

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

NATURAL RESOURCES DEFENSE
COUNCIL, INC., *et al.*,

Plaintiffs,

v.

JANET COIT, in her official capacity as
Assistant Administrator for Fisheries, *et al.*,

Defendants.

Case No. 20-cv-1150 (CRC)

MEMORANDUM OPINION

River herring inhabit most of North America’s Atlantic coast. These shimmering fish were once so abundant that, when they spawned, the water was said to “run silver.” Not anymore. Their populations, while stable, are now at historic lows. Seeking to stem further declines, the Natural Resources Defense Council (“NRDC”) and several other conservation groups petitioned to have two species of river herring—the alewife and blueback herring—listed as threatened under the Endangered Species Act (“ESA”). This case is the latest chapter in that ten-plus year effort.

In 2013, the National Marine Fisheries Service (“the Service”) determined that listing the two species “as threatened or endangered under the ESA is not warranted at this time.” Endangered Species Act Listing Determination for Alewife and Blueback Herring, 78 Fed. Reg. 48,944 (Aug. 12, 2013) (“2013 Listing Decision”). The petitioners challenged that determination in a case before the Honorable Randolph Moss of this Court. Although Judge Moss found “much of what the Service did” to be “unobjectionable,” he nonetheless concluded that the 2013 Listing Decision fell short in certain respects. See Nat. Res. Def. Council v. Rauch, 244 F. Supp.

3d 66, 87 (D.D.C. 2017). The court vacated that listing decision and remanded the matter to the agency. Id.

After another full round of review and analysis, the Service reached the same finding in 2019 as it did before—a threatened or endangered listing was not warranted. See Endangered Species Act Listing Determination for Alewife and Blueback Herring, 84 Fed. Reg. 28,630 (June 19, 2019) (“2019 Listing Decision”); Administrative Record (“AR”) 7–45. Plaintiffs are now back, raising fresh challenges to various aspects of the Service’s 2019 Listing Decision.

As will be explained, the Court finds the Service’s work to be thorough and, once again, largely unobjectionable. The Court will thus grant the Service’s motion for summary judgment, except in two limited respects. For the blueback herring population in Southern New England, the Service failed to adequately explain (a) its finding that this group was not a distinct population segment, and (b) why it did not assess that population under the agency’s “significant portion of its range” policy. The remedy will be correspondingly limited; the listing decision will be left in place while this matter is remanded for further explanation on these two points.

I. Background

Before diving in on the fishes’ background, the Court will summarize the relevant statutory and regulatory framework.

A. The Endangered Species Act and Citizen Petitions

Congress enacted the ESA to conserve endangered and threatened species and the ecosystems on which they depend. 16 U.S.C. § 1531(b). The Act defines an “endangered” species as one that “is in danger of extinction throughout all or a significant portion of its range,” id. § 1532(6), and a “threatened” species as one that “is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Id. § 1532(20).

The term “species” “includes any subspecies” and “any distinct population segment.” Id. § 1532(16). A species can be endangered or threatened based on any one of five factors: (1) “the present or threatened destruction, modification, or curtailment of its habitat or range;” (2) “overutilization for commercial, recreational, scientific, or educational purposes;” (3) “disease or predation;” (4) “the inadequacy of existing regulatory mechanisms;” or (5) “other natural or manmade factors affecting its continued existence.” Id. § 1533(a)(1). The determination of whether a species is endangered or threatened must be made “solely on the basis of the best scientific and commercial data available.” Id. § 1533(b)(1)(A).

The ESA directs the Secretary of Commerce to make this determination. Id. § 1533(a). Interested parties may petition the Secretary “to add a species to, or to remove a species from,” the list of endangered and threatened species. Id. § 1533(b)(3)(A). Once the Secretary receives a petition, “[t]o the maximum extent practicable, within 90 days . . . the Secretary shall make a finding as to whether the petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted.” Id. This determination is called a “90-day finding.” When, as here, the Secretary finds there is substantial information supporting the petition, the petition advances to further review and, within twelve months and following public comment, the Secretary must determine whether the requested action is warranted or not. Id. § 1533(b)(3)(B). This determination is called a “12-month finding.” Listed species receive heightened protections under the Act. See generally id. §§ 1533–1538. For fish like river herring, the Secretary has delegated her ESA responsibilities to the National Marine Fisheries Service. 50 C.F.R. § 402.01(b).

At the end of this process, the Service publishes its findings in a listing decision. A determination that listing a species is not warranted—a “negative finding”—terminates the petition process and triggers judicial review. 16 U.S.C. § 1533(b)(3)(C)(ii).

B. Alewife and Blueback Herring

River herring live up and down North America’s east coast. The alewife can be found from Newfoundland and Labrador to North Carolina; blueback herring from Nova Scotia to Florida. AR 2056. Both fish are “‘anadromous,’ meaning [they] are born in inland rivers, then spend most of their adult lives at sea,” but return inland to spawn. See Rauch, 244 F. Supp. 3d at 68; AR 2057. They are about a foot long and provide a source of food for a range of other fish, aquatic mammals, and birds. AR 355, 1449, 5501, 15240.

To spawn, river herring often return to the rivers in which they were born (their “natal rivers”). But they also exhibit “straying” behavior, meaning that they migrate to a different river to reproduce. Evidence in the record suggests this “straying” can occur 100–200 kilometers (62–124 miles) from natal rivers. AR 12; AR 2068. The fish are also very fecund, producing an estimated 30,000 to 400,000 eggs throughout their spawning season. AR 10. Both species spawn three to four times each year, AR 10, and their spawning migrations are cued by ocean temperatures. AR 2057. River herring grow and mature quickly, with new generations appearing every four to six years. AR 18.

Although they were once extremely abundant, the river herring population saw stark declines over the last half of the 20th century and is now “near historic lows.” AR 13. Among the culprits are overfishing, dams, predation, pollution, changing ocean conditions, and climate change. AR 5542. But over the past decade, while still near historic lows, river herring levels have stabilized. AR 13; AR 5542–43.

C. 2013 Listing Decision

In 2011, NRDC petitioned the Secretary of Commerce to list the blueback herring as threatened. The Service made a positive 90-day finding, concluding that the petition was supported by substantial scientific evidence, and initiated a status review that also included the alewife. See Rauch, 244 F. Supp. 3d at 70–71. As part of that process, the Service collaborated with the Atlantic States Marine Fisheries Commission (“ASMFC”), which had recently prepared a “River Herring Benchmark Stock Assessment” that collected data on population levels. See id. at 71. In 2013, the Service determined that listing river herring “as threatened or endangered under the ESA is not warranted at this time.” See 2013 Listing Decision, 78 Fed. Reg. 48,944 (Aug. 12, 2013).

NRDC and others successfully challenged the agency’s decision with respect to the blueback herring in a case before Judge Randolph Moss of this Court. See Rauch, 244 F. Supp. 3d 66. While noting that “much of what the Service did is unobjectionable,” Judge Moss concluded that the 2013 Listing Decision suffered from faulty analysis in certain key respects. See id. at 87. He further concluded the Service failed to consider one prong of its “Distinct Population Segment Policy.” See id. at 100; see also 16 U.S.C. § 1532(16) (defining “species” to include any “distinct population segment” of the species). Finding the agency’s action arbitrary and capricious, the court vacated the 2013 Listing Decision and remanded the matter to the agency for further consideration. See Rauch, 244 F. Supp. 3d at 100.

D. 2019 Listing Decision

On remand, the Service re-initiated a status review of both species. AR 7–8. The Service assembled a status review team of experts from the Fisheries Service itself, the Fish and Wildlife Service, and various environmental agencies from east coast states. AR 8. This team had three

tasks: (1) assess the risk of extinction facing river herring currently and in the foreseeable future; (2) identify any distinct population segments within the species and assess the risk of extinction facing each segment currently and in the foreseeable future; and (3) assess, rangewide and within any distinct population segment, whether any significant portion of the range may exist, and if so, whether that portion is presently at risk of extinction or will be in the foreseeable future. AR 8.

The status review team prepared a report that reflected its analysis of the information collected and its opinion on the questions it was tasked to answer. See AR 2033–2235 (the report). That status review report underwent independent peer review, and the Service itself separately reviewed the report, the peer reviewers’ comments, and the underlying information collected by the status review team. AR 8. The 2019 Listing Decision cites this report throughout.

The 2019 Listing Decision ultimately reached the same conclusion as before: listing river herring “rangewide or as any of the identified [distinct population segments] as threatened or endangered under the ESA is not warranted at this time.” AR 7; 2019 Listing Decision, 84 Fed. Reg. at 28,630. Three aspects of the decision are particularly relevant here.

1. Foreseeable future timeframe

The first is the “foreseeable future” timeframe. Again, the ESA defines a “threatened species” as one that “is likely to become an endangered species *within the foreseeable future.*” 16 U.S.C. § 1532(20) (emphasis added). The Act does not define “foreseeable future,” so the Service has taken a “case-by-case” approach for each species it reviews. See AR 18. The Service interprets that term to extend as far as two things can be reasonably determined: (1) the threats facing the species, and (2) the particular species’ response to those threats. See, e.g., AR

18 (2019 Listing Decision); Ribbon Seal Listing Decision, 78 Fed. Reg. 41, 371, 41,373 (July 10, 2013). Here, the Service agreed with the status review team’s use of a 12- to 18-year timeframe—corresponding to three generations, or the period of 2030–2036. AR 18. The listing decision explained that “[s]pecies with shorter generation time frames, such as river herring (4 to 6 years), experience greater population variability than species with long generation times, because they maintain the capacity to replenish themselves more quickly following a period of low survival.” AR 18. Thus, the decision reasoned, “projecting out further than a few generations could lead to considerable uncertainty in predicting the response to threats for each species.” AR 18.

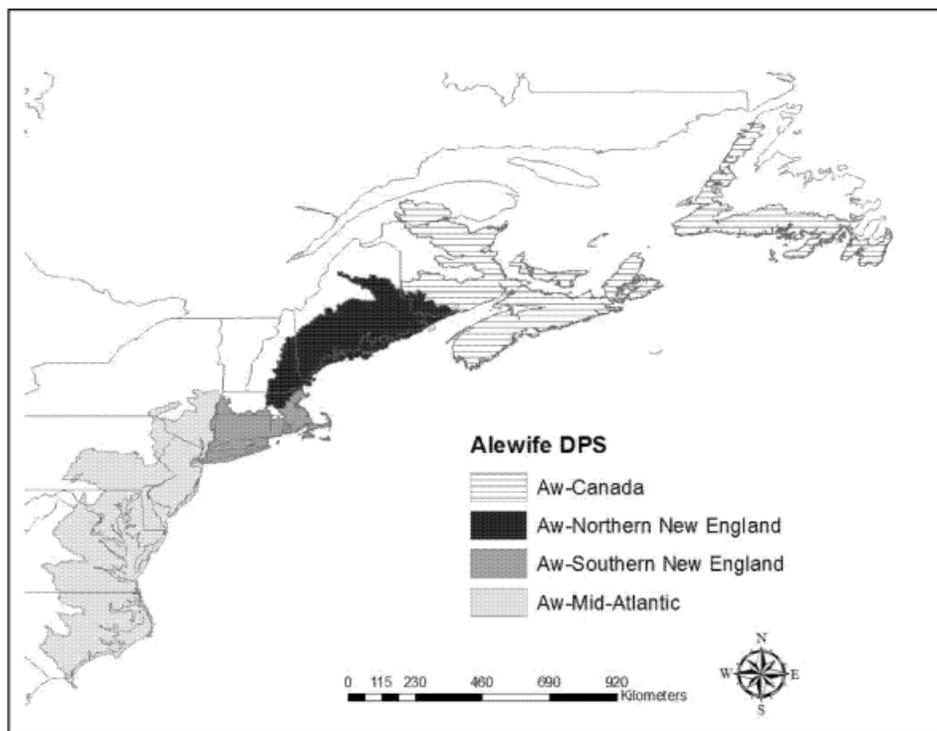
The listing decision noted that the status review team deemed “dams, water withdrawal, poor water quality, incidental catch, inadequacy of regulations, and climate change vulnerability” as the main threats facing river herring. AR 18. The Service used the 12- to 18-year foreseeable future timeframe to assess all these threats.

2. Analysis of distinct population segments

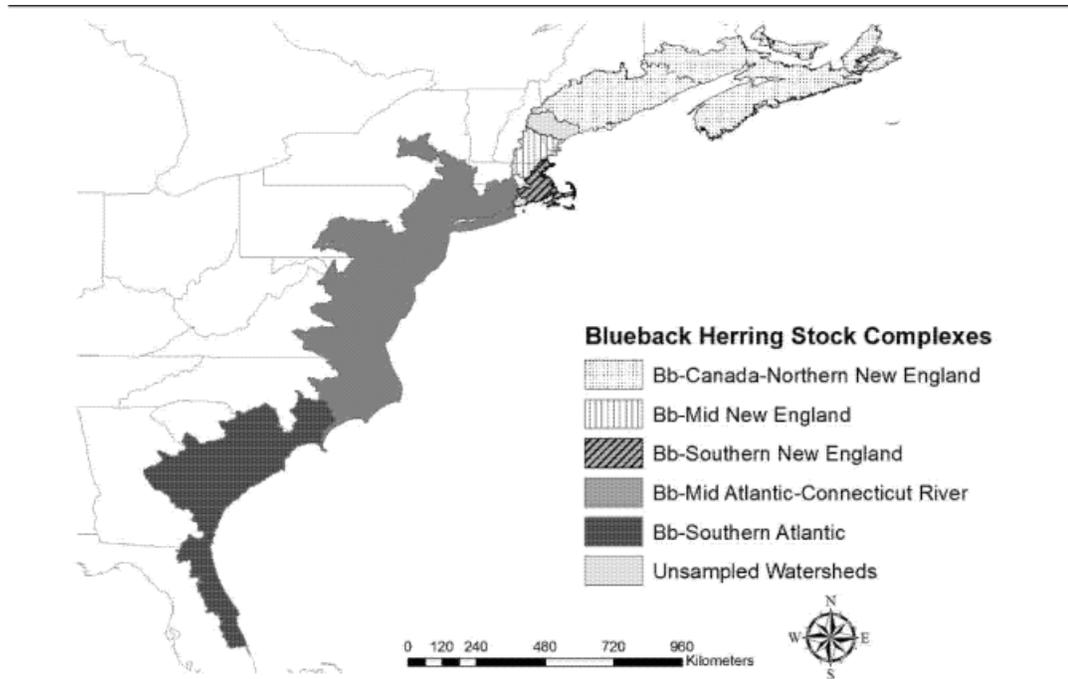
Second, the Service analyzed whether there were any distinct population segments of river herring. The agency’s distinct population segment policy (“DPS Policy”) guided this analysis. Under that policy, a population segment is considered distinct if it is both “discrete” and “significant.” AR 13; DPS Policy, 61 Fed. Reg. 4,722 (Feb. 7, 1996). A population segment may be “discrete” if it “is markedly separated from other populations of the same” species due to “physical, physiological, ecological, or behavioral factors.” DPS Policy, 61 Fed. Reg. at 4,725. If a population segment is discrete, then the Service considers its significance. That assessment may include but is not limited to: (1) “[p]ersistence of the discrete population segment in an ecological setting unusual or unique for the” species; (2) “[e]vidence that loss of the discrete

population segment would result in a significant gap in the range” of the species; (3) “[e]vidence that the discrete population segment represents the only surviving natural occurrence of a” species “that may be more abundant elsewhere as an introduced population outside its historic range”; and (4) evidence of “markedly” different “genetic characteristics” compared to “other populations of the species.” Id.

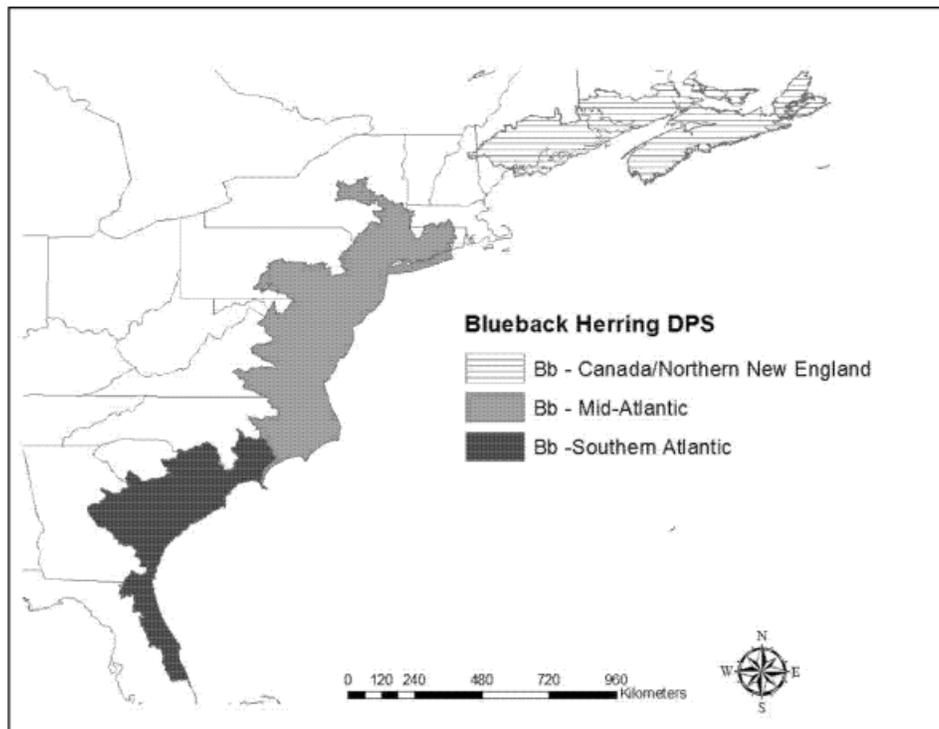
After summarizing the status review team’s assessment, the Service determined that the alewife had four distinct population segments: Aw-Canada, Aw-Northern New England, Aw-Southern New England, and AW-Mid-Atlantic. AR 16. For blueback herring, there were three: Bb-Canada-Northern New England, Bb-Mid-Atlantic, and Bb-Southern Atlantic. AR 16. The geographical spread of these population segments is shown in the following maps, the second of which also reflects other blueback herring “stock complexes” (essentially regional groups) that the Service assessed but found did not constitute distinct population segments:



See AR 17, Fig. 3 (Alewife map).



See AR 12, Fig. 2 (Blueback Herring regional groups map).



See AR 18, Fig. 4 (Blueback Herring distinct population segments map).

While the Service also found that blueback herrings in Southern and Mid-New England were “discrete” under its DPS Policy, it did not find those regional groupings “significant.” AR 14–16. Before describing the Service’s reasoning, the Court pauses to summarize the status review team’s analysis of this issue, which is also relevant to the parties’ dispute. The status review team reached the same conclusion as the Service, but took a somewhat different analytical approach. The status review team found that neither of the two groups were significant due to (1) the “small size” of each group, and (2) the team’s conclusion that, in the event of a hypothetical loss, the groups would “likely” be recolonized (i.e., repopulated) by regional groups to the north and south over a 40- to 60-year timeframe. AR 16. In the status review team’s assessment of Mid-New England, for example, it reasoned that this area could be repopulated by neighboring groups of blueback herring within that timeframe because Mid-New England “spans a relatively short coastline distance” and straying could occur “over such distances as 100–200 km.” AR 2150–51; AR 2151–52 (similar for Southern New England).

The Service likewise focused its analysis on the small geographical gap in blueback herrings’ range that would be caused by a hypothetical loss of the Southern and Mid-New England groups, but it did not adopt the status review team’s 40- to 60-year “recolonization formula.” AR 16. The Service concluded that, following the hypothetical loss of these groups, river herring may “regain or even maintain connectivity between neighboring” regional groups to the north and south, thus mitigating problems that would be present with larger gaps (e.g., less habitat diversity or reduced ability to overcome larger threats). AR 16. That assessment, in turn, rested largely on the fishes’ occasional behavior of migrating to non-natal rivers to reproduce (“straying”) and their ability to produce many offspring (“fecundity”). AR 16.

3. *Significant portion of its range analysis*

The last aspect of the 2019 Listing Decision to highlight is the Service’s “significant portion of its range” analysis. Again, the ESA defines “endangered” and “threatened” as meaning a species that “is in danger of extinction” (endangered) or “is likely to become an endangered species within the foreseeable future” (threatened) “throughout all or *a significant portion of its range.*” 16 U.S.C. § 1532(6), (20) (emphasis added). The Service has promulgated a policy for how to conduct a “significant portion of its range” analysis, which proceeds in a step-by-step manner. See SPR Policy, 79 Fed. Reg. 37,578 (July 1, 2014). There is a threshold determination of whether there is significant information indicating that further review is warranted for the portion of a species’ range in question. Id. at 37,586; AR 39. An affirmative answer triggers a fuller review, which involves a two-part test. AR 39. The first part asks whether the portion of the range is biologically significant to the species, and the second asks whether the species is endangered or threatened in that portion. AR 39. Under the SPR Policy, these questions can be addressed in either order, but both must be satisfied to list the species as endangered or threatened. SPR Policy, 79 Fed. Reg. at 37,587; AR 39.

For blueback herring specifically, the Service found that further review was warranted rangewide, for each of the fish’s distinct population segments, as well as the Mid-New England regional grouping and the Long Island Sound portion of the range. AR 39–42; AR 45. In its initial 2011 petition, NRDC identified the Long Island Sound portion as a potential distinct population segment, see AR 40; 2013 Listing Decision, 78 Fed. Reg. at 48,944; it overlaps the Southern New England and Mid-Atlantic groupings. AR 45. The Service agreed with the status review team’s findings that no evidence suggested the Mid-Atlantic and Long Island Sound portions of the range were at a heightened risk of extinction, now or in the foreseeable future.

AR 40. Accordingly, the Service did not assess these portions' biological significance to the overall blueback herring population.

As for the Mid-New England blueback herring grouping, the Service noted that it was at a high risk of extinction but found that the population did not represent a significant portion of blueback herrings' range. AR 41–42. The Service reached the latter finding because Mid-New England blueback herrings' contribution to the overall population size is minimal, and they inhabit a tiny geographic portion of the species' range. AR 41–42. While this portion was deemed to “contribute[] genetic diversity,” the Service found the importance of this contribution to be “unclear because there is no evidence” that its genetic differences “are linked to adaptive traits.” AR 42. Thus, the agency concluded that the Mid-New England grouping did not constitute a significant portion of blueback herrings' range. AR 42. Ultimately, the Service did not find that any portion of the range was both significant to the species as a whole, and endangered or threatened. AR 42–43.

* * *

Plaintiffs once again challenge the listing decision as arbitrary and capricious under the Administrative Procedure Act (“APA”). See 5 U.S.C. § 706(2)(A). They seek vacatur of the decision, with an order remanding the matter to the agency to complete yet another listing decision within one year. See Compl. at 32–33. Both sides have filed dueling motions for summary judgment, and the Court held a hearing on those motions on February 22, 2022. The case is now ripe for this Court's decision.

II. Legal Standard

“Summary judgment is the proper stage for determining whether, as a matter of law, an agency action complies with the APA and is supported by the administrative record.” St.

Lawrence Seaway Pilots Ass’n v. U.S. Coast Guard, 357 F. Supp. 3d 30, 35 (D.D.C. 2019) (Cooper, J.) (citing Richards v. INS, 554 F.2d 1173, 1177 (D.C. Cir. 1977)). The APA provides that a “reviewing court shall . . . hold unlawful and set aside agency action, findings, and conclusions found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.” 5 U.S.C. § 706(2)(A).

This standard of review is “narrow,” and the “court is not to substitute its judgment for that of the agency.” FCC v. Fox Television Stations, Inc., 556 U.S. 502, 513 (2009) (quoting Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983)). Rather, the Court must determine whether the agency “examine[d] the relevant data and articulate[d] a satisfactory explanation for its action including a rational connection between the facts found and the choice made.” State Farm, 463 U.S. at 43. Even if the agency did not fully explain its decision, the Court may uphold it “if the agency’s path may reasonably be discerned.” Bowman Transp., Inc. v. Ark.-Best Freight Sys., Inc., 419 U.S. 281, 285–86 (1974). The Court’s review is limited to the administrative record, Holy Land Found. For Relief & Dev. v. Ashcroft, 333 F.3d 156, 160 (D.C. Cir. 2003), and the party challenging an agency’s action bears the burden of proof, City of Olmsted Falls v. FAA, 292 F.3d 261, 271 (D.C. Cir. 2002).

III. Analysis

Plaintiffs cast three main lines of argument for why the 2019 Listing Decision is arbitrary and capricious. *First*, they argue that the 12- to 18-year foreseeable future timeframe is too short because the Service failed to adequately account for harms related to climate change, which plaintiffs contend will affect river herring beyond 2030–2036. *Second*, plaintiffs maintain that the Service’s so-called “recolonization theory,” which they say underpinned its assessment of distinct population segments, lacks any basis in the record. This problem, plaintiffs say, is

particularly relevant for the Southern and Mid-New England groupings of blueback herring, which the Service did not find to be distinct population segments. And *third*, plaintiffs attack the Service’s “significant portion of its range” analysis, again mainly focusing on the Southern and Mid-New England blueback herring groupings. Plaintiffs argue that the asserted flaws in the Service’s recolonization theory also contaminated this analysis.

For the most part, the Court disagrees and concludes that the 2019 Listing Decision is not arbitrary and capricious. The Court is mindful of both sides of its role in reviewing this administrative action. On one hand, the APA “establishes a scheme of ‘reasoned decisionmaking,’” so the Court must ensure the agency’s process for reaching its result was “logical and rational.” Allentown Mack Sales & Serv., Inc. v. NLRB, 522 U.S. 359, 374 (1998) (quoting State Farm, 463 U.S. at 52). On the other hand, the Court must take care not to “substitute its judgment for that of the agency,” especially in cases like this one “involving scientific analysis and ‘technical expertise.’” See Rauch, 244 F. Supp. 3d at 86 (quoting Marsh v. Or. Nat. Res. Council, 490 U.S. 360, 377 (1989)). “[D]eference is appropriate to [an] agency’s evaluation of scientific data within its technical expertise.” Defs. of Wildlife & Ctr. for Biological Diversity v. Jewell, 815 F.3d 1, 14 (D.C. Cir. 2016). In this case, confronted with several scientific judgment calls, the Service offered a rational explanation for its decision, and, even if not a perfect model of clarity, its reasoning is reasonably discernable.

There are, however, two relatively narrow exceptions. First, the Service did not “articulate a satisfactory explanation” for its finding that the Southern New England blueback herring population was not “significant” under the DPS Policy. See State Farm, 463 U.S. at 43. As will be explained, the Court does not take issue with the points underpinning the Service’s distinct population segment analysis, but it is not clear how the factors considered connect to the

agency's conclusion as to that regional group of blueback herring. Second, the Court finds error in the listing decision's inadequate (or perhaps nonexistent) explanation as to why this Southern New England population was apparently not analyzed under the SPR Policy. Given the context of the listing decision and the Service's approach to other genetically distinct populations, the agency's treatment of the Southern New England group under the SPR Policy warranted an explanation, or at least a clearer one. Accordingly, the Court will order a limited remand for further explanation on these points.

The Court elaborates below.

A. Foreseeable Future Timeframe

“The foreseeability of a species' future status is case specific and depends upon both the foreseeability of the threats to the species and foreseeability of the species' response to those threats.” See Ribbon Seal Listing Decision, 78 Fed. Reg. at 41,373; AR 18 (2019 Listing Decision); W. Watersheds Project v. Ashe, 948 F. Supp. 2d 1166, 1180 (D. Idaho 2013). The foreseeable future timeframe thus depends on the species and should be “based upon the best data available for a particular species and its habitat.” Alaska Oil & Gas Ass'n v. Pritzker, 840 F.3d 671, 681 (9th Cir. 2016) (collecting cases). “When a species is exposed to a variety of threats,” the Service has recognized that “each threat may be foreseeable over a different time frame.” Ribbon Seal Listing Decision, 78 Fed. Reg. at 41,372.

Plaintiffs first assert that the best available science shows a high likelihood of escalating harms to river herring through 2100, rather than 2030–2036. They point to evidence throughout the record supporting the conclusion that river herring are “highly vulnerable to climate change,” see, e.g., AR 2088 (status review report), with many effects occurring outside the 12- to 18-year window used by the Service. See AR 2177; see also AR 2170–71; AR 2086–88; AR 14759–60.

Indeed, both the listing decision and status review team acknowledge this longer-term threat. AR 23–24, 38–39; AR 2086–88. Plaintiffs also highlight 2016 agency guidance that counsels the Service “to project effects [of climate change] over the longest possible period for which credible projections are available . . . to ensure the best available science is fully considered.” AR 4004. The Service’s projections, plaintiffs argue, fail to consider the best available climate science, citing papers by scientists Patrick Lynch and Dr. Jonathan Hare, which they say reflect a grave threat. See AR 11200–11 (Lynch et al. study); AR 18866–89, 18993–97, 19082–85 (Hare et al. study). In administrative law terms, the argument is that the Service “failed to consider an important aspect of the problem” by not adequately addressing climate change. See State Farm, 463 U.S. at 43.

Plaintiffs’ argument leans heavily on the foreseeability of the climate change threat, but it largely ignores the other half of the analysis—the foreseeability of river herrings’ *response* to the threat. The Service does not really contest the point that climate change poses a threat to river herring, and its listing decision acknowledges climate change’s impact on the freshwater and ocean environments used by the fish, citing the Lynch and Hare studies. See AR 23; see also AR 18 (listing “climate change vulnerability” as one of “the main threats”). The agency nonetheless chose a shorter foreseeability timeframe because, in its view, river herrings’ future response to the threat is uncertain. And uncertainty is a justifiable rationale for not extending the foreseeability timeframe beyond 12 to 18 years—so long as the agency “explain[s] why uncertainty justifies its conclusion.” See Ctr. for Biological Diversity v. Zinke, 900 F.3d 1053, 1072 (9th Cir. 2018); State Farm, 463 U.S. at 51–52 (although “policymaking . . . must account for uncertainty,” it is not enough “for an agency to merely recite the terms ‘substantial uncertainty’ as a justification for its actions”).

Here, the Service adequately explained why the foreseeability of the species' response to various threats was hard to predict. The listing decision states that “[s]pecies with shorter generation times, such as river herring (4 to 6 years), experience greater population variability than species with long generation times, because they maintain the capacity to replenish themselves more quickly following a period of low survival.” AR 18. That is why “projecting out further than a few generations could lead to considerable uncertainty in predicting the response to threats.” AR 18. The Service cited a working group report to support its analysis, AR 18 (citing Mace et al.); that report notes that small fish like river herring are highly productive and that generation times are inversely related to productivity and resilience—i.e., shorter generation times correlate with higher productivity and resilience. See AR 11261, 11247. In plain terms, river herrings' rapid maturity and ability to produce an abundance of offspring provide the basis for the conclusion that the fishes' response to climate change is uncertain.

The parties also spar over what constitutes the best available science, focusing particularly on the relative weight of the status review team's report and the Hare and Lynch studies. As for the studies, the Service acknowledges that they informed part of its decision, see Gov't Mem. In. Supp. Mot. Summ. J. (“Gov't Br.”) at 20, ECF No. 38-1, and the listing decision cites them. AR 9, 23. But the Service says that plaintiffs overstate the importance of the studies by emphasizing the threat-side of the equation while ignoring the species-response side. Looking at the studies themselves, the Lynch study notes that river herrings' relative abundance in the ocean has been increasing, AR 11200, 11206–07, and that “increases in [river herring] density projected in spring . . . could serve to buffer the net impacts of climate change.” AR 11207; see also AR 11207 (“While declines are likely along the US Atlantic coast, these species may thrive in Canadian waters” and expand north “as temperatures warm.”); AR 23. And

although the Hare study looked at various “Biological Attributes” related to climate vulnerability, AR 18874–75, and concluded river herring had “Very High” overall climate vulnerability, AR 18994, 19083, in a separate presentation to the agency, Dr. Hare also recognized that the effect of climate change on spawning habitats was “uncertain.” AR 2431. Moreover, the Hare study took a broad approach, surveying 82 species of fish and invertebrates, two of which were the alewife and blueback herring. AR 18872–73.

The listing decision concluded that the status review team’s report “provide[d] the best available scientific and commercial information” on river herring. AR 8.¹ The Service maintains it was entitled to place more reliance on the status review, which was more comprehensive than the Hare and Lynch studies and focused exclusively on the alewife and blueback herring. The status review team “noted [that] uncertainty related to current limitations in predicting the specific changes that will occur within river herring habitat across the range make it difficult to determine the degree to which river herring may be impacted in the foreseeable future.” AR 2170–71. And the status review report (like the listing decision) cites the Hare and Lynch studies, among others, throughout its discussion of the climate change threat. See AR 2086–88. For instance, it notes that Lynch “suggested additional studies to further the work and address uncertainties associated with their study,” and that in the literature generally, “gaps still remain” as to climate change’s impact on river herring. AR 2087–88.

The upshot is that this dispute is one about the interpretation of the scientific data and the relative weight to place on certain evidence. “[T]he Service’s evaluation of this data falls within its area of expertise and is entitled to deference.” Defs. of Wildlife v. Zinke, 849 F.3d 1077,

¹ Every peer reviewer who looked at the status review report agreed that it contained the best available science on river herring. AR 1734, 1765, 1792.

1089 (D.C. Cir. 2017). And the “best data available” standard “merely prohibits [the Service] from disregarding available scientific evidence that is in some way better than the evidence [it] relies on.” See Friends of Blackwater v. Salazar, 691 F.3d 428, 435 (D.C. Cir. 2012) (citation omitted). The Service did not disregard the Lynch and Hare studies—again, both the status review team and the listing decision incorporated the studies into their assessments. But the Service simply gave greater weight to the status review team’s report, which the agency viewed as more comprehensive and in-depth as to river herring.

Plaintiffs obviously have an alternative interpretation of the data, but merely raising “competing views about scientific data . . . fail[s] to show that the Service’s conclusions were arbitrary and capricious or contrary to law.” Defs. of Wildlife, 849 F.3d at 1089. Here, the agency has a different take on the predictability of river herrings’ *response* to climate change, and it offered a sufficient explanation—rooted in specific biological characteristics and the reproductive profile of river herring—for why the fishes’ response was uncertain.

Moving on, plaintiffs contend that the Service departed from its past practice of taking a threat-specific approach to the foreseeable future analysis, without acknowledging or explaining the change. They point to listing decisions for various seal species, for which the Service projected the climate-change threat out to the year 2100, see, e.g., 78 Fed. Reg. at 41,372–73 (ribbon seals); 77 Fed. Reg. 76,706, 76,707, 76,709–10 (Dec. 28, 2012) (ringed seal); 77 Fed. Reg. 76,740, 76,753 (Dec. 28, 2012) (bearded seal), as well as the Fish and Wildlife Service’s use of a 50-year period for another fish with a similarly short lifespan, see 85 Fed. Reg. 71,859, 71,866 (Nov. 12, 2020) (sickle darter, with a 3 to 4 year lifespan). Also, in the listing decisions for seals, the Service noted that it “did not identify a single specific time as the foreseeable future.” 77 Fed. Reg. at 76,753. “Rather, [it] addressed the foreseeable future based on the

available data *for each respective threat.*” Id. (emphasis added); 78 Fed. Reg. at 41,373 (“Not all potential threats to ribbon seals are climate related, and therefore not all can be regarded as foreseeable through” 2100).

Although agencies must “acknowledge” and “offer a reasoned explanation” for changing policy and departing from past practice, Am. Wild Horse Pres. Campaign v. Perdue, 873 F.3d 914, 923 (D.C. Cir. 2017), the Service’s approach in this listing decision was not inconsistent with prior approaches. The agency based its foreseeable future timeframe, as in the past, on the particular species’ characteristics.

River herring are not seals. Seals have longer generation times, “produce only a single pup each year,” and rely on specialized habitat—ice—that is at especially high risk of shrinking with warming temperatures. See, e.g., 77 Fed. Reg. at 76,709; 77 Fed. Reg. 76,740, 76,758 (Dec. 28, 2012). As canvassed above, river herring are reproductive opposites, and they are “habitat generalists” while at sea and use “a wide variety” of freshwater habitats to reproduce. AR 10. It makes sense, then, that these two species would have different foreseeable future periods for climate change and other threats. Plus, the Service cites other listing decisions that arrived at similar foreseeable future periods for fish that, like river herring, have short generation times and produce many offspring. See, e.g., 82 Fed. Reg. 4,022, 4,036 (Jan. 12, 2017) (using 12–24 years, a three-generation timeframe, for the Alabama shad); 85 Fed. Reg. 45,377, 45,381 (July 28, 2020) (10 years for dwarf seahorse, consistent with about eight generations); 80 Fed. Reg. 51,235, 51,236 (Aug. 24, 2015) (30 years for orange clownfish, consistent with two to three

generations).² In short, the agency’s mode of analysis has largely been the same, so there is no unexplained changed from past practice; the spectrum of foreseeable future timeframes results from the case-by-case assessment of a particular species’ characteristics.

Nor did the agency depart from the 2016 guidance cited by plaintiffs. The guidance states that the Service “will project climate change effects for the longest time period over which [it] can reasonably foresee the effects of climate change on the species’ status.” AR 4004. That projection seems necessarily to entail a consideration of the species’ response to climate change; it is therefore also consistent with the case-by-case approach that looks to a particular species’ traits. Even if the Service did not cite this specific guidance in its listing decision, again, the Court sees no departure from the analytical approach that the guidance counsels the agency to take.

As a final note on the foreseeable future front, the Court will address the point that river herring numbers are at historic lows. Again, the listing decision acknowledges this fact. AR 13. While at historic lows, however, their numbers have recently stabilized and are still in the millions in several regions and in the hundreds-of-thousands in others. AR 43. ASMFC’s 2017 “stock assessment,” which reviewed data for 54 river herring stocks, indicated that, between 2006 and 2015, “16 stocks experienced increasing trends, two experienced decreasing trends, eight were identified as stable . . . , 10 experienced no discernable trend/high [population]

² The Court finds the Alabama shad a particularly persuasive comparator, and the Service took a highly similar approach in that listing decision as it did in this case for river herring. Alabama shad, alewife, and blueback herring share the same genus (*Alosa*), have nearly the same short generation times (4 to 8 years for Alabama shad, and 4 to 6 for river herring), and reproduce in similarly high numbers (26,000 to 357,000 eggs for Alabama shad, and 30,000 to 4000,000 eggs for river herring). See 82 Fed. Reg. at 4,023–25, 4,036 (Alabama shad); AR 10, 18 (river herring). Based on their shared characteristics, it makes sense that the Service chose similar three-generation foreseeable future timeframes.

variability,” while eighteen did not have enough data to assess trends. AR 13; AR 2069. And, in the words of the listing decision, “the population size is sufficient to maintain population viability into the foreseeable future.” AR 43. Further, the historical data does not account for recent developments, like conservation efforts, dam removals, and fishing moratoria. See AR 2070; AR 5542; AR 6464. Plaintiffs have a “competing view[]” on the importance of the historical data, but that does not make the Service’s interpretation of it arbitrary and capricious, Defs. of Wildlife, 849 F.3d at 1089, particularly given the apparent recent stabilization of river herrings’ numbers and their continued overall abundance.

In sum, these arguments against the listing decision fall short. The Service provided an adequate explanation for the foreseeable future timeframe, and its listing decision was not arbitrary and capricious in this regard.

B. The Recolonization Theory and the Assessment of Distinct Population Segments

Recall that the Service assessed whether there were any distinct population segments of river herring. To qualify as such, a grouping of fish must be both “discrete” and “significant.” See AR 13. One way the Service analyzes significance is to determine whether a hypothetical loss of fish in a given area would create “a significant gap in the range.” DPS Policy, 61 Fed. Reg. at 4,725. Here, the Service determined that blueback herring had three distinct population segments: Canada-Northern New England, Mid-Atlantic, and Southern Atlantic. See AR 16, 18. The Service also found that the Southern and Mid-New England groupings were “discrete,” but it did not find that they were “significant.” AR 14–16. Thus, the Service concluded that Southern and Mid-New England did not qualify as distinct population segments. Plaintiffs challenge that conclusion.

Before tackling the competing arguments, the Court notes that the parties offer differing descriptions of the Service's approach to its distinct population segment analysis. In brief, plaintiffs say that the Service deemed a gap in a range "significant" for purposes of this analysis if a geographic area was unlikely to be recolonized with 1,000 spawning fish within 40 to 60 years (corresponding to 10 generations). Pls. Mem. In. Supp. Mot. Summ. J. ("Pls. Br.") at 28–29, ECF No. 34-1. The status review team had used that formula in its analysis. The Service counters that the listing decision focused on the geographic scope of a potential gap in river herrings' range to determine whether a gap was significant, and disavows the use of any mathematical recolonization formula. Gov't Br. at 27–30. Given the divergent accounts, some preliminary clarification is in order. In sum, the distinct population segment analysis did focus on the geographic size of the gap created by a potential loss of a particular regional grouping, but it also considered other factors, like river herrings' straying behavior. The Service did not utilize the status review team's recolonization formula.

The listing decision, as the Court reads it, posited that river herrings' behavior of migrating to rivers other than those in which they were born in order to spawn ("straying") may allow them to maintain connectivity over some gaps between populations and potentially repopulate certain areas. Large geographic gaps between populations would disrupt connectivity and "result[] in isolated populations that are more vulnerable to the impacts of large threats." AR14; AR 16. Smaller gaps, however, would pose less of a concern because river herring sometimes stray; thus, river herring populations could maintain connectivity over a small gap. AR 15; AR 16 (river herrings' "straying behavior and fecundity may allow them to regain or even maintain connectivity between neighboring stock complexes."). Connectivity, in turn, relates to river herring being "represented across diverse habitats" to help "maintain and enhance

genetic variability and population resilience.” AR 14–15. In other words, the larger the gap, the less likely river herring are to migrate over the gap, thus posing a greater risk to connectivity, and in turn, a greater threat to habitat diversity, genetic variability, and overall population resilience.

Accordingly, the Service determined that looking at the geographic scope of potential gaps—without reference to any particular recolonization formula—was sufficient for analyzing whether a gap was significant for purposes of identifying distinct population segments. AR 16; DPS Policy, 61 Fed. Reg. at 4,725 (the “significance” assessment may include considering whether “loss of the discrete population segment would result in a significant gap in the range”).³ Straying, then, is relevant in the context of mitigating potential problems associated with particular gaps. The Southern and Mid-New England regions of blueback herring were not geographically large enough to qualify as distinct population segments under the Service’s analysis. AR 16.

To bolster its “gap in the range” analysis, the Service cites cases that involved hypothetical gaps of similar proportions to those at issue here. See Am. Forest Res. Council v. Ashe, 601 F. App’x 1, 4–5 (D.C. Cir. 2015) (per curiam); Nat’l Ass’n of Home Builders v. Norton, 340 F.3d 835, 848 (9th Cir. 2003); see also AR 15 (Mid-New England blueback herrings make up less than 3% of the species’ range, and Southern New England less than 2%).

³ To describe the listing decision’s distinct population segment analysis is to reject one of plaintiffs’ characterization of it. They assert that the listing decision used a 40- to 60-year timeframe for considering whether a region was likely to be recolonized, which is inconsistent with the 12- to 18-year foreseeable future timeframe used elsewhere. If that were an accurate portrayal, they would be right—but it’s not. The Service stated that it “do[es] not find that the use of such a formula [i.e., the 40- to 60-year period] is necessary” given the geographic scope of the regional groupings of river herring at issue. AR 16.

While the Court takes the point that the size of a potential gap can be a relevant (even an important) consideration, the Service places too much weight on these cases. In Ashe, the D.C. Circuit explained that the Service does not have “to invoke [a] magic phrase” that the “loss of [a] geographic area would be a ‘substantial reduction’ of” the range. 601 F. App’x at 5. But the Court does not read Ashe to say that if a region constitutes 5% or less of a species’ range, then it is per se reasonable to conclude that the region is not a distinct population segment, as the Service’s brief could fairly be read to suggest. See Gov’t Br. at 29. And in Home Builders, the Ninth Circuit did not mention a 5% cut off either; rather, it reversed the Fish and Wildlife Service’s finding that Arizona pygmy owls were a distinct population segment because those owls “represented only ‘a small percentage’ of the total range,” and the agency “did not find that the loss” of the population “would substantially curtail” the species’ range. 340 F.3d at 848. So neither Ashe nor Home Builders establish a numeric cut-off for determining the significance of a hypothetical gap; the Service still must offer *some* explanation beyond the percentage of a species’ range a particular portion encompasses.

Here, the size of the gap matters at least partly because of river herrings’ straying behavior. Though the listing decision did not employ the 40- to 60-year recolonization timeline from the status review team’s report, this behavior still seems critical to the species’ ability to traverse gaps and maintain connectivity between populations—because it is easier to migrate over smaller gaps.

Although plaintiffs do not dispute the general proposition that straying can occur, see, e.g., Mot. Hr’g Tr. at 48 (Rough) (Feb. 22, 2022), they nonetheless assert that the Service’s analysis is speculative and unreasoned. If that were so, then plaintiffs would have an argument that the agency provided no “discernable path to which the court may defer” regarding its

distinct population segment analysis, and its action would be arbitrary and capricious. Env't Health Tr. v. FCC, 9 F.4th 893, 903, 905 (D.C. Cir. 2021) (if “[t]he factual premise . . . underlying” the agency action “may no longer be accurate,” it must offer more than “conclusory statements”). The question here, then, is whether there is evidence of river herring straying and colonizing areas they previously did not occupy.

There is such evidence in the record, so “the agency’s path may reasonably be discerned.” See Bowman, 419 U.S. at 285–86. The listing decision notes evidence of straying, including one report of straying rates between 3% and 37%. AR 12. Blueback herring have a higher tendency to stray, and to colonize new streams, than alewife. AR 12. The listing decision, moreover, cites an article that suggests river herring score higher than all other diadromous fish, except for sea lamprey, in terms of expanding habitat within existing streams. AR 12. Genetic studies also provide evidence of straying happening “with nearest-neighbor rivers over . . . distances” of “62–124 miles.” AR 12. On the other hand, evidence also demonstrates that river herring strongly prefer their natal areas—a behavior known as “homing”—at rates of 63–97%. AR 12, 22; AR 2068; AR 10176; AR 17090–91. Even if straying is the exception, however, the Lynch study noted that “a small amount of straying” could allow for river herring to adapt to changing environmental conditions. AR 11208; AR 11207 (acknowledging that river herring “may thrive in Canadian waters, and may actually expand into Arctic habitat as temperatures warm”). And, for example, the listing decision cites evidence of blueback herrings migrating over the entire distance of the Mid-New England region. AR 42.

There are also examples of river herring recolonizing areas they previously did not inhabit. ASMFC reported one such instance in New York in 2016, after the removal of a dam on

tributary to the Hudson River. AR 6736. (Dams are one main threat to river herring. See AR 18.) Another researcher similarly observed that alewife responded to a dam removal “in less than two years by spawning successfully in habitats where they had previously been excluded for over a century.” AR 9960. Although aided by human intervention, recent efforts in Maine have also established new spawning areas in the state, resulting in an increase of about 5 million river herring. AR 6464. The point is that some evidence suggests river herring can and do colonize new habitats. Cf. Pls. Br. at 35–36 (acknowledging that one study offers at least a “conceptual model” showing that river herring have “a ‘moderate’ and a ‘moderate’ to ‘strong’ tendency to ‘colonize new streams’” (citing AR 15287 (Pess et al.)).

Thus, rather than engaging in speculation, the Service exercised qualitative predictive judgments within its area of expertise. See Am. Wildlands v. Kempthorne, 530 F.3d 991, 1000–01 (D.C. Cir. 2008). Because the Service’s opinion was fairly grounded in the available scientific data, this Court, for the most part, defers to its conclusions. Id.

There is one exception, however, involving the Southern New England grouping of blueback herring. For that group, the listing decision appears to have “failed to offer a ‘rational connection’” between river herrings’ straying behavior and the size of the gap, “and its conclusion” that river herring could “maintain connectivity” over the gap. See Rauch, 244 F. Supp. 3d at 94; AR 16. Although Southern New England constitutes 2% or less of the watershed range, its coastline spans 1,802 miles (or 2,900 kilometers). See AR 15. Mid-New England’s coast, by contrast, spans only 193 miles (or 311 kilometers), AR 15, and as discussed, some evidence suggests straying occurring over large swaths, or perhaps the entirety, of that distance. AR 42; AR 12; AR 2151. The Service has not pointed to any similar evidence as to Southern New England, nor has it explained why straying (or some other trait) would allow river herring

to maintain connectivity over that longer gap of coastline. As the Court will explain later, a limited remand is warranted for the Service to provide an adequate explanation.

In sum, this challenge to the listing decision mostly fails, except with respect to the Southern New England region of blueback herring.

C. Significant Portion of its Range Analysis

As a quick recap, the Service’s “significant portion of its range” analysis proceeds in a stepwise fashion. The preliminary question is whether there is significant information indicating that a more in-depth assessment is warranted for the portion of the species’ range in question. See SPR Policy, 79 Fed. Reg. at 37,586; AR 39. If so, the Service undertakes a further two-part analysis, asking: (1) is the portion of the range in question biologically significant? And (2) is the species endangered or threatened in that portion? AR 39. These questions can be addressed in either order, but an affirmative answer to both is necessary to qualify as a “significant portion of the range.” SPR Policy, 79 Fed. Reg. at 37,587; AR 39.

Plaintiffs’ challenge to this aspect of the listing decision is threefold. *First*, they take issue with the Service not conducting any analysis of the threats facing blueback herring in Southern New England. *Second*, they claim that the Service should have considered whether the loss of the Southern and Mid-New England blueback herrings *combined* would have been “significant.” *Third*, plaintiffs claim the finding that the Mid-New England blueback herrings were not “significant” to the species as a whole was arbitrary, pointing to the purportedly faulty recolonization theory discussed above. The Court concludes that only the first argument has merit.

The Service found that the Southern New England blueback herrings were genetically distinct, AR 10; AR 14–15 (distinct population segment analysis), but they were the only such

group that did not have the threats facing it analyzed under the SPR Policy. As plaintiffs point out, the Service did not explain that omission. Although the agency states in its briefing that the Southern New England group flunked the threshold question under the SPR Policy—i.e., whether significant information indicated further review was warranted, Gov’t Br. at 37–38 (citing AR 39)—the relevant part of the listing decision actually discusses the Long Island Sound portion of the range. AR 39–40. The Service did examine the Long Island Sound portion under its SPR Policy. But that portion merely overlaps part of Southern New England, AR 39–40, 45, and the listing decision does not discuss why the Long Island Sound might be an appropriate proxy for Southern New England as a whole. The entire Southern New England regional grouping would seem to be an obvious candidate for assessment though, given that the Service analyzed every other genetically distinct population. Without any other explanation, there is some apparent internal tension with the Service’s approach in this respect.

With that context in mind, the Service’s failure to acknowledge the Southern New England blueback herring group under the SPR Policy was an arbitrary and capricious “fail[ure] to consider an important aspect of the problem.” See State Farm, 463 U.S. at 43. The Service “essentially asks the Court to assume” that the agency “must have considered” this group under the preliminary step of the SPR policy. See Magneson v. Mabus, 85 F. Supp. 3d 221, 228 (D.D.C. 2015). But unlike the rest of the listing decision, the Court cannot find “a discernable path to which [it] may defer.” See Am. Radio Relay League, Inc. v. FCC, 524 F.3d 227, 241 (D.C. Cir. 2008). Nor does it appear the Court can necessarily take the Service’s reasoning from the distinct population segment analysis—where, again, the Service found Southern New England was not “significant”—and use it to conclude the Service would have reached the same outcome under the SPR Policy. At the motions hearing, the Service acknowledged that the

distinct population segment and SPR analyses are “distinct,” even though there might be some “overlap.” Mot. Hr’g Tr. at 31–32; *id.* at 20–21 (similar, from plaintiffs’ counsel). The Court will turn to the remedy for this apparent error in the next section.

Plaintiffs’ second argument—that the Service should have combined the Southern and Mid-New England groups—falls short. Unlike their argument on the Southern New England population of blueback herring specifically, it is less clear why the Service should have proceeded as plaintiffs suggest. As the Service explained, the “range of a species can theoretically be divided into portions in an infinite number of ways.” AR 39. The preliminary step in the SPR analysis asks “whether there is substantial information” that a portion “may be significant” and that the species “may be in danger of extinction” currently or within the foreseeable future in that portion. AR 39. Although plaintiffs believe that these two regional groups “likely face[] at least some of the same threats,” Pls. Br. at 44, they cite no evidence in the record for this proposition or that “substantial information” suggested this proposed combined group warranted further review under the SPR Policy. Nor do they identify any analysis or study that looks at both groups combined. The record instead indicates that these two regions contain genetically discrete groups of river herring. AR 14. Although plaintiffs would draw the lines differently, the Court sees no reason to substitute their view for that of the agency. See Marsh, 490 U.S. at 378 (“[A]n agency must have discretion to rely on the reasonable opinions of its own qualified experts.”); Defs. of Wildlife, 849 F.3d at 1089. Nor is there any unexplained internal inconsistency in the Service’s approach on this front, unlike with the Southern New England group just discussed.

Plaintiffs’ final argument, regarding the analysis of Mid-New England blueback herring, largely rests on their challenge to the so-called recolonization theory. Accordingly, the Court

rejects this argument for the same reasons addressed previously. The Service also concluded that this group’s contribution to the species’ abundance and productivity was low and that its importance to genetic diversity was “unclear because there is no evidence” that its “genetic differences . . . are linked to adaptive traits.” AR 42. Plaintiffs do not attack this aspect of the listing decision. In short, the Service’s conclusion that this regional grouping was not biologically significant withstands arbitrary-and-capricious review.

D. Remedy

Although the Court agrees with plaintiffs that two portions of the Service’s listing decision were inadequately reasoned, it concurs with the Service that full vacatur and another 12-month review is not warranted. Instead, the Court will order a limited remand.

“While unsupported agency action normally warrants vacatur, a court is not without discretion to leave agency action in place while the decision is remanded for further explanation.” Standing Rock Sioux Tribe v. U.S. Army Corps of Eng’rs, 985 F.3d 1032, 1051 (D.C. Cir. 2021). Circuit precedent establishes two factors that guide this discretion: (1) “the seriousness of the order’s deficiencies (and thus the extent of doubt whether the agency chose correctly)” and (2) “the disruptive consequences of an interim change.” Allied-Signal, Inc. v. U.S. Nuclear Regulatory Comm’n, 988 F.2d 146, 150–51 (D.C. Cir. 1993). “The ‘seriousness’ of a deficiency . . . is determined at least in part by whether there is ‘a significant possibility that the [agency] may find an adequate explanation for its actions’ on remand.” Standing Rock, 985 F.3d at 1051 (alteration in original) (quoting Williston Basin Interstate Pipeline Co. v. FERC, 519 F.3d 497, 504 (D.C. Cir. 2008)).

The Court concludes that the Service’s errors—both concerning a relatively small population of blueback herring in Southern New England—have a real possibility of being cured

by further explanation on remand. Alternatively, the Service may decide that, upon reflection, it will reconduct its analyses for that group of blueback herring. The Court will leave it to the agency to decide which route to take, but under either option, it must offer an adequate explanation for whatever outcome it reaches. Moreover, declining to enter full vacatur would not result in any disruption. With either a full vacatur or a limited remand, the status quo remains the same: river herring will not be listed under the ESA. Vacatur, however, would require a full re-examination of the listing decision.

At least two reasons counsel against a full do-over. One, the Court finds that the Service's work was generally thoroughgoing and its findings reasoned. Two, the errors identified by the Court relate to only a small slice of the blueback herring population and do not affect the Service's analysis as a whole or as to any other populations of river herring. On remand, the Service might adequately explain its distinct population segment analysis as to Southern New England, and why it declined to further analyze that population under the significant portion of its range policy. Or it might undertake these analyses and still conclude that the grouping fails to meet the criteria for a distinct population segment, or that it does not represent a significant portion of the range, or that it is not endangered or threatened. The Court will not order vacatur given the significant possibility that the Service will reach the same bottom-line conclusion with a limited remand for further explanation based on the present, substantially developed record.

IV. Conclusion

For these reasons, the Court will grant in part and deny in part plaintiffs' motion for summary judgment, and it will grant in part and deny in part the government's cross-motion for summary judgment. Because the Court determines that certain aspects of the listing decision

warrant further explanation, the matter will be remanded to the agency. The Court will, however, defer final decision on the precise parameters and duration of that remand. A separate Order accompanies this Memorandum Opinion, which directs the parties to confer and submit a proposal on the scope and duration of the remedy. In the meantime, nothing shall be read to vacate any part of the listing decision.

CHRISTOPHER R. COOPER
United States District Judge

Date: March 31, 2022