

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

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CENTER FOR BIOLOGICAL DIVERSITY et al., :  
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Plaintiffs, :  
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-v- :  
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U.S. FISH AND WILDLIFE SERVICE et al., :  
:  
Defendants. :  
:  
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21-cv-5706 (LJL)

OPINION AND ORDER

LEWIS J. LIMAN, United States District Judge:

Plaintiffs Center for Biological Diversity, Waterkeeper Alliance, Inc., Waterkeepers Chesapeake, Inc., Lower Susquehanna Riverkeeper Association, and Middle Susquehanna Riverkeeper Association (collectively “Plaintiffs”) filed this Complaint, seeking in part an order declaring that a determination of the U.S. Fish and Wildlife Service (“FWS” or “Service”) that the eastern hellbender should not be listed as either endangered or threatened is unlawful and vacating the listing determination to that effect.

Plaintiffs and defendants FWS and two of its officials (collectively “Defendants”) now each move, pursuant to Federal Rule of Civil Procedure 56, for an order granting summary judgment in their favor. Dkt. Nos. 55, 65.

For the following reasons, Plaintiffs’ motion for summary judgment is granted and Defendants’ motion for summary judgment is denied.

**BACKGROUND**

The following facts are taken from the administrative record (“AR”), in lieu of Local Civil Rule 56.1 Statements of Material Facts. Dkt. No. 54.

## **I. The Endangered Species Act**

The Endangered Species Act (“ESA”), 16 U.S.C. § 1531 *et seq.*, “represent[s] the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.” *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978). It was enacted in 1973 “to provide a means whereby the ecosystems upon which endangered species and threatened species may be conserved, [and] to provide a program for the conservation of such endangered species and threatened species . . . .” 16 U.S.C. § 1531(b). The ESA and its implementing regulations empower FWS to “determine whether any species is an endangered species or a threatened species” based on an enumerated set of factors. *Id.* § 1533(a)(1). Under the ESA, a species is defined as “any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.” *Id.* § 1532(16). A species qualifies as endangered under the ESA when it is “in danger of extinction throughout all or a significant portion of its range,” and qualifies as threatened when it is “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” *Id.* § 1532(6), (20).

The Secretary of the Interior is required to consider the following five factors to determine whether a species is either endangered or threatened: (a) “the present or threatened destruction, modification, or curtailment of its habitat or range”; (b) “overutilization for commercial, recreational, scientific, or educational purposes”; (c) “disease or predation”; (d) “the inadequacy of existing regulatory mechanisms”; or (e) “other natural or manmade factors affecting its continued existence”. *Id.* § 1533(a)(1). The Secretary of the Interior must make this determination:

solely on the basis of the best scientific and commercial data available to him [or her] after conducting a review of the status of the species and after taking into account those efforts, if any, being made by any State or foreign nation, or any

political subdivision of a State or foreign nation, to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices, within any area under its jurisdiction; or on the high seas.

*Id.* § 1533(b)(1)(A).

Listing may be done at the initiative of the FWS or in response to a petition from an “interested person.” *Id.* § 1533(b)(3)(A). In particular, under the ESA, interested persons may petition FWS to “add a species to, or to remove a species from, either of the [endangered species or threatened species] lists,” and FWS “shall make a finding as to whether the petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted,” and, if so, the agency “shall promptly publish each finding made.” *Id.*

Within ninety days of receiving a petition, the Secretary of the Interior must, “[t]o the maximum extent practicable,” determine whether the petition presents “substantial scientific or commercial information indicating that the petitioned action may be warranted.” *Id.* The Service evaluates this information against the listing factors to determine whether the proposal of a rule listing the species may be warranted. *Id.* If the Secretary of the Interior determines that a petition presents “substantial scientific or commercial information indicating that the petitioned action may be warranted,” the Secretary must then begin a “review of the status of the species concerned.” *Id.* After that review, the Secretary of the Interior must make a second finding, commonly referred to as a “twelve-month finding,” that the petitioned action is: (a) not warranted; (b) warranted; or (c) warranted but precluded by higher priority pending proposals while expeditious progress is being made to list, delist, or reclassify species (referred to as a “warranted but precluded finding”). *Id.* § 1533(b)(3)(B). Where a “petitioned action is not warranted,” FWS “shall promptly publish such finding in the Federal Register,” and any such negative finding “shall be subject to judicial review.” *Id.* § 1533(b)(4)(B)(i), (C)(ii).

## II. The Eastern Hellbender

The eastern hellbender is an aquatic salamander with populations in streams across fifteen states in the Northeast, Midwest, Mid-Atlantic, and Southern United States. *See* Endangered and Threatened Wildlife and Plants; 12-Month Petition Finding and Endangered Species Status for the Missouri Distinct Population Segment of Eastern Hellbender, 84 Fed. Reg. 13,223 (Apr. 4, 2019) (“Listing Determination”). Eastern hellbenders typically establish their nests beneath “partially embedded, large (greater than 30 centimeters), flat rocks with a single opening facing downstream or perpendicular to streamflow,” where female hellbenders deposit their eggs for males to fertilize and then defend from other hellbenders. *Id.* at 13,225. After larvae hatch, they retain their gills until they are roughly two-years old, and advance to sexual maturity at age five or six. *Id.* Once an eastern hellbender sheds its gills, it respire through prominent, highly vascularized skin folds. *Id.* As a result, the eastern hellbender can only thrive in environments that are cool and well oxygenated. *Id.* Because it only thrives in specific environments, the eastern hellbender is considered “an indicator of good stream and river quality.” AR at 2,421. Experts estimate that in the wild, eastern hellbenders can live at least twenty-five to thirty years. Listing Determination, 84 Fed. Reg. at 13,225.

FWS has identified four distinct geographical units that comprise the eastern hellbender’s range, referred to as adaptive capacity units (“ACUs”), and which “delineate variation in genetic and ecological traits within the eastern hellbender’s historical range.” *Id.* at 13,226. The first is the Missouri River drainage ACU (“MACU”), which is the smallest ACU, encompassing only five streams in a small region of a single state and containing zero healthy populations of the eastern hellbender. *Id.*; AR at 77. The second is the Ohio River-Susquehanna River drainages ACU (“OACU”), which encompasses 123 occupied streams across nine states and contains forty-two healthy eastern hellbender populations. Listing Determination, 84 Fed. Reg. at 13,226;

AR at 77. The third is the Tennessee River drainage ACU (“TACU”), which encompasses 178 occupied streams across six states and contains sixty-eight healthy eastern hellbender populations. Listing Determination, 84 Fed. Reg. at 13,226; AR at 77. The final is the Kanawha River drainage ACU (“KACU”), which encompasses forty occupied streams across three states and contains sixteen healthy hellbender populations. Listing Determination, 84 Fed. Reg. at 13,226; AR at 77. A higher number of occupied streams signifies an enhanced level of resiliency, or annual variation in environment, allowing the eastern hellbender to better persist and recover from unfavorable conditions and disturbances and thereby sustain populations through both good and bad years. AR at 81.

Several influences have, however, put eastern hellbender populations under stress throughout its range. According to experts on the eastern hellbender, the primary stressor impacting the trajectory of the eastern hellbender is sedimentation. *Id.* at 76. Increased sediment in streams occupied by the eastern hellbender fills the spaces around and in between rocks that are used by larval and juvenile hellbenders for shelter and can impact habitat and migratory patterns in adults by burying shelter and nest rocks. *Id.* at 255. Elevated sediment can be caused by, for example, logging of upland forests, clearing of riparian vegetation, and intense flooding events occurring with increased frequency. *Id.* at 848. A second stressor projected to have a significant impact on the eastern hellbender is water quality degradation. *Id.* at 112. Water quality degradation can occur through dam construction, which stops swift water flow and submerge riffles causing oxygen levels in water to decline, as well as toxic pollution often caused by acid mine draining, which results in decreased pH levels. *Id.* Other stressors identified by FWS and the experts include habitat destruction and modification, direct mortality or permanent removal of eastern hellbenders, disease, population fragmentation and isolation,

increased abundance of predators, and climate change. Listing Determination, 84 Fed. Reg. at 13,226–28.

Because of these stressors, the eastern hellbender’s abundance is decreasing in several parts of its range. *Id.* at 13,226. “Historically, 570 healthy eastern hellbender populations are known to have existed across 15 States. Currently, 345 (61 percent) are extant, and 225 populations (39 percent) are presumed or functionally extirpated. Of the 345 extant populations across the range, 127 (37 percent) are likely healthy (stable, recruiting), and 218 (63 percent) are declining.” *Id.* In other words, nearly eighty percent of historic eastern hellbender populations have been extirpated or are in decline. *Id.* Population trends are difficult to assess due to a relative lack of data about the eastern hellbender, though efforts to survey the species have increased substantially in recent years. *Id.*

### **III. Plaintiffs’ Listing Petition and FWS’s Non-Warranted Determination**

Plaintiffs are non-profit and not-for-profit organizations and corporations involved in environmental advocacy efforts in New York, Pennsylvania, and Maryland. Dkt. No. 1 (“Compl.”) ¶¶ 13–17. Defendants are a federal agency within the U.S. Department of the Interior, the Acting Director of the agency, and the Secretary of the Interior. *Id.* ¶¶ 22–24. Plaintiffs challenge FWS’s April 4, 2019 decision and twelve-month finding that the eastern hellbender does not warrant listing as a threatened or endangered species under the ESA. *Id.* ¶¶ 81, 85–86. Plaintiffs allege that FWS’s decision is contrary to the ESA and is arbitrary and capricious, an abuse of discretion, and otherwise not in accordance with law. *Id.* ¶¶ 4, 79–86.

In April 2010, Plaintiffs petitioned FWS, pursuant to the ESA’s provisions, to list the eastern hellbender as threatened or endangered. *Id.* ¶ 3. In September 2011, FWS issued a positive 90-day finding, concluding that the petition had presented substantial scientific information indicating that a listing of the eastern hellbender may be warranted. *See* Endangered

and Threatened Wildlife and Plants; Partial 90-Day Finding on a Petition to List 404 Species in the Southeastern United States as Endangered or Threatened with Critical Habitat, 76 Fed. Reg. 59,836 (Sept. 27, 2011). FWS did not, however, issue a subsequent listing determination, prompting Plaintiffs to sue FWS in June 2013 to compel a determination. Compl. ¶ 59. In September 2013, Plaintiffs and FWS entered a stipulated settlement agreement requiring FWS to submit a listing determination on the eastern hellbender by September 30, 2018. *Id.* FWS issued its determination on April 4, 2019, concluding that a listing of the eastern hellbender was not warranted. *See* Listing Determination, 84 Fed. Reg. at 13,223–37.

In order to determine whether a listing of the eastern hellbender was warranted, FWS compiled a Species Status Assessment (“SSA”) report, which it referenced in the Listing Determination. AR at 74; Listing Determination, 84 Fed. Reg. at 13,224. A primary goal of the SSA report was to assess the viability of the eastern hellbender using the conservation biology principles of resiliency, redundancy, and representation. AR at 81. “To sustain populations over time, a species must have a sufficient number and distribution of healthy populations to withstand: (1) Annual variation in its environment (Resiliency); (2) Catastrophes (Redundancy); and (3) Novel changes in its biological and physical environment (Representation).” *Id.* In order to assess the viability of the eastern hellbender, FWS consulted eleven experts from a variety of universities, state governments, and nature and conservation organizations, in addition to reviewing existing peer-reviewed literature, reports, and data. *Id.* at 75. FWS asked these experts to project the number of stable recruiting (“SR” or “healthy”), declining (“D”), functionally extirpated (“FX”) and presumed extirpated (“PX”) populations of the eastern hellbender in ten, twenty-five, and fifty years under three different scenarios: a reasonable worst

plausible scenario (“RWP”), a reasonable best plausible scenario (“RBP”), and a most likely scenario (“ML”). *Id.* at 86.

Experts provided these scenarios as part of a four-step elicitation method that FWS used in order to “minimize anchoring and over-confidence problems.” *Id.* at 180. The four-step method consists of “asking experts to first provide their lowest and highest reasonable estimates for the variable in question, followed by their level of confidence (50-100%) that the true value of the variable falls within their stated range (lowest to highest values), and lastly, the most likely estimate.” *Id.* at 180–81. One alternative to a four-step survey method is a three-step survey method, in which an expert is asked for a lower limit, an upper limit, and a best guess of the desired value, resulting in an interval within some assigned confidence level such as 80%. *Id.* at 7,493. FWS decided to use the four-step process based on the findings of a report included in the administrative record, entitled “Reducing Overconfidence in the Interval Judgments of Experts,” that concluded that expert overconfidence was substantially lower when experts used a four-step process rather than a three-step process. *Id.* The report hypothesized two separate mechanisms that each contribute to a reduction in overconfidence when the four-step method is utilized: first, the expert “may weigh the evidence considered in determining the high and low estimates” in “deciding his or her best estimate,” and second, experts are superior at interval evaluation than at interval production. *Id.* at 7,495. Put differently, one reason why the four-step process is considered a superior method of expert elicitation is because the lower and upper bound estimates can help inform the expert’s prediction of the most likely scenario. *Id.*

The experts were asked to project the number of eastern hellbender populations that will be healthy, declining, functionally extirpated, and presumed extirpated in the RBP, RWP, and ML scenarios in and across the four ACUs that comprise the eastern hellbender’s range at ten-



twenty-five-, and fifty-year-intervals. Listing Determination, 84 Fed. Reg. at 13,228. Several experts refused, however, to provide any scenario predictions for the fifty-year interval in four states, and expressed only 50% confidence in several other states for the fifty-year-interval. AR at 192–94. Experts did, however, provide scenario predictions across the entire range at the ten- and twenty-five-year intervals. *Id.* Because the ESA does not contain a definition for “the foreseeable future,” FWS explained in the Listing Determination that “[p]redictions of the subspecies’ response to threats, based on elicitation of species’ experts, are reasonably reliable out to 25 years; therefore, we have concluded that 25 years is the foreseeable future for the eastern hellbender.” Listing Determination, 84 Fed. Reg. at 13,230.

Based on the scenario analysis, FWS concluded in its twelve-month finding that a listing of the eastern hellbender was not warranted. FWS first determined that the eastern hellbender is not endangered or threatened throughout all of its range. *Id.* It explained that although the eastern hellbender would be subject to stressors across its range, leading to population declines for the following ten years, a period of stability would then follow from years ten through twenty-five. *Id.* As a result, FWS determined “that numerous healthy (resilient) populations will persist over the next 25 years across a broad geographic range, including multiple representation units (ACUs).” *Id.* According to FWS, although “the subspecies’ redundancy is lower than in the past, the geographically wide distribution of populations, as well as the low to moderate risk of a catastrophic event, guards against catastrophic losses rangewide.” *Id.* Because of its “predicted persistence of healthy populations across multiple ACUs provid[ing] redundancy, resiliency, and representation levels that are likely sufficient to sustain the subspecies now and into the future” FWS “conclude[d] that the eastern hellbender has a low risk of extirpation.” *Id.*

Next, FWS considered whether the eastern hellbender was in danger of extinction or likely to become endangered within the foreseeable future in a significant portion of its range. *Id.* Here, the analysis contains two elements: the FWS determines (1) whether the species is endangered or threatened in a portion of the range and (2) whether that portion of the range qualifies as significant. *Id.* In this instance, FWS performed the status analysis first, finding that the populations in “MACU and KACU may have lower viability and greater vulnerability to potential further stressors than the other two ACUs.” *Id.* As a result, FWS proceeded to consider whether those two ACUs qualified as significant. *Id.* Here again, the ESA does not contain a particular definition for the term “significant portion of its range.” *Id.* In the listing determination for the eastern hellbender, FWS stated that it would “look for any portions that may be biologically important in terms of the resiliency, redundancy, or representation of the species.” *Id.* FWS then assessed the significance of MACU and KACU, noting first that the two ACUs “represent a small portion (10% currently) of the total populations and have a small spatial extent.” *Id.* It further explained that even “[i]f both of these units were extirpated, the subspecies would lose some representation and redundancy, but the loss of this portion of the subspecies’ range would still leave sufficient resiliency, redundancy, and representation in the remainder of the subspecies’ range such that it would not notably reduce the viability of the subspecies.” *Id.* at 13,231. FWS therefore concluded that MACU and KACU did not qualify as a significant portion of the species’ range. *Id.* Because none of the ACUs satisfied both elements—that the species is endangered or threatened in a portion of the range and that the portion of the range is significant—FWS concluded that the eastern hellbender was not in danger of extinction (endangered) or likely to become endangered (threatened) within the foreseeable future throughout a significant portion of its range. *Id.* Having found that the eastern hellbender

was not endangered or threatened in all or a significant portion of its range, Defendants concluded that a listing of the eastern hellbender was not warranted. *Id.*

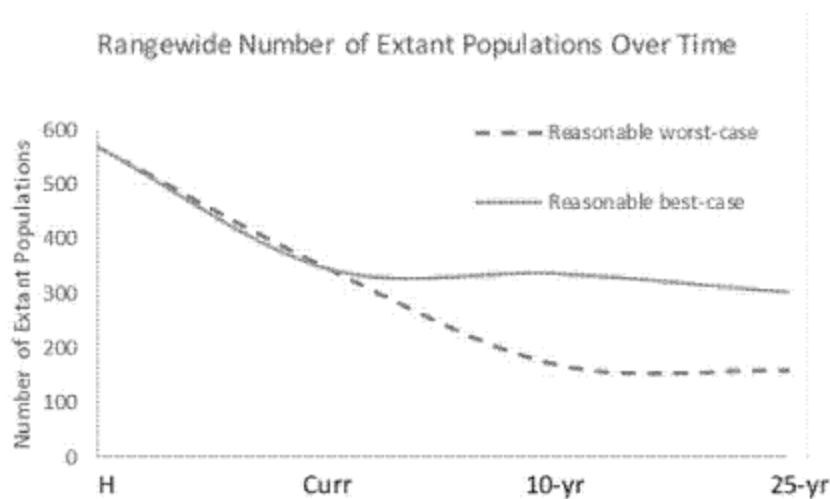
In order to reach the Listing Determination and to craft the RWP, RBP, and most likely scenarios supporting the Listing Determination, FWS worked with species experts to identify a set of risk and conservation factors that “have led to the Eastern Hellbender’s current conditions and which may influence population dynamics into the future.” AR at 318. FWS then asked the species experts to provide input on the relative influence of each factor. *Id.* The risk factors identified and considered in the creation of the future scenarios were (a) sedimentation; (b) water quality degradation; (c) habitat destruction and modification; (d) direct mortality or permanent removal of animals; (e) disease; (f) habitat disturbance; (g) small populations, population fragmentation, and isolation; (h) increased abundance of species of predators; (i) climate change; and (j) synergistic effects. Listing Determination, 84 Fed. Reg. at 13,226–28.

One of the factors identified by FWS in the Listing Determination as potentially benefitting the eastern hellbender’s population dynamics into the future was augmentation, which was referenced in the section on Conservation Efforts. *Id.* at 13,228. FWS highlighted in particular two ongoing conservation efforts: (a) habitat restoration, management, and preservation primarily in the form of artificial nest boxes, and (b) captive propagation through the collection of fertilized eggs that are raised in captivity until they reach two-to-four years of age. *Id.* The SSA report notes that artificial nest boxes, which provide additional nesting habitat and cover for adult eastern hellbenders, have been successfully used by eastern hellbenders for reproduction in five states, but “the survival of fertilized eggs and larvae from these nest boxes is unknown.” AR at 127. It also clarifies that eastern “hellbenders occupying the nests are susceptible to disturbance, persecution, and collection if the nest boxes are not properly

camouflaged,” and concludes its discussion of artificial nest boxes by stating that “[t]he overall benefit of habitat restoration, management, and preservation rangewide is unknown.” *Id.* The SSA report further explains that captive propagation efforts have increased in recent years, occurring across six states including Ohio where 712 hellbenders have been released since 2012 and an additional 1,605 hellbenders are currently being raised in captivity for release over the next three years, but that FWS “ha[s] no data on whether released individuals have or can successfully reproduce, or the survival rates of any resulting offspring.” *Id.* at 128. The SSA report states plainly that “the success of hellbender translocations is still being studied.” *Id.* According to FWS, “[s]uccessful augmentation and reintroduction, habitat restoration, and reduced persecution were cited as factors contributing to RBP scenarios” by the experts consulted. AR at 130. In the Listing Determination itself, FWS highlighted the artificial nest box and captive propagation efforts, emphasizing that they were “ranked by species’ experts as an important influence on the eastern hellbender’s status.” Listing Determination, 84 Fed. Reg. at 13,228.

Ultimately, FWS concluded that the eastern hellbender was neither endangered nor threatened. *Id.* at 13,231. Its conclusions were reflected in the Listing Determination. The projected outcomes for the eastern hellbender varied widely by scenario and by ACU but FWS concluded that the populations of eastern hellbenders would stabilize after experiencing a near-term decrease in numbers. *Id.* at 13,230. The Listing Determination states:

Rangewide, the number of extant populations is predicted to decrease by 2 to 52 percent over the next 10 years, and then slightly decrease from year 10 to year 25 under both scenarios (see figure 1, below), with the “most likely” scenario skewed toward the reasonable worst plausible scenario. Despite these overall losses, multiple healthy populations over a broad geographic range are predicted to persist over the next 25 years (55 to 178 healthy populations, representing a 57-percent decrease to a 40-percent increase from current conditions).



**Figure 1.** The rangewide number of extant eastern hellbender populations over time.

*Id.* at 13,229.

In summarizing the outcomes and the key drivers of the scenario analysis, FWS stated that “stressors are pervasive across the eastern hellbender’s range, but the magnitude varies across populations.” *Id.* It also explained that “[a]lthough augmentation has the potential to influence the eastern hellbender’s status, little data exist as to whether successful sustained reproduction and recruitment can be achieved and whether augmentation is logistically possible at a broad scale.” *Id.* It noted that “[r]angewide, healthy populations are predicted to persist, although with a reduction in geographic range” and that the “eastern hellbender has a low to moderate risk of exposure to catastrophic events (disease or chemical spills).” *Id.*

The projections by scenario and ACU are further detailed in the following table contained within the SSA report, which findings are also described in the Listing Determination, showing the number of populations expected to be SR, D, and functionally or presumed extirpated (“X”):

10-Year Predictions															
	RW			MACU			OACU			TACU			KACU		
	RWP	ML	RBP	RWP	ML	RBP	RWP	ML	RBP	RWP	ML	RBP	RWP	ML	RBP
SR	61	119	179	0	0	0	16	51	84	40	54	77	4	13	18
D	106	154	158	3	3	5	4	55	46	82	79	98	18	18	9
X	402	297	234	2	2	0	229	143	119	137	126	84	35	26	31
25-Year Predictions															
	RW			MACU			OACU			TACU			KACU		
	RWP	ML	RBP	RWP	ML	RBP	RWP	ML	RBP	RWP	ML	RBP	RWP	ML	RBP
SR	55	115	178	0	1	2	15	48	71	40	58	91	0	9	13
D	103	102	125	3	3	3	15	40	37	81	54	63	4	4	22
X	413	353	268	2	1	0	220	161	141	138	147	105	53	44	22

AR at 134. At year twenty-five under the RWP scenario, the populations of eastern hellbenders would have significantly declined: no healthy populations persist in the MACU and the KACU, fifteen healthy populations would persist in the OACU, and forty healthy populations would persist in the TACU. *Id.* Rangewide, under the RWP scenario, the healthy populations of eastern hellbenders would decline by nearly sixty percent from the current number of healthy populations of 126 to fifty-five healthy populations in only two ACUs at year twenty-five; the population of eastern hellbenders would decline more than ninety percent from the number of known populations to have existed historically. *Id.* at 141.

At year twenty-five under the RBP scenario, however, the number of healthy populations of eastern hellbenders will increase by more than forty percent from the current number of healthy populations to a total of 178 healthy populations across all four ACUs: two healthy populations would persist in the MACU, seventy-one healthy populations would persist in the OACU, ninety-one healthy populations would persist in the TACU, and thirteen healthy populations would persist in the KACU. *Id.*

Finally, at year twenty-five in the most likely scenario, the number of healthy populations across all four ACUs will decrease by less than ten percent from the number of healthy populations currently to 115 healthy populations. *Id.* at 134. Populations of eastern hellbenders would persist in all four ACUs: one healthy population would persist in the MACU, forty-eight healthy populations would persist in the OACU, fifty-eight healthy populations would persist in the TACU, and nine healthy populations would persist in the KACU. *Id.* Rangewide, those figures amount to 115 healthy populations across all four ACUs, a decrease of less than ten percent from the number of healthy populations today. *Id.*

Having found, based on the information contained in the administrative record, that the eastern hellbender was not endangered or threatened throughout all or a significant portion of its range, FWS determined that a listing was not warranted. Listing Determination, 84 Fed. Reg. at 13,231.

### **PROCEDURAL HISTORY**

On July 1, 2021, Plaintiffs filed their complaint against Defendants. Dkt. No. 1. Plaintiffs allege that FWS's finding "failed to rely on the best scientific and commercial data available in several respects," rendering its decision "arbitrary and unlawful." *Id.* On November 8, 2021, Defendants filed their answer. Dkt. No. 21. On February 3, 2022, Defendants filed the administrative record with the Court along with a certification describing its contents and attesting to its completeness. Dkt. Nos. 26, 27.<sup>1</sup> Defendants filed supplemental

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<sup>1</sup> Plaintiffs filed a motion to compel Defendants to complete the administrative record and a memorandum of law in support of the motion identifying the records Plaintiffs believed were wrongly omitted. Dkt. Nos. 33–35. On June 17, 2022, Defendants filed a memorandum of law in opposition to the motion to compel Defendants to complete the administrative record, and Plaintiffs replied on June 24, 2023. Dkt. Nos. 36, 37. The Court heard oral argument regarding the motion on July 15, 2022. Dkt. No. 38. On July 18, 2022, the Court denied Plaintiffs' motion. Dkt. No. 39.

administrative record documents along with a certification describing the additional documents and attesting to their completeness on October 4, 2022. Dkt. No. 49.

On October 28, 2022, Plaintiffs filed their motion for summary judgment, a memorandum of law in support of the motion, and four declarations. Dkt. Nos. 55–60.<sup>2</sup> Defendants filed their cross motion for summary judgment, along with a memorandum of law in support of the motion, on February 3, 2023. Dkt. Nos. 65–66. Plaintiffs and Defendants each filed a reply memorandum in support of their motion to dismiss on March 3, 2023 and March 31, 2023, respectively.

### LEGAL STANDARD

Under Federal Rule of Civil Procedure 56, a court “shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the moving party is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). A fact is “material” if it “might affect the outcome of the suit under governing law.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). And “[a]n issue of fact is genuine if the evidence is such that a reasonable jury could return a verdict for the nonmoving party.” *WWBITV, Inc. v. Village of Rouses Point*, 589 F.3d 46, 49 (2d Cir. 2008). When parties move for summary judgment in an APA-based challenge to agency action, as is the case here, “the district judge sits as an appellate tribunal. The ‘entire case’ on review is a question of law.” *Am. Bioscience, Inc. v. Thompson*, 269 F.3d 1077, 1083 (D.C. Cir. 2001). It is therefore the case that “a district court’s procedural decision to award summary judgment is generally appropriate.” *Aleutian Cap. Partners, LLC v. Scalia*, 975 F.3d 220, 229 (2d Cir. 2020).

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<sup>2</sup> On October 14, 2022, parties filed a joint letter requesting waiver of the requirement of Local Civil Rule 56.1 that the parties file statements of material facts because the case would be decided on the basis of the administrative record, leaving no disputed facts for resolution. Dkt. No. 53. The Court granted the requested waiver. Dkt. No. 54.



The party seeking summary judgment bears the burden of demonstrating that “there is no genuine dispute as to any material fact.” Fed. R. Civ. P. 56(a). If the movant meets its burden, “the nonmoving party must come forward with admissible evidence to raise a genuine issue of fact for trial in order to avoid summary judgment.” *Jaramillo v. Weyerhaeuser Co.*, 537 F.3d 140, 145 (2d Cir. 2008). To survive summary judgment, the nonmoving party “may not rely on mere speculation or conjecture as to the true nature of the facts,” *Hicks v. Baines*, 593 F.3d 159, 166 (2d Cir. 2010) (internal quotation marks and citations omitted), and must “do more than simply show that there is some metaphysical doubt as to the material facts,” *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 586, (1986). The non-moving party “cannot defeat the motion by relying on the allegations in [its] pleading, or on conclusory statements, or on mere assertions that affidavits supporting the motion are not credible.” *Gottlieb v. Cnty. of Orange*, 84 F.3d 511, 518 (2d Cir. 1996) (internal citation omitted). But if “the party opposing summary judgment propounds a reasonable conflicting interpretation of a material disputed fact,” summary judgment must be denied. *Schering Corp. v. Home Ins. Co.*, 712 F.2d 4, 9 (2d Cir. 1983).

A court reviewing an agency decision is generally “confined to the administrative record compiled by that agency when it made the decision.” *Nat’l Audubon Soc’y v. Hoffman*, 132 F.3d 7, 14 (2d Cir. 1997); *see also Fed. Power Comm’n v. Texaco, Inc.*, 417 U.S. 380, 397 (1974); *Camp v. Pitts*, 411 U.S. 138, 142 (1973). FWS’s determination that a listing of the eastern hellbender under the ESA was not warranted is subject to review in accordance with the Administrative Procedure Act (the “APA”). *Am. Wildlands v. Kempthorne*, 478 F. Supp. 2d 92, 96 (D.D.C. 2007). Under Section 706 of the APA a reviewing court must set aside an agency’s decision if it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with

law.” 5 U.S.C. § 706(2)(A). The Court’s scope of review under the deferential “arbitrary and capricious standard” is “narrow.” *Dep’t of Commerce v. New York*, 139 S. Ct. 2551, 2569 (2019) (quoting *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)) (internal quotation marks omitted). An agency’s decision is arbitrary and capricious if it “has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *State Farm*, 463 U.S. at 43. Put differently, “so long as the agency examines the relevant data and has set out a satisfactory explanation including a rational connection between the facts found and the choice made, a reviewing court will uphold the agency action, even a decision that is not perfectly clear, provided the agency’s path to its conclusion may reasonably be discerned.” *Karpova v. Snow*, 497 F.3d 262, 268 (2d Cir. 2007). The Court may not substitute its judgment for that of the agency, *Dep’t of Commerce*, 139 S. Ct. at 2569, but must confine itself to determining whether the agency has engaged in “reasoned decisionmaking,” *Allentown Mack Sales & Serv., Inc. v. NLRB*, 522 U.S. 359, 374 (1998); *see also SEC v. Chenery Corp.*, 318 U.S. 80, 94 (1943) (“[T]he orderly functioning of the process of review requires that the grounds upon which the administrative agency acted be clearly disclosed and adequately sustained.”).

## DISCUSSION

Plaintiffs ask the Court to declare unlawful FWS’s April 4, 2019 not-warranted determination for the eastern hellbender, vacate the determination, remand to the agency with orders to make a lawful determination, and award Plaintiffs reasonable attorneys’ fees and costs. Compl. at 24. Plaintiffs challenge Defendants’ decision to issue the not-warranted finding as invalid under Section 702 of the APA, which requires an agency decision to be set aside if found

to be “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” Compl. at 23 (quoting 5 U.S.C. § 706(2)(A)). Plaintiffs advance five arguments in support of their claim: (1) FWS failed to articulate a rational and legal basis for its not-warranted determination; (2) FWS relied on unproven or uncertain future conservation measures in reaching its not-warranted determination; (3) FWS failed to consider the adequacy of existing regulatory mechanisms; (4) FWS’s definition of “a significant portion of its range” is arbitrary; and (5) FWS arbitrarily truncated consideration of the “foreseeable future” by limiting its analysis to twenty-five years. Dkt. No. 56.

Defendants cross-move for summary judgment and ask the Court to dismiss Plaintiffs’ complaint. Dkt. No. 65. Defendants argue that the not-warranted listing determination was reasonable, supported by the administrative record, and adequately explained. Dkt. No. 66 at 16. Defendants also argue that their technical and scientific expertise is owed deference, and that mere disagreement with their conclusions is insufficient to overcome Defendants’ motion for summary judgment. *Id.* at 17. Defendants do not challenge Plaintiffs’ standing to bring this action. The Court addresses each of Plaintiffs’ and Defendants’ arguments in turn.

### **I. FWS’ Consideration and Characterization of the RWP Scenario**

Plaintiffs first argue that Defendants offered an explanation for the not-warranted determination that ran counter to the evidence before the agency by ignoring or mischaracterizing the conclusions of the RWP scenario. Dkt. No. 56 at 19. Plaintiffs highlight the fact that under the RWP scenario, the eastern hellbender will be reduced to fifty-five healthy populations in twenty-five years, a decline of more than 90% from historical levels. *Id.* Plaintiffs also point out that under the RWP scenario, the eastern hellbender will be extirpated within ten years from nearly two-thirds of the states in its range. *Id.* at 20. According to Plaintiffs, the severity of redundancy loss is particularly concerning—the SSA report included a

finding that in the RWP scenario, extirpation is likely in each of the four ACUs on account of a catastrophic event—not only rendering the conclusion of the Listing Determination arbitrary and capricious, but also rendering it unlawful in its failure to sufficiently acknowledge this finding contained in the SSA report. *Id.* Plaintiffs argue that Defendants’ determination that a listing was not warranted in light of the RWP scenario was arbitrary and capricious and insufficiently explained. *Id.* at 21–23.

Defendants respond that they were under no obligation to list the eastern hellbender based on the RWP scenario alone; put differently, Defendants argue that its decision not to rely solely on the RWP is neither arbitrary nor capricious. Dkt. No. 66 at 24. Defendants point to the locations in the SSA report, which is referenced in the Listing Determination and contained in the administrative record, where they explain and discuss the RWP scenario. *Id.* at 25. Defendants also point to data in the SSA report, beyond just the RWP scenario, supporting the determination that a listing was not warranted. *Id.* Defendants further argue that Plaintiffs err by conflating the results of a catastrophic event with the likelihood that such an event would occur. *Id.* at 25. Finally, Defendants argue that Plaintiffs wrongly focus on the RWP scenario in isolation, when in fact the RWP scenario is properly utilized in conjunction with the RBP and ML scenarios based on the experts’ degree of confidence. *Id.* at 25–26.

The agency did not ignore evidence of the RWP nor did it reach a conclusion without explanation that ran “counter to the evidence before” it. *State Farm*, 463 U.S. at 43. FWS did not, as Plaintiffs allege, “disregard all the expert opinion on population viability, including that of its own expert[s] . . . and instead merely assert its expertise in support of its conclusions.” *N. Spotted Owl v. Hodel*, 716 F. Supp. 479, 483 (W.D. Wash. 1988). The Listing Determination itself reflects that the agency considered—and did not ignore—the risks to the eastern hellbender

in each of the ACUs individually and across all ACUs collectively in the event of the RWP scenario: The Listing Determination reflects that in MACU, there would be no healthy populations and in the event of a disease outbreak, ACU-wide extirpation would be likely; in OACU, there would be thirty populations and ACU-wide extirpation would be likely in the event of a catastrophic disease outbreak; in TACU, there would be 112 populations, and ACU-wide extirpation would be likely in the event of a catastrophic disease; and in KACU there would be four extant populations and no healthy populations and ACU-wide extirpation would be likely in the event of a catastrophic disease. Listing Determination, 84 Fed. Reg. at 13,228–29. The Listing Determination also contains a chart reflecting that under the RWP scenario the number of healthy populations would decrease from a little below 600 historically and approximately 126 currently to fifty-five at the twenty-five-year mark. *Id.* at 13,229.

The SSA report, which is referenced in the Listing Determination, *see* Listing Determination, 84 Fed. Reg. at 13,224, and included in the administrative record, and which the Court is permitted to review “to see whether the record supports the reasons offered,” *Ctr. for Biological Diversity v. Haaland*, 998 F.3d 1061, 1068 (9th Cir. 2021) (citing *Alaska Oil & Gas Ass’n v. Jewell*, 815 F.3d 544, 563 (9th Cir. 2016)), offers more detailed information. AR at 130–37 (outlining the projections for the RWP scenario by state, describing the RWP predictions using only populations with known status and trends, explaining how the RWP predictions were extrapolated to populations with unknown status and trends, and detailing the conditions needed for population health to increase or decrease in the future); *id.* at 138–50 (summarizing the results of the scenario analysis rangewide and by ACU, the implications of the scenario analysis for eastern hellbender viability rangewide and by ACU, and the uncertainty associated with the scenario analysis).

The Court also rejects Plaintiffs' argument that FWS's not-warranted determination ran counter to the evidence before it in light of the projections contained in the RWP scenario. Plaintiffs' argument amounts to the claim that, because under the RWP, the eastern hellbender would be reduced to fifty-five healthy populations in twenty-five years (a 90% reduction) and because in the event of a catastrophic event in each of the four ACUs extirpation would be likely, the agency was required to conclude that the eastern hellbender was either endangered or threatened, regardless of the likelihood that the RWP or a catastrophic event would occur over the twenty-five-year time period in each of the ACUs. The agency was not, however, required to accept the RWP as a likely case or to assume that there would be a disease outbreak in each of the four ACUs in determining whether the species would become extinct or threatened with extinction in the foreseeable future; it was also permitted to consider the likelihood of those results. The record before the Court reflects that it did precisely that. The administrative record reflects that FWS engaged with experts to formulate a range of scenarios, including the RWP scenario, and referenced the full dispersion of plausible outcomes in reaching its final Listing Determination. Listing Determination, 84 Fed. Reg. at 13,228 ("To assess the future number, health, and distribution of eastern hellbender populations, we asked species' experts for their predictions of the changes in the numbers of stable recruiting, declining, functionally extirpated, and presumed extirpated populations at 10-year, 25-year, and 50-year timeframes under three scenarios: Reasonable worst plausible, reasonable best plausible, and 'most likely' future plausible scenarios."). And the RWP scenario crafted by the experts was not ignored or downplayed in the SSA report, but was instead extensively articulated, explained, and discussed throughout it. Defendants therefore did not fail to acknowledge the RWP scenario or ignore any risks articulated within it.

Ultimately, FWS found that under the range of outcomes elicited from experts, a number of healthy populations would likely persist through year twenty-five across multiple ACUs. AR at 77 (“The number of healthy populations is predicted to increase by 41% total (n=178) over the next 25 years under the RBP scenario, while the number decreases by 57% (total n=55) under the RWP scenario.”). The Listing Determination explains precisely how the agency reached that conclusion and provides a rational, legal basis for that result. *See Karpova*, 497 F.3d at 268 (“[S]o long as the agency examines the relevant data and has set out a satisfactory explanation including a rational connection between the facts found and the choice made, a reviewing court will uphold the agency action, even a decision that is not perfectly clear, provided the agency’s path to its conclusion may reasonably be discerned.”). The agency did not elicit an RWP analysis—or an RBP analysis, for that matter—with a mind that such analysis would form the sole foundation for the agency’s prediction of the likelihood that the eastern hellbender would become endangered or threatened in the foreseeable future. The Listing Determination explains: “The reasonable worst plausible and reasonable best plausible scenarios provide the range of plausible outcomes while the ‘most likely’ predictions provide insights to whether the future scenarios are likely to be closer to the upper (reasonable best) or the lower (reasonable worst) predictions.” Listing Determination, 84 Fed. Reg. at 13,228. It further explains that “the ‘most likely’ scenario [was] not skewed toward the reasonable best or reasonable worst plausible scenario for each ACU, but for the number of extant populations, the ‘most likely scenario’ varies by ACU.” *Id.* In short, as the administrative record makes clear, the RWP and RBP scenarios were elicited to reduce anchoring and over-confidence problems. AR at 180. Having gone through that exercise, the agency reasonably reached the conclusion that the ML scenario was reliable and that the species population would decline over the ten-year time frame but then

level from year ten to year twenty-five. Listing Determination, 84 Fed. Reg. at 13,230. FWS's conclusion thus does not "contradict the science," *see Greater Yellowstone Coal., Inc. v. Servheen*, 672 F. Supp. 2d 1105, 1120 (D. Mont. 2009), *aff'd in part, rev'd in part on other grounds*, 665 F.3d 1015 (9th Cir. 2011), but rather, rationally reflects consideration of the RWP alongside other dimensions of the expert predictions elicited.

The agency also explained why it did not assume that there would be catastrophic events in each of the ACUs such that the species would be extirpated. It stated: "The risk of exposure to catastrophic events varies across the eastern hellbender's range." Listing Determination, 84 Fed. Reg. at 13,230. It also noted that there was a "low to moderate risk of a catastrophic event." *Id.* That low-to-moderate risk, combined with "the geographically wide distribution of populations, guards against catastrophic losses rangewide." *Id.* In short, FWS did not ignore the possibility that there would be a catastrophic event in the next twenty-five years in one or more of the ACUs. It confronted that possibility and explained why, even with the likely effects of such an event, the low-to-moderate risk of it occurring in each of the four ACUs did not render the eastern hellbender endangered or threatened.

## **II. The RBP Scenario and FWS' Reliance on It**

Plaintiffs next argue that FWS acted in an arbitrary and capricious manner and ignored the best available science and the evidence before it by considering augmentation and conservation efforts not yet implemented in crafting the RBP scenario and then by utilizing the RBP scenario to justify its decision not to list the eastern hellbender. Dkt. No. 56 at 23–26; Dkt. No. 67 at 6–9. Plaintiffs point to portions of the SSA report, which state that the conservation programs highlighted by Defendants in both the Listing Determination and the SSA report, including the artificial nest boxes and captive propagation efforts, either do not exist or have not yet demonstrated that they are effective. Dkt. No. 56 at 24–25. According to Plaintiffs, because



the effectiveness of the conservation programs is not sufficiently certain, FWS was not permitted to rely on the conservation efforts under its own Policy for Evaluation of Conservation Efforts When Making Listing Decisions (“PECE”). *Id.* at 27 (citing Policy for Evaluation of Conservation Efforts When Making Listing Decisions, 68 Fed. Reg. 15,100 (Mar. 28, 2003)). Plaintiffs point to numerous statements in the SSA report that connect the RBP outcomes to the success of the augmentation efforts, such as where the SSA report, in reference to the OACU states of Indiana, New York, Ohio, and Pennsylvania, reports that the “RBP is contingent upon successful augmentation and habitat enhancement. . . .” Dkt. No. 56 at 25 (quoting AR at 208). In Plaintiffs’ view, Defendants’ reliance on augmentation efforts that it could not properly rely on under its own policies render the listing determination unlawful. Dkt. No. 56 at 26.

Defendants argue that it was permissible for the experts to take conservation efforts into account because conservation efforts “are already operational and increasing the wild population: hundreds of hellbenders raised in captivity have been released to the wild, with hundreds more to follow; nest boxes have been ‘successfully’ used for reproduction.” Dkt. No. 66 at 27.<sup>3</sup> According to Defendants, the agency was permitted to consider the conservation efforts in their not-warranted listing determination because “the real question is whether the conservation

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<sup>3</sup> Defendants initially suggested in their Answer, but do not further argue in their briefs supporting their motion or opposing Plaintiffs’ motion, that the PECE policy was not applicable in this case because “PECE is an evaluation of formalized conservation efforts that are not applicable to the analysis for the eastern hellbender because FWS had no formal conservation agreements or plans to evaluate.” Dkt. No. 21 at 12–13. Although there is language in PECE to the effect that it applies to “*formalized* conservation efforts that have not yet been implemented or have been implemented, but have not yet demonstrated whether they are effective at the time of a listing decision,” PECE, 68 Fed. Reg. at 15,113 (emphasis added), the Court is skeptical that the PECE policy can be read to permit FWS to consider conservation efforts that are not sufficiently certain to be effective so long as they are not reflected in a formal plan. In other words, inclusion of the word “formalized” appears to limit the scope of conservation efforts that can be considered in a listing determination, not to exempt from scrutiny informal conservation efforts that are considered.

programs are currently operational, *i.e.*, whether they exist or are promised to be implemented in the future.” *Id.* Defendants argue that “the efforts and population-increasing effects are sufficiently concrete and not speculative so as to provide a rational basis for the experts, and thereby FWS, to conclude that conservation measures would be beneficial to the species’ populations under an RBP scenario.” *Id.* at 27–28.

The Court concludes that FWS’ consideration of the conservation efforts was arbitrary and capricious and not in accordance with law, and relied on improper factors. The ESA provides that, in making a listing determination, the agency is to “tak[e] into account those efforts, if any, being made by any State . . . or any political subdivision of a State . . . to protect such species,” including by conservation practices. 16 U.S.C. § 1533(b)(1)(A). The language “speaks only in the present tense in terms of ‘efforts, if any, being made,’ and not future efforts which have yet to be made.” *Or. Nat. Res. Council v. Daley*, 6 F. Supp. 2d 1139, 1153 (D. Or. 1998). To that end, FWS’s own policy limits it to considering only those future actions that are “sufficiently certain” to affect a species’ status. PECE, 68 Fed. Reg. at 15,114. That policy was adopted in response to the decision by some courts that prospective future conservation efforts or new conservation efforts with uncertain results could not serve as a valid basis for consideration in a listing determination. *See Biodiversity Legal Found. V. Babbitt*, 943 F. Supp. 23, 26 (D.D.C. 1996); *Sw. Ctr. For Biological Diversity v. Babbitt*, 939 F. Supp. 49, 52 (D.D.C. 1996); *Daley*, 6 F. Supp. 2d at 1153. In PECE, FWS outlines its view that the ESA requires it to “consider both current actions that affect a species’ status and sufficiently certain future actions—either positive or negative—that affect a species’ status.” PECE, 68 Fed. Reg. at 15,114. The policy distinguishes between formalized conservation efforts that are currently operational and have shown effectiveness, and those that have “yet to be implemented or ha[ve] recently been

implemented but ha[ve] yet to show effectiveness.” *Id.* The policy recognizes that conservation efforts and plans can be “an effective mechanism for conserving declining species and has, in some instances, made listing unnecessary.” *Id.* at 15,113.

PECE also recognizes, however, that “[i]n some situations, a listing decision must be made before all formalized conservation efforts have been implemented or before an effort has demonstrated effectiveness.” *Id.* In that situation, the policy states that FWS will consider a conservation effort that has yet to be implemented or has been recently implemented but has yet to show effectiveness if there is a “a high level of certainty that the effort will be implemented and/or effective and result[] in the elimination or adequate reduction of threats.” *Id.* at 15,114. If, however, a conservation plan contains “numerous conservation efforts, not all of which are sufficiently certain to be implemented and effective,” the efforts that are “not sufficiently certain to be implemented and effective cannot contribute to a determination that a listing is unnecessary or a determination to list as threatened rather than endangered.” *Id.* at 15,115. It offers that, if the listing process does not offer time to complete the development of a plan, a plan may nevertheless “serve as the foundation for a special rule under section 4(d) of the [ESA], which would establish only those prohibitions necessary and advisable for conservation of a threatened species, or for a recovery plan, and could lead to earlier recovery and delisting.”<sup>4</sup> *Id.*

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<sup>4</sup> Section 4(d) of the ESA provides the steps that FWS is required to take upon the determination that a species should be listed as threatened. 16 U.S.C. § 1533(d). “Whenever any species is listed as a threatened species pursuant to subsection (c) of this section, the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species.” *Id.* For every species listed as endangered or threatened, the Secretary of the Interior is required to develop and implement a recovery plan for the conservation and survival of the species. *Id.* § 1533(f)(1). Within the recovery plan, the Secretary of the Interior is directed to include “objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions of this section, that the species be removed from the list.” *Id.* § 1533(f)(1)(B)(ii).

The parties do not dispute that, to the extent that FWS considered conservation efforts that have not yet been demonstrated to be effective, PECE is applicable. In order to be considered in a listing determination, therefore, a current action must do more than just exist or in FWS's words, be "operational"—there must be some evidence that its operations will at the very least "affect" a species' status and its likely persistence. PECE, 68 Fed. Reg. at 15,114. If a policy is not already affecting a species' status, there must be evidence, and the agency must conclude, that the policy is sufficiently certain to be implemented and effective—"a high level of certainty that the effort will be implemented and/or effective and result[] in the elimination or adequate reduction of threats." *Id.* PECE commits FWS to "evaluate each effort individually and use the following criteria to direct [its] analysis" in evaluating the certainty that a conservation effort will be effective:

1. The nature and extent of threats being addressed by the conservation effort are described, and how the conservation effort reduces the threats is described.
2. Explicit incremental objectives for the conservation effort and dates for achieving them are stated.
3. The steps necessary to implement the conservation effort are identified in detail.
4. Quantifiable, scientifically valid parameters that will demonstrate achievement of objectives, and standards for these parameters by which progress will be measured, are identified.
5. Provisions for monitoring and reporting progress on implementation (based on compliance with the implementation schedule) and effectiveness (based on evaluation of quantifiable parameters) of the conservation effort are provided.
6. Principles of adaptive management are incorporated.

*Id.* at 15,115.

The record before the Court demonstrates that the agency considered conservation measures in reaching its not-warranted determination that had not yet been implemented and determined effective without concluding that those measures were sufficiently certain to be effective and thereby satisfied PECE. The Listing Determination reflects that FWS, in consultation with the experts, identified conservation efforts as a beneficial factor to the survival

of the species. Listing Determination, 84 Fed. Reg. at 13,226. The experts consistently ranked augmentation as one of the most important influences affecting the eastern hellbender's future status for each of the four ACUs. *Id.* at 13,228–29. The Listing Determination concludes: “Beneficial efforts, primarily of population augmentation, were also ranked by species’ experts as an important influence on the eastern hellbender’s status.” *Id.* at 13,228. Yet, the Listing Determination also reflects that these conservation efforts have not yet been demonstrated to be effective in augmenting the population of eastern hellbenders (at least on anything other than a momentary basis). The Listing Determination explains that there have been efforts at rearing eastern hellbenders in captivity and then releasing them into the wild but that “[FWS] currently ha[s] no data on whether released individuals have successfully reproduced or can successfully reproduce, or the survival rates of any resulting offspring.” *Id.* It states that “artificial nest boxes have been successfully used for reproduction by hellbenders in Ohio, West Virginia, Missouri, Virginia, and New York,” but that “the survival of fertilized eggs and larvae from these nest boxes is unknown.” *Id.* The Listing Determination also makes clear that eastern hellbenders “sexually mature at an age of approximately 5 or 6 years,” *id.* at 13,225, and that it is important to the survival of the species that the individuals are “long-lived,” *id.* at 13,227. It thus would appear that whether an individual hellbender would survive until age five or six, and beyond, when released from captivity, and whether the hellbender would be able to propagate, are critical questions. Yet, the record is silent as to how FWS reasoned from the facts that eastern hellbender could be raised in captivity and reintroduced into the wild and that individual members of the species could lay eggs in nest boxes to the conclusion that such conservation efforts are important influences on the future survival of the species.<sup>5</sup> Neither the Listing

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<sup>5</sup> Neither conservation effort is directly aimed at reducing sedimentation, identified by experts as

Determination, nor the SSA report that supports it, contains any indication that the agency considered whether the conservation efforts which had not yet been demonstrated effective were sufficiently certain to be implemented and to be effective.

Defendants make two arguments in response. First, Defendants claim that the conservation programs were properly considered in the listing determination because they were “currently operational” and “hundreds of hellbenders raised in captivity have been released to the wild.” Dkt. No. 66 at 27; *see also* Dkt. No. 68 at 6 (“[O]ngoing conservation efforts . . . , at a minimum, introduced hundreds of new hellbenders into the wild, with at least 1,605 more hellbenders on the way.”). Second, Defendants accuse Plaintiffs of making “the analytical error of relying solely on one scenario,” the RWP. Dkt. No. 68 at 6. Neither argument is persuasive. The administrative record does support that the captive propagation program has been successful in introducing captivity-raised eastern hellbenders into the wild. But by FWS’ own admission, the record contains no evidence that those eastern hellbenders will survive in the wild or beget successors. Thus, unless the conservation program is one that contemplates captivity-raised individuals perpetually being introduced into the wild such that new individuals are introduced into the population before the old individuals expire without propagating their replacements (a proposition not articulated by the agency), FWS points to no evidence or data to support that the

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the primary stressor to the eastern hellbender, *see* Listing Determination, 84 Fed. Reg. at 13,226, leaving open the possibility that the larvae from artificial nest boxes and adolescents released from captive propagation will have no material impact on the status of the species. The administrative record makes clear that Defendants themselves do not know whether the conservation efforts are “affect[ing]” the eastern hellbender’s status, thereby requiring Defendants to engage in the full sufficient certainty analysis prescribed in PECE, which they did not. *See* AR at 200 (“Conservation efforts are being informally implemented in many states throughout the range, but the effectiveness of those efforts and the likelihood of long-term continuation has not been evaluated to date.”).

conservation programs will be effective in achieving the goal FWS set for the efforts—to offset the effects of sedimentation and the other threats to the survival of the species.

FWS also cannot defend and has not defended its reliance on the conservation efforts on the grounds that it relied on those efforts only with respect to the calculation of the RBP and not with respect to RWP and ML. The administrative record itself makes clear that the agency relied generally on conservation efforts to reach its listing determination. The Listing Determination states that FWS, together with the experts, identified “Conservation Efforts” as a “beneficial facto[r] . . . which may influence population dynamics into the future.” Listing Determination, 84 Fed. Reg. at 13,226. It stated:

Beneficial efforts, primarily of population augmentation, were also ranked by species’ experts as an important influence on the eastern hellbender’s status. Captive rearing increases the survival rate of young by raising them in captivity to 2 to 4 years of age. Once reared, young are released into the wild to augment existing populations or are reintroduced into areas where the species have been extirpated. . . . In addition, artificial nest boxes have been successfully used for reproduction by hellbenders in Ohio, West Virginia, Missouri, Virginia, and New York.

*Id.* at 13,228. Further, in its summary of the projections of the numbers of healthy and extant populations over the foreseeable future, FWS identified “augmentation” as one of the “most important influences affecting eastern hellbender’s future status.” *Id.* The SSA report also notes, without reference to a particular scenario and while discussing the factors considered by the experts in the eastern hellbender’s future population dynamics, that “beneficial efforts were also ranked relatively high” in importance by the experts “and consisted primarily of population augmentation.” AR at 107.

Moreover, while the administrative record makes clear the undisputed fact that augmentation efforts were an essential component of the RBP scenario,<sup>6</sup> FWS has made clear

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<sup>6</sup> See AR at 148 (“[M]any of the future best-case scenario predictions assume that ongoing and

that its listing determination was not based solely on any particular scenario but rather on its analysis of all of the scenarios as a whole. *See, e.g.*, Dkt. No. 66 at 26 (“FWS reasonably concluded, based on the SSA report and the experts’ analysis of the RWP, RBP, and ML scenarios, that the eastern hellbender was not in danger of extinction, and not likely to become endangered . . . .”); *id.* at 25 (“FWS did not ignore the RWP or cast aside a warning; it considered it alongside the RBP and the assessments of scientists with expertise in the eastern hellbender’s biology, status, and trends across its historical range.”); *id.* at 25 n.7 (“FWS carefully considered the [ ] RWP (as well as the RBP and ML scenarios) for the MACU and concluded that listing the eastern hellbender in Missouri as an endangered distinct population segment was indeed warranted.”). Thus, if FWS considered improper factors in calculating the RBP, that error cannot be ignored or excused on the grounds that it affected the RBP alone and not the ultimate Listing Determination. Accordingly, the Court finds that Defendants’ reliance on the conservation efforts rendered unlawful its determination that a listing of the eastern hellbender was not warranted.

### **III. FWS’ Consideration of the Adequacy of Existing Regulatory Mechanisms**

Plaintiffs next argue that Defendants entirely failed to consider an important aspect of the problem by neglecting to consider the adequacy of existing regulatory mechanisms. Dkt. No. 56 at 27. As previously stated, the ESA mandates that when making a listing determination, FWS “[s]hall by regulation promulgated in accordance with subsection (b) determine whether any

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future population augmentation and habitat restoration efforts will be successful. Efforts to date have shown promise, but augmentation is still in its infancy and little data exist as to whether successful sustained reproduction and recruitment can be achieved and whether augmentation is logistically possible at a broad scale.”); *id.* at 208 (“RBP is contingent upon successful augmentation and habitat enforcement in IN, PA, NY, and OH.”); *id.* at 130 (“Successful augmentation and reintroduction, habitat restoration, and reduced persecution were cited as factors contributing to the RBP scenarios.”).



species is an endangered species or a threatened species because of any of the following factors: . . . (D) the inadequacy of existing regulatory mechanisms.” 16 U.S.C. § 1533(a)(1). Plaintiffs argue that the ESA, in stating that the agency “shall” make a listing determination because of “any” of the five factors, requires consideration of whether existing regulatory mechanisms are adequate. Dkt. No. 56 at 28. According to Plaintiffs, analysis of the adequacy of existing regulatory mechanisms is entirely absent from FWS’s not-warranted determination, rendering the not-warranted determination violative of the ESA. *Id.*

Plaintiffs’ argument that Defendants failed to consider the adequacy of existing regulatory mechanisms is without merit.<sup>7</sup> The Listing Determination reflects the process the agency followed: It evaluated each threat to the species individually and their expected effects and then analyzed the “cumulative effect of all of the threats on the species as a whole,” before considering “those actions and conditions that will have positive effects on the species such as any existing regulatory mechanisms or conservation efforts.” Listing Determination, 84 Fed. Reg. at 13,226. The agency plainly understood its obligation to consider existing regulatory mechanisms. In addition, as Defendants note, a section of the SSA report titled “State and Federal Laws,” summarizes the state and federal laws that might impact eastern hellbender populations. AR at 128–29. Among the state and federal laws listed are laws in several states protecting rare or non-game animals including the eastern hellbender from killing, sale, and possession; the Lacey Act Amendments of 1981, which make illegal the interstate or

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<sup>7</sup> Defendants initially asserted in their Answer that “[b]ecause FWS did not find that other factors contained in 16 U.S.C. § 1533(a)(1) were causing the species to be endangered or threatened, it did not need to evaluate the effect of regulatory mechanisms on the stressors listed under the other four factors.” Dkt. No. 21 ¶ 73. In their Memorandum of Law in support of their motion for summary judgment, however, Defendants argue that they did consider the adequacy of existing regulatory mechanisms in the SSA report which was incorporated into the listing determination by reference. Dkt. No. 66 at 32.

international sale of eastern hellbenders; and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (“CITES”), which requests the assistance of other countries in monitoring and controlling the sale of enumerated species, including the eastern hellbender. *Id.* The administrative record demonstrates that the agency considered existing regulatory mechanisms.

In addition, “the agency’s path to its conclusion [that the species was not endangered or threatened due to the adequacy or inadequacy of existing regulatory mechanisms] may reasonably be discerned.” *Karpova*, 497 F.3d at 268. Admittedly, FWS’s discussion of the existing regulatory mechanisms is not lengthy and FWS did not—in the Listing Determination—explicitly state that the existing regulatory mechanisms were not inadequate. It did not need to do so. The path to its conclusion was readily apparent. Subsection (D) of Section 1533(a)(1) of the ESA differs from subsections (A), (B), (C), and (E). The remainder of the subsections address factors that present a threat to the survival of a species, such as destruction or modification of the species’ habitat, overutilization for commercial purposes, disease or predation, or other natural factors affecting the species’ continued existence. Subsection (D), by contrast, addresses a factor that contributes to the species’ survival—the existence and adequacy of regulatory mechanisms. As a result, persuasive authority indicates that the agency need not consider subsection (D) “in isolation” and “without regard to whether there are any threats arising under the other provisions of § 4(a)(1).” *Friends of Blackwater v. Salazar*, 691 F.3d 428, 436 (D.C. Cir. 2012); *see also Rocky Mountain Wild v. U.S. Fish & Wildlife Service*, 2014 WL 7176384, \*10 (D. Mont. Sept. 29, 2014) (“The Service’s determination of whether additional regulatory protection of a species is necessary is inextricably linked to the Service’s threat determinations.”). “When considering the inadequacy of existing regulatory mechanisms in the

context of a petition to list a species, the question is whether the existing regulatory mechanisms are inadequate to prevent a species that is presumably decreasing in population from becoming threatened, endangered, or even extinct.” *Rocky Mountain Wild*, 2014 WL 7176384, at \*11. If, after “consider[ing] all the other types of threats listed in § 4(a)(1) and f[inding] no existing conditions such as disease or destruction of habitat threaten[] the []species,” the Service can “reasonably, indeed readily, conclude” that the species does not require additional regulatory protection. *Friends of Blackwater*, 691 F.3d at 436. As the D.C. Circuit has explained, any contrary conclusion would effectively impose a requirement that every species “either (1) be protected by regulations of some sort or (2) be classified as endangered or threatened.” *Id.*

It therefore is not individually fatal to FWS’s determination that it did not consider the existing regulatory measures in isolation. The Listing Determination reflects the agency’s understanding that regulatory mechanisms are to be considered after determining the threats to the species and their effects. Listing Determination, 84 Fed. Reg. at 13,226. FWS considered the remainder of the Section 4(a)(1) factors and determined that they did not present a threat to the species’ survival. Having reached that conclusion, there was no need for the FWS to isolate existing regulatory mechanisms and to explore whether they were adequate or not. Under FWS’s determination, no additional regulatory mechanisms were necessary for the species’ survival.

#### **IV. FWS’ Definition of a “Significant Portion of its Range”**

Plaintiffs argue that Defendants’ conclusion that the eastern hellbender is not in danger of extinction in a “significant portion of its range” was arbitrary and capricious in light of its conclusion that in the RWP scenario, the species would be left with no healthy populations in two of its four ACUs. Dkt. No. 56 at 29–30.

As noted, the ESA defines a species as endangered if, in the disjunctive, it is “in danger of extinction throughout (1) all, *or* (2) a significant portion of its range,” and defines a species as threatened when, again in the disjunctive, it is “likely to become an endangered species within the foreseeable future throughout (1) all or (2) a significant portion of its range.” 16 U.S.C. § 1532(6), (20) (emphasis added). The phrase “extinct[t] throughout . . . a significant portion of its range” is “something of an oxymoron.” *Defs. of Wildlife v. Norton*, 258 F.3d 1136, 1141 (9th Cir. 2001). A species is extinct when it “come[s] to an end” or has “no living representative.” *Id.* (quoting *Extinct*, Oxford English Dictionary). The statute thus is “inherently ambiguous.” *Id.* The phrase cannot be understood to mean that the species is threatened in enough of its range that the entire species will be in danger of extinction throughout its range without rendering the language “a significant portion of its range” surplusage. *Id.* at 1141–42. However, it also cannot refer to loss of a quantitatively large portion of the range while still making sense of the word “extinct”: “A species with an exceptionally large historical range may continue to enjoy healthy populations levels despite the loss of a substantial amount of suitable habitat.” *Id.* at 1143.

Confronted with the conundrum that Congress’s use of language sits “in some tension with ordinary usage,” *id.* at 1141, courts have granted the Secretary “a wide degree of discretion in delineating ‘a significant portion of its range,’” *id.* at 1145. In short, FWS must provide “some rational explanation for why the lost and threatened portions of a species’ range are insignificant before deciding not to designate the species for protection.” *Tucson Herpetological Soc’y v. Salazar*, 566 F.3d 870, 876–77 (9th Cir. 2009). It is not enough that the agency “point to one area or class of areas where [the species’] populations persist to support a finding that threats to the species elsewhere are not significant . . . .” *Id.* at 877.

The agency did not abuse its discretion or act contrary to law in deciding, articulating, or applying its chosen definition of “significant portion of its range” in this case. FWS identified that the ACU was the relevant unit to analyze in determining the range of the eastern hellbender and then analyzed whether the eastern hellbender was in danger of extinction or likely to become so in the foreseeable future in any of the ACUs. It concluded that “the eastern hellbender populations in MACU and KACU may have lower viability and greater vulnerability to potential future stressors than the other two ACUs.” Listing Determination, 84 Fed. Reg. at 13,230. It concluded that in MACU, in the event of a disease outbreak, ACU-wide extirpation is likely under the RWP scenario and is about as likely as not under the RBP scenario. *Id.* at 13,228. With respect to KACU, ACU-wide extirpation due to a disease outbreak was likely under the RWP scenario but the risk of catastrophic loss was lower under the RBP scenario. *Id.* at 13,229. In both, under the RWP scenario, no healthy populations would survive at year twenty-five. FWS then looked, however, to see whether those portions should be considered to be “significant,” and concluded that they were not. *Id.* FWS based its conclusion on the facts that (1) “these two units represent a small proportion (10% currently) of the total populations and have a small spatial extent”; and (2) even if the two units were lost, “the loss of this portion of the subspecies’ range would still leave sufficient resiliency, redundancy, and representation in the remainder of the subspecies’ range such that it would not notably reduce the viability of the subspecies.” *Id.* at 13,230–31.

FWS’s determination of what constitutes a “significant portion” of the eastern hellbender’s range is not “so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *Town of Southold v. Wheeler*, 48 F.4th 67, 77 (2d Cir. 2022) (quoting *State Farm*, 463 U.S. at 29). FWS acted reasonably, and was not arbitrary and

capricious, in choosing the ACU as the unit for analysis. FWS acknowledged that “[t]he range of a species can theoretically be divided into portions in an infinite number of ways.” Listing Determination, 84 Fed. Reg. at 13,230. There is nothing necessarily natural about the ACU unit of analysis; FWS could in theory have analyzed whether the eastern hellbender was likely to become extinct or endangered in a state or in a region of a state, rather than using the ACU. The state is a frame of analysis resorted to by Plaintiffs. See Dkt. No. 56 at 20 (arguing that within ten years, the species will be extirpated from 9 of 15 states within its range). However, there is nothing in the ESA that precludes the agency from using the ACU to conduct its “significant portion” analysis. As FWS also concluded, it had collected “substantial information” about the ACUs. Listing Determination, 84 Fed. Reg. at 13,230. Each ACU was identified based on genetic markers that delineated variations in genetic and ecological traits within the eastern hellbender’s historical range. *Id.* at 13,226. ACUs are defined by adaptive diversity, which is “important because it provides the variation in phenotypes and ecological settings on which natural selection acts. By maintaining these two sources of diversity across the species’ range, as well as the processes that drive evolution . . . the responsiveness and adaptability of the Eastern Hellbender over time is preserved.” AR at 37. It thus was reasonable and rational for FWS to use the ACU as a unit of measurement “given that the SSA report and the experts all analyzed the future prospects of the species on an ACU basis.” Dkt. No. 66 at 29.

FWS also acted rationally in determining that the two ACUs did not constitute a “significant portion” of the eastern hellbender’s range. It is not fatal to FWS’s determination that the two ACUs it concluded did not constitute a “significant portion” of the eastern hellbender’s range represent half of the ACUs in which the species persists. The other two ACUs have a greater percentage of the eastern hellbender population. “[I]t simply does not make sense to

assume that the loss of a predetermined percentage of habitat or range would necessarily qualify a species for listing.” *Norton*, 258 F.3d at 1143. It was reasonable for FWS to conclude that the loss of the eastern hellbender in those two ACUs would not be significant by virtue alone of the fact that it would leave only two other ACUs. The administrative record supports that MACU and KACU represent only 10% of current populations. Listing Determination, 84 Fed. Reg. at 13,230. The geographical extent of MACU is limited, encompassing only five streams entirely within a single state. AR at 77. While the geographic extent of KACU is larger, spanning three states, it still only includes forty occupied streams (less than one-third of the number of occupied streams in each of OACU and TACU). *Id.* The remaining two ACUs, OACU and TACU, are geographically large and widely dispersed; OACU spans nine states that feature 123 occupied streams, while TACU spans six states that feature 178 occupied streams. *Id.* And even under the RWP scenario, fifteen populations are anticipated to be healthy in OACU and forty populations are anticipated to be healthy in TACU at year twenty-five. *Id.* It is therefore not the case here that “the area in which the [species] is expected to survive is much smaller than its historical range.” *Norton*, 258 F.3d at 1145.

FWS also avoided concluding that the two ACUs were not significant because, even without them, the eastern hellbender would not face extinction in all portions of its range. *See id.* at 1141–42. Portions of the Listing Determination are based on the determination that the loss of the two ACUs would not alone threaten the subspecies. *See* Listing Determination, 84 Fed. Reg. at 13,231. In explaining why MACU and KACU did not qualify as significant, the Listing Determination states:

If both of these units were extirpated, the subspecies would lose some representation and redundancy, but the loss of this portion of the subspecies’ range would still leave sufficient resiliency, redundancy, and representation in the

remainder of the subspecies' range such that it would not notably reduce the viability of the subspecies.

*Id.* If this alone had been the exclusive explanation for why the ACUs were not significant, Defendants may have risked running afoul of *Norton*'s mandate not to adopt a definition of significance that was functionally identical to the entirety of the species' range. *See Norton*, 258 F.3d at 1142. However, FWS did not base its "substantial portion" determination on that fact alone, but also examined the quantitative significance of the two ACUs and their extent.<sup>8</sup> FWS found: "Historically and currently, these two units represent a small proportion (10% currently) of the total populations and have a small spatial extent." *Id.* at 13,230. The two concepts together support the agency's "significant portion" conclusion.

Plaintiffs' remaining arguments to the contrary are not persuasive. Plaintiffs argue that the agency erred because it did not "even address" the significant-portion-of-the-range question at the state level and failed to analyze whether the predicted disappearance of the eastern

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<sup>8</sup> For that reason, the Court rejects Plaintiffs' argument that FWS adopted an approach to significant that was "identical to its prior unlawful SPR definitions." Dkt. No. 56 at 32. Plaintiffs' reliance on *Center for Biological Diversity v. Jewell*, 248 F. Supp. 3d 946 (D. Ariz. 2017), is not persuasive. In that case, the defendants had applied a draft administrative construction of "significant portion of its range" that would deem a portion of a species' range significant only "if its contribution to the viability of the species is so important that, without that portion, the species would be in danger of extinction." *Id.* at 952. Without reaching the facts of the case, the court vacated the agency's twelve-month finding because the definition of "significant portion of its range" that the agency had developed in its draft policy "impermissibly render[ed] the SPR language of the ESA superfluous by limiting it to situations in which it is unnecessary," and therefore could not be validly relied upon in the twelve-month finding. *Id.* at 959. Here, the agency's reference to the eastern hellbender's viability outside the portion of the range analyzed required less to reach a finding of significance ("biologically important in terms of the resiliency, redundancy, or representation of the species," Listing Determination, 84 Fed. Reg. at 13,230, as opposed to "so important that, without that portion, the species would be in danger of extinction," *Jewell*, 248 F. Supp. at 952), and was only one component of its significance analysis. Alone, that component may have rendered the agency's definition of "significant portion of its range" in this case similar to the draft policy invalidated by the court in *Jewell*. But FWS also analyzed the spatial extents and population sizes of MACU and KACU. Listing Determination, 84. Fed. Reg. at 13,230–31.



hellbender in a number of states constitutes a significant portion of the range. Dkt. No. 56 at 31. Plaintiffs argue that, in the absence of a listing, there will be an “overwhelming loss of populations or the species’ extirpation from nearly two-third of its historic states.” *Id.* There are at least two flaws in Plaintiffs’ argument. First, Plaintiffs’ argument is based on a faulty foundation. Only in the RWP scenario did experts anticipate that the eastern hellbender would be extirpated from two-thirds of the states in its range. AR at 134. In the ML scenario, all four ACUs are projected to contain healthy eastern hellbender populations at year twenty-five. *Id.*

Second, the appropriate question under the APA is not whether the agency could have employed a different analysis, or if it could have analyzed whether the loss of the eastern hellbender in any or all of Alabama, Illinois, Indiana, Maryland, Mississippi, New York, Ohio, Tennessee, or Virginia, would constitute a significant portion of the range. Dkt. No. 56 at 31. At least in theory, it could have chosen to determine how many states or counties within the eastern hellbender’s range were significant and then determined whether there was a risk that the eastern hellbender would become extinct or threatened in those states or counties. Because several of the ACUs are home to more than one state, the analysis could have come to a different conclusion than the analysis conducted at the ACU level. That is precisely what Plaintiffs have demonstrated. The proper question under the APA and the ESA, however, is whether the unit of analysis that FWS chose—the ACUs—was arbitrary and capricious and whether it was inadequately explained. *See Norton*, 258 F.3d at 1145.

The Court cannot say that it was. As even Plaintiffs acknowledges, there is not a single metric that the ESA requires the agency to consider. Species do not, and therefore species protection may not, honor or follow political lines; the use of the ACUs here, meanwhile, was logical and reasonable. FWS vetted the geographic segmentation of the four ACUs with the

species' experts consulted for the SSA report, *see* AR at 24–25, and the experts used that segmentation to develop their projected RWP, RBP, and most likely scenarios, *see* AR at 58–64. Many of the streams that contain eastern hellbender populations cross state lines, further reducing the relevance of state boundaries in assessing the health of the eastern hellbender. AR at 100. It was not error to have not also conducted an analysis at the state level.

Plaintiffs also argue that FWS's "apparent willingness to deny protections to two populations [of eastern hellbenders] that will likely soon be recognized as distinct species . . . is also radically counter to the ESA's purposes" and violates the APA. Dkt. No. 56 at 30. It notes that there is evidence in the administrative record, from the study upon which FWS relied for its ACU-level analysis, that "hellbenders between the ACUs are in fact so genetically divergent that they comprise 'five distinct species which are each on their own evolutionary trajectories.'" *Id.* (citing AR at 6,574). On Plaintiffs' theory, because each of the ACUs is home to a genetically divergent variant of eastern hellbender, each ACU must necessarily represent at least a "significant portion" of the eastern hellbender's range.

The best measure of the ESA's "purposes" is the language that Congress used in drafting the ESA. *See Mei Xing Yu v. Hasaki Restaurant, Inc.*, 944 F.3d 395, 412 (2d Cir. 2019) ("Appeals to . . . congressional purpose are not a substitute for the actual text of the statute when it is clear." (citing *Magwood v. Patterson*, 561 U.S. 320, 334 (2010))). The purpose of the ESA is to conserve "endangered species and threatened species," 16 U.S.C. § 1531(b), not individual members of a species who might subsequently evolve to be recognized as a species. The statute requires FWS to consider whether a "species" will be "in danger of extinction throughout all or a significant portion of its range," *id.* § 1532(6), or "is likely to become endangered," *id.* § 1532(20). Species is a defined term. *See id.* § 1532(16).

It thus was not error or arbitrary and capricious for FWS to determine that the eastern hellbender was not in danger of extinction or likely to become endangered in a significant portion of its range without considering whether genetically divergent variants of the eastern hellbender that might be recognized as a species sometime in the future were in danger of extinction or of becoming endangered. Plaintiffs petitioned only for the hellbender, with the name *Cryptobranchus alleganiensis* to be listed as endangered or threatened. Listing Determination, 84 Fed. Reg. at 13,223. At the time of the Listing Determination, the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*) was one of only two subspecies of the hellbender recognized as a species—the other being the already listed Ozark hellbender (*Cryptobranchus alleganiensis bisophi*). *Id.* And the statutory scheme of the ESA requires only that the agency “make a finding as to whether . . . the *petitioned action* may be warranted,” 16 U.S.C. § 1533(b)(3)(A) (emphasis added), which in this case requires only that the agency make a finding as to whether a listing of the eastern hellbender as endangered or threatened in all or a significant portion of its range is warranted, and not whether any further variants of the eastern hellbender were at risk. If Plaintiffs believe a listing of a distinct population segment of the eastern hellbender is warranted, they can petition for the population segment to be recognized and listed as endangered or threatened.<sup>9</sup> It was not error or arbitrary and capricious for the agency to consider the petition for the relief that the petition requested.<sup>10</sup>

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<sup>9</sup> Plaintiffs do not challenge FWS’s election, on its own accord, to recognize the MACU eastern hellbender as a distinct population segment and list it as an endangered species. Listing Determination, 84 Fed. Reg. at 13,231–37.

<sup>10</sup> Plaintiffs’ reliance on *Tenn. Valley Auth.*, 437 U.S. 153, is misplaced. The Supreme Court there stated that the ESA made it “abundantly clear that the balance has been struck in favor of affording species the highest of priorities. . . .” *Id.* at 194. It did not say that the agency was required to consider variants that were not yet species and that the petitioner did not identify as a species.

## V. FWS' Definition of the "Foreseeable Future"

Plaintiffs argue that Defendants' use of twenty-five years as the outward bound of the "foreseeable future" was arbitrary, capricious, or otherwise not in accordance with law under the APA. Dkt. No. 56 at 33. Plaintiffs also argue that Defendants, in only considering projections for the next twenty-five years, entirely failed to consider the best data available to them as required by the ESA. *Id.*

The term "'foreseeable' is not defined by statute or regulation." *In re Polar Bear Endangered Species Act Listing and Section 4(d) Rule Litigation*, 709 F.3d 1, 15 (D.C. Cir. 2013). It thus is sufficient that the agency consider the timeframe over which the best available scientific information allows it to reliably assess the effect of threats on the species. *Id.* It is "of no moment" that the plaintiff "might have chosen a different period of foreseeability . . . so long as the agency's decision was justifiable and clearly articulated." *Id.* at 16. That approach is consistent with the rule issued by the Department of the Interior in August 2019, outlining its approach to defining the term "foreseeable future." *See* Endangered and Threatened Wildlife and Plants; Regulations for Listing Species and Designating Critical Habitat, 84 Fed. Reg. 45,020, 45,026 (Aug. 27, 2019). Although the effective date of the rule postdates the FWS' not-warranted listing determination for the eastern hellbender, the rule was issued to formalize principles that had been in place for many years. *Id.* The Department of the Interior defines the term "foreseeable future" as "only so far into the future as [FWS] can reasonably determine that both the future threats and the species' responses to those threats are likely." 50 C.F.R. § 424.11(d). Accordingly, FWS is not required to "identify the foreseeable future in terms of a specific period of time," and it considers the foreseeable future "on a case-by-case basis, using the best available data and taking into account considerations such as the species' life-history characteristics, threat-projection timeframes, and environmental variability." *Id.*

FWS's decision to use a twenty-five-year time period was justifiable and was clearly articulated, and therefore did not violate the APA or the ESA. FWS articulated the basis for the time period: "Predictions of the subspecies' response to threats, based on elicitation of species' experts, are reasonably reliable out to 25 years; therefore, we have concluded that 25 years is the foreseeable future for the eastern hellbender." Listing Determination, 84 Fed Reg. at 13,230. That conclusion was justifiable and finds support in the administrative record. Defendants initially sought expert predictions for the RBP, RWP, and ML scenarios at ten, twenty-five, and fifty-year intervals. *Id.* at 13,224. The experts consulted, one of whom was an author on the 2007 study cited favorably by Plaintiffs, were well-credentialed and the SSA report created with their input was reviewed by two additional experts. *Id.* The experts refused, however, to provide any scenario predictions for the fifty-year interval in four states, and expressed only 50% confidence in several others. AR at 192–94. In contrast, the experts were comfortable in providing scenario predictions across the entire range at the ten- and twenty-five-year intervals. *Id.* It was sufficient for FWS to state that its use of the twenty-five-year time frame was based on the view of the experts that twenty-five years was the longest period as to which the experts could make predictions that were reasonably reliable.

Plaintiffs argue that FWS's definition of foreseeable future "is contradicted by record evidence and is not based on the best data available." Dkt. No. 56 at 33. They complain that FWS's determination was "not, in fact, based upon *any* data, but on the experts' *predictions* and their discomfort with the outer time frames of those predictions." *Id.* (emphasis in original). That argument is without merit. Any analysis of events into the "foreseeable future" must be based on prediction or projection. There is no historical data for events that have not yet occurred. That does not mean that a prediction cannot find its basis in data. On Plaintiffs'

theory, every determination of foreseeable future would be arbitrary and capricious or unlawful because every determination of foreseeable future involves a projection with respect to events that have not yet occurred.

Plaintiffs further argue that twenty-five years is too short a time frame because eastern hellbenders commonly live longer than thirty years, and may even live beyond fifty years. *Id.* at 34. According to Plaintiffs, it understates the challenges presented to the eastern hellbender to limit the analysis to twenty-five years because “adults often survive degraded conditions better than young, looking at only twenty-five years arbitrarily excludes consideration of hellbender declines and extirpations related to poor or no reproduction and overestimates the species’ future viability.” *Id.* That argument presents a non-sequitur. That eastern hellbenders commonly live for more than thirty years does not mean that the experts can reliably predict the effect of threats to the species over that entire thirty-year time period. Nor does it mean that a thirty-year time period is necessary to address the impact of degraded conditions on the species’ viability. Plaintiffs offer no basis to believe that, with a population comprised of eastern hellbenders of varying ages, the experts were not able to make projections based on the effects of the threats posed to eastern hellbenders of all different ages. Under the ESA, threats are assessed not on an individual basis—whether an individual member of a species will survive based on the expected threats—but on a population-wide basis. Thus, that an individual member of the eastern hellbender species may live for thirty years or fifty years is not relevant if the experts cannot reliably predict the effect of threats on the species as a whole over more than a twenty-five-year time period.

Finally, Plaintiffs suggest that FWS violated its statutory duty to consider the best available scientific evidence because it did not use, or explain why it did not use, a stochastic

population model that had been used in a 2007 workshop meeting of hellbender experts to estimate population viability over a seventy-five-year time period. *Id.* at 34–35. FWS is required to make its listing determination “solely on the basis of the best scientific and commercial *data* available . . . after conducting a review of the status of the species.” 16 U.S.C. § 1533(b)(1)(A) (emphasis added). The statutory language of the ESA requires the agency to consider factual information such as measurements or statistics regarding the species. *See Data*, Merriam-Webster Online, <https://unabridged.merriam-webster.com/unabridged/data> (last visited Aug. 30, 2023) (“[F]actual information (such as measurements or statistics) used as a basis for reasoning, discussion, or calculation.”). Thus, for example, when FWS was considering whether to list the arctic grayling, it was error for the agency to have ignored a report that the species population was declining in concluding that it was actually increasing. *See Ctr. for Biological Diversity v. Zinke*, 900 F.3d 1053, 1068 (9th Cir. 2018). The court in that case concluded that “[a]lthough FWS has broad discretion to choose which expert opinions to rely on when making a listing decision, it cannot ignore available biological data.” *Id.* The statute does not require the agency to canvass every conceivable methodology for analyzing the impact of a threat on a species going forward and to discuss whether the methods it chose were superior to those it eschewed.

Here, the study emphasized by Plaintiffs reported the findings of a hellbender population and habitat viability assessment conducted at a four-day workshop in August 2006. *See AR* at 5,221. It did not contain data that Plaintiffs contend FWS ignored. Plaintiffs do not argue, nor could they, that the FWS was required to follow the methodology of the 2007 study. The seventy-five-year models was, as can be discerned from the administrative record, used at a single conference over fifteen years ago. That it was used on that occasion does not mean that it

had to be used forevermore. Of course, the agency was required to provide a justifiable and clearly articulated rationale for the methodology and time frame it did use. *See In re Polar Bear*, 709 F.3d at 16 (“That Appellants might have chosen a different period of foreseeability is of no moment so long as the agency’s decision was justifiable and clearly articulated.”). FWS did so. After experts refused to provide any scenario predictions for the fifty-year interval in four states and expressed only 50% confidence in several others at the fifty-year time horizon, but did provide scenario predictions across the entire range at twenty-five-year intervals, Defendants justifiably determined that the foreseeable future consisted of twenty-five years. AR at 192–94. It then articulated why it chose twenty-five years, briefly in the Listing Determination, Listing Determination, 84 Fed. Reg. at 13,228, and in greater detail in the SSA report, AR at 192–93. The fact that the time frame FWS used was not Plaintiffs’ preferred time frame does not mean that the agency violated the ESA or the APA. Defendants therefore did not err in defining foreseeable future based on the scope of the expert predictions.

## **VI. Vacatur and Remand**

Plaintiffs and Defendants disagree about the appropriate relief. Defendants argue that the Court should order a limited remand to FWS directing it to provide further explanation of its conclusions; the Court would then review the record with that further explanation. Dkt. No. 71. Plaintiffs, on the other hand, urge that the Court should both vacate the Listing Determination and also impose time limits for FWS to issue a new listing determination within 180 days. Dkt. No. 72.

“In the usual case, when an agency violates its obligations under the APA, we will vacate a judgment and remand to the agency to conduct further proceedings.” *Ward v. Brown*, 22 F.3d 516, 522 (2d Cir. 1994). Vacatur and remand “has long been held to be the appropriate remedy when, as here, an agency acts contrary to law” or when “agency action is found to be arbitrary



and capricious.” *New York v. U.S. Dep’t of Commerce*, 351 F. Supp. 3d 502, 673 (S.D.N.Y.), *aff’d in part, vacated in part, remanded sub nom. Dep’t of Commerce v. New York*, 139 S. Ct. 2551 (2019). Still, “remand for clarification remains a useful and appropriate device for determining that an agency has engaged in reasoned decision making.” *Local 814, Int’l B’hood of Teamsters, Chauffeurs, Warehousemen v. NLRB*, 512 F.2d 564, 567–68 (D.C. Cir. 1976). The D.C. Circuit, which has developed expertise in administrative law, has developed a two-part test for the “rare circumstances,” *City Club of N.Y. v. U.S. Army Corps of Eng’rs*, 246 F. Supp. 3d 860, 872 (S.D.N.Y. 2017), when remand without vacatur is appropriate: (1) there is “at least a serious possibility that [the agency] will be able to substantiate its decision on remand”; and (2) “the consequences of vacating may be quite disruptive,” *New York*, 351 F. Supp. 3d at 673–74 (S.D.N.Y. 2019) (quoting *Allied-Signal v. U.S. Nuclear Regulatory Comm’n*, 988 F.2d 146, 151 (D.C. Cir. 1993)).

Neither part of the two-part test is satisfied. FWS’s error here is not comparable to those in the cases Defendants cite in which a court found that a listing determination was “largely unobjectionable” and lacking only adequate explanation of two conclusions, *see Natural Resources Defense Council, Inc. v. Coit*, 597 F. Supp. 3d 73, 78 (D.D.C. 2022), that a three-page reversal of an agency’s prior determination was insufficient, *see Ctr. for Biological Diversity*, 998 F.3d at 1070, that the defendant agency had properly conducted a required analysis but failed to fully consider the analysis, *see Wyo. State Snowmobile v. Fish and Wildlife Service*, 741 F. Supp. 2d 1245, 1266 (D. Wyo. 2010), or that the defendant agency had not articulated a rational basis for one element of its conclusion, *see National Ass’n of Home Builders v. Kempthorne*, 2007 WL 9724575, at \*2, \*6 n.5 (D. Ariz. Mar. 12, 2007).<sup>11</sup> In each of those cases,

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<sup>11</sup> Defendants also rely on several cases that are not applicable here. In *Buffalo Field Campaign*

there was a serious possibility that the agency would be able to substantiate its decision on remand.

Here, while there is a possibility that FWS would be able to substantiate its decision on remand without reconvening the species' experts (by, for example, explaining how the conservation efforts satisfy PECE), the Court cannot say that such possibility is likely or serious or that it necessarily would be sufficient. On the record here, it appears that FWS's conclusion that a listing was not warranted was tainted by the experts' consideration of the conservation efforts without those efforts having satisfied PECE. Moreover, from the record here, it is by no means obvious or likely that such policy could be satisfied. The agency found that there was no

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*v. Zinke*, 289 F. Supp. 3d 103 (D.D.C. 2018), the court found the 90-day finding improper, and remanded to the agency to conduct a new 90-day finding. In other words, the court did vacate the challenged agency action even though that remedy did not consist of ordering a twelve-month finding. *Id.* at 105. In *American Forest Resource Council v. Ashe*, 946 F. Supp. 2d 1 (D.D.C. 2013), the plaintiff challenged a critical habitat designation that FWS conceded it “[did] not wish to defend,” and therefore made a motion for voluntary remand without vacatur. *Id.* at 43. The court granted the agency’s motion to remand without vacatur because the “critical habitat claims [had] not been fully briefed, and the administrative record as to those claims [had] not been filed. . . . [S]o the Court does not consider vacatur an option at this time.” *Id.* at 42. In *Defenders of Wildlife v. Kempthorne*, 535 F. Supp. 2d 121 (D.D.C. 2008), defendants had been directed by the court to amend their prior listing decision with further exploration of the adequacy of the regulatory mechanisms in place at the time of the listing determination. *Id.* at 127. The dispute in the opinion cited by the defendants centered on whether the appended analysis should have considered the regulatory mechanisms in place at the time of the original listing determination or at the time of the new listing determination. *Id.* The court had not reached the issue of whether the defendants properly relied on the regulatory mechanisms. *Id.* In *Building Industry Ass’n of Superior California v. Babbitt*, 979 F. Supp. 893 (D.D.C. 1997), the plaintiffs challenged FWS’ decision not to designate an area of a species range as a critical habitat after making the determination that the species should be listed. *Id.* at 906. In that case, the court made clear that it was not, in directing the agency to designate an area as a critical habitat or adequately explain why it had not designated an area a critical habitat, vacating the underlying decision to list. *Id.* The court noted that the ESA directs the Secretary of the Interior to, concurrently with listing a species as endangered or threatened, designate any habitat which is considered to be critical. *Id.* at 905. The court therefore held that the Secretary’s failure to designate a critical habitat was a distinct action that need not also invalidate the listing determination. *Id.* at 906.

data to support that the eastern hellbenders raised in captivity could successfully reproduce or that eggs fertilized in nest boxes could survive into reproductive age, *i.e.*, that the introduction into the wild of eastern hellbenders, or successful fertilization of eggs in nest boxes could generate any additional eastern hellbenders in the longer term or lead to the survival of the species. Nor is it clear that a conclusion that the augmentation efforts must be excluded from the analysis would not impact the agency's ultimate conclusions. The outcomes contemplated by the RWP scenario are stark—in the event it occurs, by year twenty-five no healthy populations would persist in two ACUs and the total number of healthy populations rangewide would have declined by more than 90% from historical levels, leaving the eastern hellbender vulnerable to complete extirpation on account of catastrophic events. AR at 134, 146. The conclusion that the conservation efforts will not be found to be effective with current information is by no means foreordained. It is the function of the agency to find the facts and reasonably determine whether there is a substantial certainty that the efforts will be effective. *Dep't of Commerce*, 139 S. Ct. at 2569. But the *Allied-Signal* test requires the Court to make an assessment of the likelihood that the agency will be able to substantiate its decision with an otherwise omitted explanation and Defendants have made no such showing here.

Second, Defendants have not demonstrated that the consequences of a vacatur will be quite disruptive. At oral argument, FWS argued that a vacatur will require FWS to begin the twelve-month process again, displacing valuable resources that would otherwise be used to determine whether other species are endangered or threatened. Dkt. No. 73 at 47. The Court does not underestimate that consequence of its decision; respect for administrative resources and expertise is one reason why courts tread with care in reviewing an administrative determination under the APA. *See State Farm*, 463 U.S. at 43; *Baltimore Gas & Elec. Co. v. Natural*

*Resources Defense Council, Inc.*, 462 U.S. 87, 105 (1983). At the same time, however, FWS's argument proves too much. In every FWS case in which a court identifies that the agency has acted in an arbitrary and capricious manner, the effect of a vacatur will be that the agency has to begin a process anew. The effect of adopting FWS's argument then would be to deprive the second prong of the *Allied-Signal* test of any meaning.

The sole remaining question is whether the Court vacates the Listing Determination with a further order that the agency act within time limits as Plaintiffs request. Dkt. No. 72 at 2 (requesting this relief); *see* Dkt. No. 1 at 24 (requesting that the Court order that FWS make a new listing determination within six months). Plaintiffs offer no authority that supports that request. There is authority for the proposition that when a court *stays* an order on remand and permits a challenged rule to remain in place pending the agency's further explanation for its action, the court can put a time limit on its action. *See Natural Resources Defense Council, Inc. v. EPA*, 489 F.3d 1250, 1263–64 (D.C. Cir. 2007) (Randolph, J., concurring). In that circumstance, the court acted within its authority—since the court has the power to vacate an administrative order, it surely can condition a stay of its decision to vacate on the administrative agency acting speedily. But Plaintiffs seek an order of vacatur not a limited remand for an agency explanation. And if the order is to be vacated then it will be up to the agency to follow the ESA and the APA, as it is empowered with discretion to do, and not up to the Court to impose time limits in advance.

### CONCLUSION

Plaintiffs' motion for summary judgment is GRANTED, and the Defendants' motion for summary judgment is DENIED. FWS's April 4, 2019 determination that a listing of the eastern hellbender as endangered or threatened is not warranted is vacated and the matter is remanded to FWS for further proceedings consistent with this Opinion and Order.

The Clerk of Court is respectfully directed to close Dkt. Nos. 55 and 65 and to close this case.

SO ORDERED.

Dated: September 5, 2023  
New York, New York

A handwritten signature in black ink, appearing to read "L. Liman", written over a horizontal line.

LEWIS J. LIMAN  
United States District Judge