species. The Service therefore gets no deference, and its action cannot stand.

Indeed, the Service’s legal reasoning was not just wrong; it was egregiously wrong. The Service’s argument rested entirely upon a half-sentence in the legislative history. This “approach is a relic from a bygone era of statutory construction.” *Food Mktg. Inst.*, 139 S. Ct. at 2364 (internal quotation marks omitted); see, e.g., *Citizens to Pres. Overton Park, Inc. v. Volpe*, 401 U.S. 402, 412 n.29 (1971) (stating that because the legislative history “is ambiguous,” courts “must look primarily to the statutes themselves to find the legislative intent”). Under the Service’s approach, legislative history may supply duties that, as the Service now concedes, are not found in the enacted law. As the Supreme Court recently said, “We cannot approve such a casual disregard of the rules of statutory interpretation.” *Food Mktg. Inst.*, 139 S. Ct. at 2364. For “legislative history is not the law.” *Epic Sys. Corp. v. Lewis*, 138 S. Ct. 1612, 1631 (2018). The reason is obvious; as any high school Civics student should know, legislators vote on and the president signs bills, not their legislative history. U.S. Const. Art. I, § 7, cl. 2. Legislative history therefore cannot bind the executive branch and compel a presumption in favor of the species not required by statute.

The Service says courts have “acknowledged the appropriateness of giving ‘the benefit of the doubt to the species,’” but it cites no persuasive case. In one of the cited cases, the Eleventh Circuit announced itself “reluctant to read into the words that Congress has enacted as law words that it did not enact as law”; but the court ultimately found the purported presumption irrelevant because the question was not a close one, so there was “no tie” to resolve in favor of the species. *Miccosukee Tribe of Indians of Fla. v. United States*, 566 F.3d 1257, 1266–67 (2009). As the Eleventh Circuit further explained, no appellate court has made anything of this argument, and the Ninth Circuit cited this legislative history only in a dictum. *Id.* at 1267 (discussing *Conner v. Burford*, 848 F.2d 1441, 1454 (9th Cir. 1988)). So had the First Circuit. *Roosevelt Campobello Int’l Park Comm’n v. EPA*, 684 F.2d 1041, 1049 (1982).

2. The Service’s change in position is arbitrary and capricious

Second, no deference to the Service’s view of the Congress’s allegedly eloquent “silence” is appropriate because the agency has oscillated between one view and its opposite. See *Encino Motorcars, LLC v. Navarro*, 579 U.S. 211, 221 (2016). Only a few years ago, the Service, revisiting its interpretive rules, agreed with commenters that “nothing” in the ESA required it to use “a ‘worst-case scenario’ or make unduly conservative modeling assumptions,” and rejected comments arguing it should give the benefit of the doubt to a species by evaluating “effects or activities that were possible even if not likely.” 84 Fed. Reg. 44,976, 44,993/2, 45,000/3 (2019). Under the Service’s interpretive rules, the “effects of the action” are those effects that are “reasonably certain to occur,” a finding the Service must make “based on clear and substantial information.” 50 C.F.R. §§ 402.02, 402.17(b).

The Service argues that it complied with its interpretive rule because it picked the “conservative” outcome or the “worst-case scenario” only when there were “two or more reasonably likely outcomes,” but that is just not so. By the Service’s admission, it relied upon worst-case modeling that is “very likely” wrong, based upon assumptions the Service concededly does not believe are accurate. Projections that are “very likely” wrong are not reasonably certain to occur. The Service’s new approach was therefore a change in position. “Agencies are,” of course, “free to change their existing policies as long as they provide a reasoned explanation for the change.” *Encino Motorcars*, 579 U.S. at 221. In this case, though, the Service displayed no awareness of its own flip flop. This was “arbitrary and capricious,” and so the agency’s interpretation was “unlawful” and “receives no *Chevron* deference.” *Id.* at 222.

3. The Service’s biological opinion is contrary to law

Now set all that aside. Suppose the agency had properly preserved its argument for deference and shown awareness of its changed position. We would still have to reject the argument. Statutory text and structure do not authorize the Service to “generally select the value that would lead to conclusions of higher, rather than lower, risk to endangered or threatened species” whenever it faces a plausible range of values or competing analytical approaches. The statute is focused upon “likely” outcomes, not worst-case scenarios. It requires the Service to use the best available scientific data, not the most pessimistic. The word “available” rings hollow if the Service may hold up an action agency by merely presuming that unavailable data, if only they could be produced, would weigh against the agency action.

Besides, when the Congress wants an agency to apply a precautionary principle, it says so. Consider the Clean Air Act, for example, requiring “an adequate margin of safety” when the EPA sets air quality standards. 42 U.S.C. § 7409(b)(1); *Lead Indus. Ass’n, Inc. v. EPA*, 647 F.2d 1130, 1153 (D.C. Cir. 1980) (recognizing the “precautionary nature” of the law requires the EPA to “err on the side of caution”). The precautionary principle, taken seriously, can multiply an agency’s power over the economy. It allows an agency to regulate or veto activities “even if it cannot be shown that those activities are likely to produce significant harms.” *Competitive Enter. Inst. v. Dep’t of Transp.*, 863 F.3d 911, 918 (D.C. Cir. 2017) (quoting Cass R. Sunstein, *Beyond the Precautionary Principle*, 151 U. Pa. L. Rev. 1003, 1003 (2003)). That is particularly significant because uncertainty is “not unusual in day-to-day agency decisionmaking within the Executive Branch.” *FCC v. Prometheus Radio Project*, 141 S. Ct. 1150, 1160 (2021). Indeed, it is endemic in the field of health and safety regulation. See Richard B. Stewart, *Environmental Regulatory Decision Making Under Uncertainty*, 20 Rsch. in L. & Econ. 71, 74 (2002) (“Very many environmental problems are . . . characterized by uncertainty regarding risks of harm.”).

The presumption in favor of the species is, like an adequate margin of safety, a blunt tool. The presumption significantly expands the Service’s veto power, prevents the agency from “paying attention to the advantages *and* the disadvantages” of the action, and invites the unnecessary economic dislocation wrought by worst-case thinking. *Michigan v. EPA*, 576 U.S. 743, 753 (2015). A presumption also ignores that worst-case scenarios lie on all sides. It is not hard to indulge in one here: ropeless fishing technologies, weak links, inserts, and trawls may not work; permanent fishery closures may be the only solution. The result may be great physical and human capital destroyed, and thousands of jobs lost, with all the degradation

that attends such dislocations. *See, e.g.*, Stephen Breyer, *Breaking the Vicious Circle: Toward Effective Risk Regulation* 23 (1993) (“[D]eprivation of real income itself has adverse health effects, in the form of poorer diet, more heart attacks, more suicides.”). Nor are humans the only casualties of worst-case thinking: A presumption in favor of one protected species may jeopardize another. *See, e.g.*, *Miccosukee Tribe of Indians of Fla.*, 566 F.3d at 1262 (considering the presumption in the setting of an agency action that “pits a sparrow against a hawk”). We may reasonably expect the Congress at least to speak, not to be silent, when it delegates this power to destroy.

All the more so when the Congress tasks an agency to serve as a scientific consultant and permitting authority, not with making policy, a task reserved to the action agency. It is not the province of a scientific consultant to pick whales over people. The Service must strive to resolve or characterize the uncertainty through accepted scientific techniques, not jump to a substantive presumption that distorts the analysis of effects and creates false positives. When the Service applies a substantive presumption to distort the analysis, the public can have no confidence that “economic dislocation” is needed to protect a species and is not the result of “speculation or surmise” by overly zealous agency officials. *Spear*, 520 U.S. at 176–77.

We recognize the Service has a difficult task. Under brute uncertainty, the Service may have no way to attach even rough probabilities to the range of possible outcomes. *See* Frank H. Knight, *Risk, Uncertainty, and Profit* 20–21 (1921) (distinguishing “risk” from “true uncertainty,” which is not susceptible to measurement). We do not deny this, nor do we require scientific reasons or calculated probabilities when no reasons or calculations are possible. In most realistic cases, however, the Service will be able to make a scientifically defensible decision without resort to a presumption in favor of the species.

When it does so, the Service's predictions will be entitled to deference. If brute uncertainty does make it impossible for the Service to make a reasoned prediction, however, the interpretive rules supply a ready answer: The Service lacks a clear and substantial basis for predicting an effect is reasonably certain to occur, and so, the effect must be disregarded in evaluating the agency action.

C. The Error Is Not Harmless

In a last effort, the Service asks us to pay no attention to its presumption in favor of the species. According to the Service, if we ignore the words the Service used, we would see that the agency reasonably evaluated the effects and used the best available data. The agency's outcome, in other words, could stand up to scrutiny without a presumption in favor of the species.

We cannot ignore the words the Service used. It is—again—a “foundational principle of administrative law that a court may uphold agency action only on the grounds that the agency invoked when it took the action.” *Michigan*, 576 U.S. at 758 (citing *Chenery Corp.*, 318 U.S. at 87). Here, the Service announced at the outset that when it made assumptions about the known unknowns, it would “generally select the value that would lead to conclusions of higher, rather than lower, risk to endangered or threatened species.” All of the assumptions the Service made are thus tainted by the presumption in favor of the species. Some of the assumptions the Service made along the way are quite important—as we have explained, the Service ultimately concluded the lobster and Jonah crab federal fisheries kill 46 whale deaths per decade, a staggering departure from the two documented deaths known to have originated in all U.S. fisheries over a period of nine years.

This conclusion rests upon uncertain assumptions. Take the Service's decision to allocate half the deaths of unknown origin and half of the undocumented deaths to U.S. fisheries. This allocation is of great importance to the analysis, but it has little empirical support. As shown in the chart above, most documented deaths from entanglement of known origin, particularly in recent years, have happened in Canada. Right whales have also migrated away from the Gulf of Maine. Moreover, before 2017, Canada did little to survey the Gulf of St. Lawrence, where many whales had relocated, so the dataset used by the Service may well understate the role of Canada in the decline of the right whale population. *See* Crowe et al., at 247 (“[S]ubstantial[] undetected mortality of these right whales probably occurred in the [Gulf of St. Lawrence] in 2015 and 2016.”). Or perhaps the detection bias runs in the opposite direction, as the Service implies. What matters for our purposes is that the Service is making a highly discretionary judgment under uncertainty. That judgment may (or may not) be rational enough to pass muster under arbitrary and capricious review, but that is beside the point. We have no way of knowing how the Service would have made this discretionary judgment had it not applied a general presumption in favor of the species, so we cannot conclude the error was harmless. “To do so would propel the court into the domain which Congress has set aside exclusively for the administrative agency.” *SEC v. Chenery Corp.*, 332 U.S. 194, 196 (1947).

IV. The Remedy

As for the remedy, we follow our “ordinary practice” and direct the district court to vacate the biological opinion as it applies to the lobster and Jonah crab fisheries. *United Steel v. Mine Safety & Health Admin.*, 925 F.3d 1279, 1287 (D.C. Cir. 2019). The error in the biological opinion is a serious one and vacating the opinion will have no adverse consequences. No

one disputes the Consolidated Appropriations Act will protect the Service and the lobstermen from liability for several years while the Service works on a new biological opinion.

Because the biological opinion covers multiple federal fisheries, our relief is limited to the lobster and Jonah crab fisheries. *Nat. Res. Def. Council v. Wheeler*, 955 F.3d 68, 81–82 (D.C. Cir. 2020). We include the Jonah crab fishery because it is intertwined with the lobster fishery: most Jonah crab is incidentally caught in lobster traps.

The phase one rule presents a different situation. Vacating the rule would create significant uncertainty over whether the Consolidated Appropriations Act continues temporarily to protect the Service and the lobstermen from liability and thus prevents the closure of the fishery. 16 U.S.C. § 1538(g) (unlawful for a person to “cause to be committed” a “take”); *id.* § 1532(13) (person includes agency employees); *id.* § 1540 (penalties). And we are not convinced the error claimed by the lobstermen is fatal to the rule. Although the Service has not defended the rule during this appeal on independent grounds, choosing instead to defend the biological opinion, on remand the Service may well be able to explain why the phase one rule does not depend upon the validity of the biological opinion. *Cf. Biden v. Texas*, 142 S. Ct. 2528, 2544–48 (2022) (holding an agency may reconsider a decision on remand, provide new reasons, and reach the same outcome). In any event, the agency’s failure to defend the rule here does not limit its ability to “return[] to the drawing table” and add explanations to the record when it reconsiders the problem on remand. *Id.* at 2546. We therefore remand the phase one rule without vacating it, thus allowing the rule “to remain in effect.” *North Carolina v.*

EPA, 550 F.3d 1176, 1178 (D.C. Cir. 2008).⁴ Because the phase one rule remains in effect, the rule continues to be “deemed sufficient” under the Consolidated Appropriations Act for the lobster and Jonah crab fishery to be “in full compliance with the [MMPA] and the [ESA].”

V. Conclusion

We reverse the district court’s grant of summary judgment to the Service and direct the court to enter summary judgment for the lobstermen on count one of their complaint. Because the Service has raised no independent defense to count four of the complaint, we direct the district court to enter summary judgment for the lobstermen on count four. We further direct the district court to vacate the biological opinion as applied to the lobster and Jonah crab fisheries and to remand the phase one rule to the Service. Because our judgment gives the lobstermen all the relief they seek, we do not reach counts two or three of their complaint.

So ordered.

⁴ Our precedent allowing for remand without vacatur has supporters as well as critics. *Compare* Administrative Conference of the U.S., Recommendation 2013-6 (2013) (recommending that “[r]emand without vacatur should continue to be recognized as within the court’s equitable remedial authority on review of cases that arise under the Administrative Procedure Act”), *with* *Nat. Res. Def. Council v. EPA*, 489 F.3d 1250, 1262 (D.C. Cir. 2007) (Randolph, J., concurring) (“In cases governed by the Administrative Procedure Act, I have long believed that the law requires us to vacate the unlawful agency rule.”); John C. Harrison, *Remand Without Vacatur and the Ab Initio Invalidity of Unlawful Regulations in Administrative Law*, B.Y.U. L. Rev. (forthcoming 2023) (arguing an unlawful rule governing private conduct is void ab initio).