

This case concerns the government’s decision to remove the gray wolf in Wyoming from the endangered species list. Plaintiffs Center for Biological Diversity, Defenders of Wildlife, Fund for Animals, Humane Society of the United States, Natural Resources Defense Council, and Sierra Club, in this consolidated case, challenge the September 30, 2012 decision of the United States Fish and Wildlife Service (“FWS” or “the Service”) to remove the wolves from the list under the Endangered Species Act (“ESA” or “the Act”). *See* Final Rule: Removal of the Gray Wolf in Wyoming from the Federal List of Endangered and Threatened Wildlife, 77 Fed.

Reg. 55,530 (Sept. 10, 2012) (“the 2012 rule”). The 2012 rule transferred management of the gray wolf in Wyoming from federal control to state control. *Id.*

Plaintiffs have moved for summary judgment, and they maintain that the decision was arbitrary and capricious because Wyoming’s regulatory mechanisms are inadequate to protect the species, the level of genetic exchange shown in the record does not warrant delisting, and the gray wolf is endangered within a significant portion of its range. Pls.’ Mot. for Summ. J. [Dkt. # 48] (“Pls.’ Mot.”) and Pls.’ Mem. of P. & A. in Supp. of Mot. for Summ. J. [Dkt. # 48-1] (“Pls.’ Mem.”).

The Court will grant plaintiffs’ motion for summary judgment in part and deny it in part and remand the matter back to the agency because it finds that the Service could not reasonably rely on unenforceable representations when it deemed Wyoming’s regulatory mechanisms to be adequate. Given the level of genetic exchange reflected in the record, the Court will not disturb the finding that the species has recovered, and it will not overturn the agency’s determination that the species is not endangered or threatened within a significant portion of its range. But the Court concludes that it was arbitrary and capricious for the Service to rely on the state’s nonbinding promises to maintain a particular number of wolves when the availability of that specific numerical buffer was such a critical aspect of the delisting decision.

BACKGROUND

I. Statutory Background

Congress passed the ESA in 1973 “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, [and] to provide a program for the conservation of such endangered species and threatened species.” 16 U.S.C. § 1531(b). An “endangered species” means any species that is “in danger of extinction

throughout all or a significant portion of its range,” while a “threatened species” means any species that 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 Secretaries of the Interior and Commerce are required to publish and maintain a list of all species determined to be endangered or threatened. *Id.* § 1533(c)(1). “The Secretaries have delegated this authority to FWS and the National Marine Fisheries Service, depending on the species at issue.” *In re Polar Bear Endangered Species Act Listing and Section 4(d) Rule Litigation*, 709 F.3d 1, 3 (D.C. Cir. 2013), citing 50 C.F.R. § 402.01(b).

The decision to list or delist a species under the ESA is governed by section 1533 of the Act. That section sets forth five factors the agency must consider when determining whether a species is 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.” 16 U.S.C. § 1533(a)(1). The agency must base its decision to list or delist a species “solely on the basis of the best scientific and commercial data available . . . 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 . . . to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices” *Id.* § 1533(b)(1)(A).

II. Factual and Procedural Background

A. Gray Wolves

Gray wolves have a complex and contentious history in the American west and northern Rocky Mountain (“NRM”) region. Federal and state legislators and regulators have endeavored

to harmonize demands that they manage the gray wolf population with efforts to maintain species viability as required under the ESA. *See, e.g.*, 16 U.S.C. § 1533(a)(1); 77 Fed. Reg. 55,530; Wyo. Stat. Ann. § 23-1-103 (2013). The geographic range of the species once spanned nearly all of North America, but its reach and population declined over time. *See* 77 Fed. Reg. at 55,535; Pls.’ Statement of Facts [Dkt. # 48-2] (“Pls.’ SOF”) ¶ 4. This was due in large part to human-caused mortality of wolves, which remains “the most significant factor affecting the long term conservation status of the wolf population.” 77 Fed. Reg. at 55,553. By 1930, gray wolves were largely exterminated in the western United States. Pls.’ SOF ¶ 5; Fed. Defs.’ Statement of Facts [Dkt. # 56-1] (“Fed. Defs.’ SOF”) ¶ 8. The most recent data suggests that there are now 1,774 gray wolves and approximately 109 breeding pairs in the northern Rocky Mountain region. 77 Fed. Reg. at 55,552; Pls.’ SOF ¶ 11; Fed. Defs.’ SOF ¶ 23.

Since the federal government has been involved with managing the gray wolf as an endangered species in and around Wyoming for decades, the traits and habitat of the gray wolf have been extensively researched. Gray wolves prey primarily on medium and large mammals, including elk, various species of deer, and other large, hoofed mammals. 77 Fed. Reg. at 55,535. They live in roaming packs that can include from two to twelve wolves, and each pack typically includes a breeding pair, defined as a male and female wolf capable of breeding offspring. *Id.* Litters are usually born in April, and in most years, eighty percent of pups survive until winter. *Id.*

B. Federal Management of the Gray Wolf and Delisting in the Northern Rocky Mountain Region

1. Recovery Efforts

The Service first designated the gray wolf in the northern Rocky Mountain region as endangered under the Act in 1973, and in 1980, it developed a recovery plan for wolves in the

region. 77 Fed. Reg. at 55,531; Pls.’ SOF ¶ 8; Fed. Defs.’ SOF ¶ 8. In 1987, FWS identified three recovery areas in the NRM most likely to support a recovered wolf population: northwestern Montana, central Idaho, and the Yellowstone National Park (“YNP”) area of northwest Wyoming.¹ Fed. Defs.’ SOF ¶ 10, citing AR 309² at 6995–97, 7027; Pls.’ SOF ¶ 8. The Service also established a recovery goal of a minimum of ten breeding pairs – defined as two wolves of the opposite sex and of an age capable of producing young – for a minimum of three consecutive years in each of the three recovery areas, for a total of thirty breeding pairs. 77 Fed. Reg. at 55,536; Fed. Defs.’ SOF ¶ 10; Pls.’ SOF ¶ 8.

In 1994, the Service revised the NRM recovery goal. It revised the definition of breeding pair³ and added a genetic exchange component to the numeric recovery goal:

Thirty or more breeding pairs comprising some 300+ wolves in a metapopulation (a population that exists as partially isolated sets of subpopulations) with genetic exchange between subpopulations should have a high probability of long term persistence.

1 Northwestern Montana is comprised of Glacier National Park; the Great Bear, Bob Marshall, and Lincoln Scapegoat Wilderness Areas; and adjacent public and private lands. Central Idaho is comprised of Selway-Bitterroot, Gospel Hump, Frank Church River of No Return, and Sawtooth Wilderness Areas; and adjacent, mostly federal, lands. The YNP area includes the Absaroka-Beartooth, North Absaroka, Washakie, and Teton Wilderness Areas; and adjacent public and private lands. 77 Fed. Reg. at 55,536.

2 Federal defendants filed the administrative record for this case on May 9, 2013. *See* Notice of Filing Administrative Record [Dkt. # 40]. Documents in the record relating to the 2012 delisting rule are Bates stamped with the “WY2012-” precursor followed by the Bates number. When referring to a document in the administrative record, the Court will use “AR” and the Bates number of the document.

3 It redefined breeding pair to mean an adult male and an adult female wolf that have produced at least two pups that survived until December 31 of the year of their birth, during the previous breeding season. 77 Fed. Reg. at 55,536.

77 Fed. Reg. at 55,536; *see* Fed. Defs.’ SOF ¶ 12; Pls.’ SOF ¶ 9. The Service indicated that it would be preferable if this genetic exchange were to be natural, but it authorized human assistance if necessary. 77 Fed. Reg. at 55,536–37.

The Service also designated two “nonessential experimental population recovery areas” under section 10(j) of the ESA to facilitate recovery and reintroduction efforts, one of which was the Greater Yellowstone Area (“GYA”). Fed. Defs.’ SOF ¶ 11. The GYA recovery area includes portions of southeastern Montana, eastern Idaho, and northwestern Wyoming, including Yellowstone National Park, Grand Teton National Park, wilderness areas, forest land, and other public and private lands. 77 Fed. Reg. at 55,542. The GYA comprises “one of the largest contiguous blocks of suitable habitat within the [northern Rockies] region.” 77 Fed. Reg. at 55,577; Pls.’ SOF ¶ 12; *see* Fed. Defs.’ SOF ¶ 14.

In 2000, the NRM wolf population reached the recovery goal of thirty breeding pairs and 300 wolves for the first time. 77 Fed. Reg. at 55,531. In 2002, FWS conducted a peer review of the 1994 recovery plan, which reaffirmed the plan and its recovery goals. 77 Fed. Reg. at 55,537. After 2002, the Service began looking at individual states as well as the previously identified recovery areas to measure progress because Montana, Idaho, and Wyoming each contain the “vast majority of one of the original three core recovery areas.” *Id.*; *see* Pls.’ SOF ¶ 9; Fed. Defs.’ SOF ¶ 16.

2. The 2003 Rule and Efforts to Delist in Wyoming

In 2003, after finding that gray wolf populations had recovered from the threat of extinction, FWS reclassified and delisted the gray wolf incrementally across three distinct population segments (“DPSs”). 77 Fed. Reg. at 55,531, citing 68 Fed. Reg. 15,804 (Apr. 1, 2003). This final rule was challenged and overturned. *Id.* The courts found that it was improper

for the Service to downlist from endangered to threatened entire population segments based only on the viability of a core population. *Id.*, citing *Defenders of Wildlife v. Sec’y, Dep’t of Interior*, 354 F. Supp. 2d 1156, 1172 (D. Or. 2005); *Nat’l Wildlife Fed’n v. Norton*, 386 F. Supp. 2d 553, 566 (D. Vt. 2005).

Also in 2003, the Service published an advanced notice of proposed rulemaking specific to the western DPS, which includes the northern Rocky Mountain region, stating its intent to delist the species because the recovery goal had been satisfied. 77 Fed. Reg. at 55,531, citing 68 Fed. Reg. 15,876 (Apr. 1, 2003). The notice explained that delisting would require the Service to consider threats to the species and what the states would put in place to address those threats. *Id.* In 2004, FWS determined that Idaho’s and Montana’s wolf management plans met the baseline requirements for delisting, but Wyoming’s did not. *Id.* Wyoming challenged this rule in court, but the case was resolved on procedural grounds. 77 Fed. Reg. at 55,531–32.

Following this, in 2005, Wyoming petitioned the Service to delist the gray wolf by recognizing a separate DPS for the northern Rocky Mountain region. 77 Fed. Reg. at 55,532. The Service denied this petition because it found that Wyoming’s 2003 measures still did not provide adequate protection for its portion of the wolf population. *Id.*, citing 71 Fed. Reg. 43,410 (Aug. 1, 2006). Wyoming contested this finding in federal court, but the challenge was rendered moot in 2007, after the state amended its regulations and management plan. *Id.*

3. The 2008 Rule

Upon review of Wyoming’s revised statutes and regulations, FWS promulgated a final rule recognizing the northern Rocky Mountain DPS and delisting the gray wolf in the NRM, this time including Wyoming. *Id.*, citing 73 Fed. Reg. 10,514 (Feb. 27, 2008) (the “2008 rule”). A number of environmental groups challenged the 2008 rule in federal court, and the U.S. District Court for the District of Montana enjoined the rule on grounds that FWS’s approval of

Wyoming's wolf management plan was arbitrary and capricious. *Defenders of Wildlife v. Hall*, 565 F. Supp. 2d 1160, 1174–75 (D. Mont. 2008) (granting preliminary injunction because of lack of evidence of genetic exchange between wolf subpopulations, because Wyoming did not commit to manage for 15 breeding pairs, and because the state's trophy game area, where wolves are managed as game animals subject to mortality quotas, was not fixed or permanent). The gray wolf reverted back to federal protection under the ESA for the entire NRM as a result. *See* 77 Fed. Reg. at 55,532.

4. The 2009 Rule

Following the court ruling, FWS initiated another rulemaking, and in 2009, it promulgated a rule delisting the gray wolf in Idaho and Montana but not in Wyoming. *Id.*, citing 74 Fed. Reg. 15,123 (Apr. 2, 2009) (the “2009 rule”). The agency again found Wyoming's wolf management plan to be inadequate to meet ESA delisting recovery requirements, and it recommended that the entire state be designated as a “trophy game area.”⁴ *Id.*; Fed. Defs.' SOF ¶ 26; Pls.' SOF ¶ 19. Environmental groups challenged the 2009 rule, and the U.S. District Court for the District of Montana vacated it. 77 Fed. Reg. at 55,532; *Defenders of Wildlife v. Salazar*, 729 F. Supp. 2d 1207, 1228 (D. Mont. 2010) (holding that the agency could not delist the species for only part of the DPS). Following this decision, Congress passed legislation requiring FWS to reissue the 2009 rule. 77 Fed. Reg. 55,532–33; Fed. Defs.' SOF ¶ 27. FWS complied, delisting the species in Idaho and Montana and leaving Wyoming as the only NRM state subject to ESA management requirements. 77 Fed. Reg. at 55,533, citing 76 Fed. Reg. 25,590 (May 5, 2011).

4 Wolves located in a designated trophy game area may be hunted as regulated by the Wyoming Game and Fish Commissions and Wyoming Game and Fish Department, which provide for methods of take, hunting seasons, and numbers of wolves that can be killed. 77 Fed. Reg. at 55,535, 55,558; *see also* Pls.' SOF ¶ 19 (explaining that wolves in the trophy game area are subject to regulated hunting seasons, bag limits, and authorized hunting methods).

At the same time, Wyoming challenged the fact that it was not delisted in 2009, and the U.S. District Court for the District of Wyoming ruled in favor of Wyoming. *Wyoming v. U.S. Dep't. of Interior*, 2010 WL 4814950, Nos. 09-CV-118J, 09-CV-138J, at *45 (D. Wyo. Nov. 18, 2010). The court rejected the Service's recommendation that the whole state be designated a trophy game area, and it remanded the rule back to the agency to reconsider whether Wyoming's regulatory framework would maintain its share of a recovered wolf population and provide adequate genetic connectivity. *Id.*; 77 Fed. Reg. at 55,533.

5. The 2012 Rule

In light of the 2010 decision from the District of Wyoming, FWS and Wyoming embarked on an effort to establish a regulatory regime within the state that would support delisting. 77 Fed. Reg. at 55,533. Their discussions were designed to address a series of concerns identified by the Service:

(1) The size and permanency of the Trophy Area; (2) conflicting language within the State statutes concerning whether Wyoming would manage for at least 15 breeding pairs and at least 150 wolves, exactly 15 breeding pairs and 150 wolves, or only 7 breeding pairs and 70 wolves; and (3) liberal depredation control authorizations and legislative mandates to aggressively manage the population down to minimum levels.

Id.

Wyoming revised its statutes and regulations as a result. It amended its statutes to make the "trophy game area" – where wolves would be managed as game animals and subject to regulated hunting – permanent in the northwest portion of the state. *Id.* It also amended its statute to require the state "to reasonably ensure at least ten (10) breeding pairs of gray wolves and a total of at least one hundred (100) individual gray wolves are located in this state outside of Yellowstone National Park and the Wind River Indian Reservation at the end of the current

calendar year.” Wyo. Stat. Ann. § 23-1-304(a); 77 Fed. Reg. at 55,535. Further, the state revised its regulations governing the taking of wolves. 77 Fed. Reg. at 55,535.

In light of these amendments, on October 5, 2011, the Service issued a proposed rule to delist the species in the state. 77 Fed. Reg. at 55,543, citing 76 Fed. Reg. 61,782 (Oct. 5, 2011); Fed. Defs.’ SOF ¶ 34. As part of this process, the Service commissioned a third-party peer review of the proposed rule, which involved five independently appointed scientists who conducted two reviews. 77 Fed. Reg. at 55,543, citing AR 855; AR 718–852; AR 853–953.

The first review of the newly enacted laws and regulations produced a set of conflicting opinions. Three of the five scientists found that Wyoming’s framework “followed the scientific literature and appropriate standards.” AR 858. Two dissenting scientists, Dr. Mills and Dr. Vucetich, found the references in the state’s materials to a minimum population “buffer” above the minimum number of wolves to be protected problematic because that buffer was vague and undefined. AR 860. Additionally, Dr. Vucetich contended that the plan lacked detail. AR 861. The peer review included a recommendation that Wyoming “fully explain how a monitoring program would allow swift corrective action to halt harvest . . . in the absence of a specified numerical buffer.” AR 862.

Wyoming responded to the initial peer review by issuing an Addendum to its Wyoming Gray Wolf and Management Plan (“the Addendum”). Fed. Defs.’ SOF ¶ 37; AR 878. The Addendum is a nine-page document that describes the state’s intention to consider various causes of wolf mortality in population management. 77 Fed. Reg. at 55,600; AR 877–885. It was

presented as a “clarification” of the state’s “commit[ment] to manage for a recovered, stable, and sustainable wolf population.” AR 878.⁵

The peer reviewers then conducted a second review that focused on the Addendum. AR 866. This review addressed “*solely* . . . whether the major issues previously raised by the panel have been sufficiently addressed.” *Id.* (emphasis in original). Responses from the second review split along the same lines as the first. The same three scientists who approved Wyoming’s framework in the first review were “fully assured” upon reviewing the Addendum “that the documents are well-prepared, based on the best available science (with a few minor suggested additions), and will support continued recovery of the population.” AR 855; Fed. Defs.’ SOF ¶ 39. Drs. Mills and Vucetich took issue with the lack of a specific numeric buffer as in the first review, and Dr. Vucetich maintained his position that the risk involved was undefined and that amendments to the state’s wolf management program were cosmetic and lacked detail. AR 861–62.

FWS incorporated Wyoming’s amendments and peer review into its proposed rule and provided for a public notice and comment period. 77 Fed. Reg. at 55,543. The 100-day period concluded before Wyoming’s amendments were finalized, so FWS reopened public comment on

5 The Addendum includes five primary components: (1) buffer management; (2) adaptive management; (3) genetics monitoring and management; (4) wolf mortality management; and (5) human-caused mortality rate estimation. AR 879–83. Part 1 of the Addendum provides that “a positive buffer is inherently built into [the] management and decision making processes” and lists several reasons why maintaining a recovery level wolf population will be in the state’s interest and capacity. AR 879–880. The state’s adaptive management plan, discussed in Part 2, refers to the state’s procedure for making annual adjustments to hunting guidelines during each “annual season setting process.” AR 881. Part 3 of the Addendum discusses the state’s goal to monitor and continually address the wolf population to uphold a minimum threshold of genetic connectivity across subpopulations. Parts 4 and 5 pertain to managing wolf mortality rates and emphasize the state’s ability to limit wolf mortality through regulation – for example, by restricting hunting permits if necessary. AR 883–84.

May 1, 2012 for fifteen days. *Id.* FWS received approximately 250,000 comments, and it has stated that it gave “the same review and consideration” to all comments. 77 Fed. Reg. at 55,545.

Ultimately, FWS concluded that the changes to the state’s regulatory framework supported delisting the gray wolf in Wyoming. *See, e.g.*, 77 Fed. Reg. at 55,545, 55,569, 55,552–53 (pointing to the establishment of a permanent trophy area, the seasonal expansion of the trophy area to protect dispersing wolves, the commitment to meeting the minimum recovery goal and to maintain a buffer above these minimum levels, plans to monitor and manage to provide adequate levels of genetic exchange, and changes to the state’s defense-of-property regulations). The Service explained that, “on the whole, we expect the statewide wolf population in Wyoming will be maintained well above minimum recovery levels,” and that earlier concerns had been remedied. 77 Fed. Reg. at 55,535. It published the 2012 final rule at issue here on September 10, 2012. 77 Fed. Reg. 55,530.

C. Procedural History

On November 13, 2012, plaintiffs in *Defenders of Wildlife v. Salazar*, 12-cv-1833, filed a complaint in this Court challenging the 2012 delisting rule and seeking declaratory and injunctive relief. On December 7, 2012, another set of plaintiffs filed *Humane Society v. U.S. Fish and Wildlife Service*, 12-cv-1965, seeking the same relief. The two cases were consolidated on December 21, 2012. Dec. 21, 2012 Order [Dkt. # 12]. On April 29, 2013, the Court permitted the Safari Club International and the National Rifle Association to intervene as defendants. Apr. 29, 2013 Order [Dkt. # 33]. On May 3, 2013, it permitted the State of Wyoming to intervene as a defendant. May 3 Order, 2013 [Dkt. # 37]. And on May 9, 2013, it permitted the Rocky Mountain Elk Foundation to intervene as a defendant. May 9, 2013 Minute

Order. Finally, on July 17, 2013, the Court granted the Wyoming Wolf Coalition permission to participate as amicus curiae. July 17, 2013 Order [Dkt. # 57].

On June 3, 2013, plaintiffs filed a motion for summary judgment, arguing that FWS violated its obligations under the ESA, that the 2012 rule should be set aside, and that ESA management of the gray wolf in Wyoming should be reinstated. Pls.' Mot. Defendants Secretary of the Interior Sally Jewell,⁶ FWS, and FWS Director Dan Ashe opposed the motion. Fed. Defs.' Mem. in Opp. to Pls.' Mot. for Summ. J. [Dkt. # 56] ("Fed. Defs.' Opp."). Defendant-intervenor the State of Wyoming also opposed the motion. Def.-Intervenor State of Wyo. Opp. to Pls.' Mot. for Summ. J. [Dkt. # 58] ("Wyo. Opp.") Defendant-intervenors the National Rifle Association of America, Rocky Mountain Elk Foundation, Inc., and Safari Club International and amicus curiae the Wyoming Wolf Coalition 2013 filed briefs opposing the motion. Def.-Intervenors Safari Club Int'l, Nat'l Rifle Ass'n, and Rocky Mountain Elk Found. Opp. to Pls.' Mot. for Summ. J. at 27 [Dkt. # 60]; Br. of Amicus Curiae Wyo. Wolf Coalition-2013 [Dkt. # 61]. Plaintiffs filed a consolidated reply to all the opposition briefs on August 20, 2013. Pls.' Reply in Supp. of Summ. J. [Dkt. # 64] ("Pls.' Reply"). The Court heard oral argument on the motion on December 17, 2013.

STANDARD OF REVIEW

Summary judgment is appropriate "if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). The party seeking summary judgment bears the "initial responsibility of informing the district court of the basis for its motion, and identifying those portions of the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if

⁶ Sally Jewell has replaced Kenneth Salazar as Secretary of the Interior and is substituted for her predecessor in office pursuant to Federal Rule of Civil Procedure 25(d).

any, which it believes demonstrate the absence of a genuine issue of material fact.” *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986) (internal quotation marks omitted). To defeat summary judgment, the non-moving party must “designate specific facts showing that there is a genuine issue for trial.” *Id.* at 324 (internal quotation marks omitted). The existence of a factual dispute is insufficient to preclude summary judgment. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247–48 (1986). A dispute is “genuine” only if a reasonable fact-finder could find for the non-moving party; a fact is only “material” if it is capable of affecting the outcome of the litigation. *Id.* at 248; *Laningham v. U.S. Navy*, 813 F.2d 1236, 1241 (D.C. Cir. 1987). In assessing a party’s motion, the court must “view the facts and draw reasonable inferences ‘in the light most favorable to the party opposing the summary judgment motion.’” *Scott v. Harris*, 550 U.S. 372, 378 (2007) (alterations omitted), quoting *United States v. Diebold, Inc.*, 369 U.S. 654, 655 (1962) (per curiam).

Listing determinations made under the Endangered Species Act are subject to judicial review under the Administrative Procedure Act. 5 U.S.C. § 706; *see also Am. Wildlands v. Kempthorne*, 530 F.3d 991, 997 (D.C. Cir. 2008) (“The Service’s listing determination is subject to review under the APA . . .”). Under the APA, a court must “hold unlawful and set aside agency action, findings, and conclusions” that are “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,” 5 U.S.C. § 706(2)(A); in excess of statutory authority, § 706(2)(C); or “without observance of procedures required by law.” § 706(2)(D). But the scope of review is narrow. *See Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). An agency’s decision is presumed to be valid, *see Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 415 (1971), and a court must not “substitute its judgment for that of the agency.” *State Farm*, 463 U.S. at 43. A court must be satisfied,

though, that the agency has examined the relevant data and articulated a satisfactory explanation for its action, “including a rational connection between the facts found and the choice made.” *Alpharma, Inc. v. Leavitt*, 460 F.3d 1, 6 (D.C. Cir. 2006) (citations omitted) (internal quotation marks omitted).

ANALYSIS

Plaintiffs allege that the decision to delist the wolves in Wyoming was made in violation of the Endangered Species Act, and that it is arbitrary, capricious, and otherwise not in accordance with law. They challenge the 2012 rule on three broad grounds: (1) that Wyoming’s statutory and regulatory regime is legally inadequate under the ESA, and that it was arbitrary and capricious for the FWS to find it to be acceptable; (2) that wolves in the Greater Yellowstone Area face an ongoing threat of inadequate genetic connectivity to other northern Rocky Mountain wolves and therefore are not eligible to be delisted; and (3) that FWS incorrectly determined that wolves are not imperiled throughout a “significant portion” of their range.

I. Wyoming’s Existing Regulatory Mechanisms Are Not Adequate

Section 1533(a)(1) of the ESA requires the Service to determine whether any species may be endangered or threatened due to, among other reasons, “the inadequacy of existing regulatory mechanisms.” 16 U.S.C. §1533(a)(1)(D). Plaintiffs contend that Wyoming’s regulatory mechanisms, which have governed gray wolves in the state since the 2012 rule took effect, are inadequate because they do not call for the maintenance of an enforceable buffer over the minimum wolf population that Wyoming is bound to maintain under state law. Pls.’ Mem. at 13–17. They also contend that the state’s laws governing lethal take permits, including permits for the taking of wolves that cause damage to private property, are flawed because they do not authorize the state to withhold permits in the event the population falls below the minimum requirement. *Id.* at 17–25. And they assert that these shortcomings affect other aspects of the

state's regulatory mechanisms, rendering the entire wolf management scheme to be inadequate. *Id.* at 25–28.

The Service's stated recovery goal for gray wolves in the northern Rocky Mountain region is "[t]hirty or more breeding pairs comprising some 300+ wolves in a metapopulation (a population that exists as partially isolated sets of subpopulations) with genetic exchange between subpopulations." 77 Fed. Reg. at 55,536. FWS divided the overall numeric goal among the three states that comprise the NRM, so Idaho, Montana, and Wyoming are each required to have a minimum of ten breeding pairs and 100 wolves. 77 Fed. Reg. at 55,537. And because the "numerical component of the recovery goal represents the *minimum* number of breeding pairs and individual wolves needed to achieve and maintain recovery," the 2009 rule requires that Montana and Idaho each maintain a fifty percent buffer above their individual minimum requirements. 77 Fed. Reg. at 55,538 (emphasis added). In other words, Montana and Idaho must each manage for at least fifteen breeding pairs and 150 wolves. This "buffer above the minimum recovery target" provides an "adequate safety margin, recognizing that all wildlife populations, including wolves, can fluctuate widely over a relatively short period of time." *Id.*

In delisting the gray wolf in Wyoming, though, the Service took a different approach. Rather than explicitly requiring the state to maintain a fifty percent buffer above its minimum goal, the Service recognized the fact that a significant portion of wolf habitat in Wyoming falls outside the jurisdiction of the state, in federally controlled park land and Native American reservations, and it determined that the wolf population in those areas within the state's borders could serve as the buffer. So the Service set a minimum goal for Wyoming of ten breeding pairs and 100 wolves – instead of the 15/150 as in Montana and Idaho – but explained that the wolves

found in Yellowstone National Park and on the reservation would not be counted towards achieving that goal.

The recovery goal requires at least 10 breeding pairs and at least 100 wolves per State. The new approach and agreement provides that this goal is met in Wyoming outside YNP and the Wind River Indian Reservation (large areas outside of State jurisdiction).

77 Fed. Reg. at 55,554.

The agency explained:

Nearly all wolf populations in Montana and Idaho occur in areas under State jurisdiction. Therefore, it makes sense for these States to manage for a statewide total. In Wyoming, a substantial portion of the wolf habitat and wolf population occurs in YNP, where the State has no jurisdiction Thus, it would be more difficult to manage for a statewide total.

Id.

The Service also concluded, though, that Wyoming would need to manage the population in state-controlled lands *above* the minimum requirement in order to *meet* the requirement. “Wyoming will, and *must*, maintain a buffer to consistently meet its minimum management targets.” 77 Fed. Reg. at 55,556 (emphasis added). But rather than identify a specific percentage or numeric buffer, as in Idaho and Montana, the Service relied upon the representations in the Addendum that Wyoming intended to manage above the minimum target to buffer the wolf population.

Wyoming is firmly committed to a population at least at these levels as reflected in State statute, regulations, and its management plan. In order to meet these goals and allow for continued management flexibility, Wyoming intends to manage for a population above its minimum management targets.

77 Fed. Reg. at 55,554; *see also id.* (explaining that given “Wyoming’s management approach (i.e., the State’s commitment to maintain at least 10 breeding pairs and at least 100 wolves, which the State intends to satisfy by managing for a buffer above these minimums) and . . . the

YNP wolf population's likely future abundance . . . , the original 15-breeding-pair and 150-wolf-minimum management targets will rarely, if ever, be compromised"). Based on these understandings, the Service found that Wyoming's regulatory scheme was adequate to secure the numeric component of the recovery goal.

Plaintiffs challenge the agency's reliance upon the nonbinding representations contained in the Addendum. They contend that an unenforceable statement of intent to manage the population above the minimum cannot constitute an adequate regulatory means for achieving the necessary buffer, which they maintain is an integral part of the mandated recovery goal. Pls.' Mem. at 14, citing 77 Fed. Reg. at 55,556.

It is important to note at the outset that plaintiffs are *not* challenging either the recovery goal of thirty breeding pairs and 300 wolves for the entire NRM or the individual state goal of a minimum of ten breeding pairs and 100 wolves for Wyoming. See Tr. at 16. They do not dispute that Wyoming is legally obligated under its own statutes to maintain at least ten breeding pairs and 100 wolves. See Wyo. Stat. Ann. § 23-1-304(a). And, they do not challenge the Service's reliance on the Yellowstone and Wind River reservation populations to help buffer the overall population and achieve numbers comparable to those in Montana and Idaho.⁷

Instead, the gravamen of plaintiffs' challenge is that Wyoming has not implemented a legally enforceable commitment that would satisfy the Service's requirement that the state maintain a buffer *above* the minimum requirement of 10/100 within its own territory in order to meet that minimum requirement: "[W]hat we are saying is they don't have a regulatory regime that is sufficient to assure that they meet the goal they themselves established." Tr. at 16; see

⁷ Plaintiffs do not dispute that the YNP and Wind River Indian Reservation will provide some additional wolf population to the state's minimum goal, though they contend none have satisfied the definition of a breeding pair. See Pls.' Mem. at 10 n.3 (noting that the Wind River Reservation typically contains a small number of wolves).

also Tr. at 16–18 (Plaintiffs’ counsel: “[T]he Service said you must – their word, not ours – must have something more than 10 and 100 in the areas where Wyoming is calling the shots, not the national parks, in order to make sure that you actually meet the 10 and 100 . . .”). Plaintiffs contend that FWS should have required Wyoming to enact a legally binding buffer above the minimum instead of relying on the nonbinding Addendum to ensure the state will manage above the minimum. Pls.’ Mem. at 14, citing 77 Fed. Reg. at 55,590. And they maintain that a statement of intent does not constitute a regulatory mechanism under the Act. Pls.’ Mem. at 14–15, citing *Or. Natural Res. Council v. Daley*, 6 F. Supp. 2d 1139, 1155 (D. Or. 1998) (holding that voluntary actions are necessarily speculative); *S.W. Ctr. for Biological Diversity v. Norton*, Civ. No. 98–934 (RMU/JMF), 2002 WL 1733618, at *9 (D.D.C. July 29, 2002) (holding that the operative question in addressing the adequacy of regulatory mechanisms under the ESA “is whether a set of regulations is concrete and specific enough to ensure that it will in fact be implemented”).

FWS has explained that it “decided against requiring Wyoming to provide a specific numeric buffer above the[] minimum management targets” because any buffer will necessarily change over time as mortality rates change in response to delisting and changing hunting quotas, and because of shifting population dynamics. 77 Fed. Reg. at 55,556. It contends that the ESA does not require that every part of the state’s management plan for a species be “binding and enforceable,” and that the ESA does not preclude the Service from considering management plans and other state pronouncements about how a state will manage a species after delisting. Fed. Defs.’ Opp. at 9–10. Further, the Service argues that its reading of the statute to permit it to consider all relevant information bearing on a state’s management and regulation of a species, including nonbinding commitments, is reasonable under the *Chevron* test. *Id.* at 7–10, citing

Defenders of Wildlife v. Kempthorne, 535 F. Supp. 2d 121, 130–31 (D.D.C. 2008) (upholding FWS’s consideration of individual management plans on state-owned lands); *Biodiversity Legal Found. v. Babbitt*, 943 F. Supp. 23, 26 (D.D.C. 1996) (holding that land management plans are valid considerations under Factor D, provided that the plans were in existence at the time the analysis is performed); *see also Tucson Herpetological Soc’y v. Salazar*, 566 F.3d 870, 881 (9th Cir. 2009) (ruling that FWS reasonably considered a conservation agreement and a management strategy, where the agency considered both its conservation benefits and limitations); *In re Polar Bear Endangered Species Act Listing and Section 4(d) Rule Litigation*, 794 F. Supp. 2d 65, 112 (D.D.C. 2011); affirmed 709 F.3d 1 (D.C. Cir. 2013) (upholding decision to list the polar bear as threatened based, in part, on adaptive management plans).

Meanwhile, the intervenor-defendant state of Wyoming takes a different approach in defending against this aspect of plaintiffs’ claim. It argues that it is not legally required to manage over the minimum requirement of ten breeding pairs and 100 wolves *at all*, and therefore, its regulatory scheme is adequate to meet the only demands imposed by the 2012 rule. *See Wyo. Opp.* at 22 (“The State is not legally required to manage for a specific numeric buffer in addition to the minimum management targets, but the State has the authority to do so, has committed to do so, and will do so.”); *see also Tr.* at 71 (THE COURT: “Okay. So your basic position is that our commitment to manage to 10, plus the park, meets the goals, done.” [Counsel for Wyoming]: “Correct.”).

Given these conflicting contentions, the Court must first ascertain what the Service determined was required of Wyoming as a condition of the delisting: that it maintain *at least* ten breeding pairs and 100 wolves outside Yellowstone and the Wind River Indian Reservation, as Wyoming asserted in oral argument and as is plainly required under Wyoming state law, or that

it maintain *more than* ten breeding pairs and 100 wolves, as plaintiffs contend. If FWS required the former, then there is no dispute that the state's laws bind Wyoming to meet the minimum. If FWS required the latter as a buffer, then the Court must consider whether the agency's determination that Wyoming's regulatory mechanisms are adequate to do so is reasonable.

A. FWS required Wyoming to maintain more than the minimum recovery population.

Based on its review of the 2012 rule and the entire set of materials published in the Federal Register explaining the delisting decision, as well as the record of this case as a whole, the Court finds that the Service expressly relied upon its understanding that Wyoming would maintain *more than* ten breeding pairs and 100 wolves within its jurisdiction as a necessary predicate for the delisting. It is true that in the 2012 rule, the Service pointed to the state statute that requires Wyoming to maintain “at least” ten breeding pairs and 100 wolves, 77 Fed. Reg. 55,535; *see also* Tr. at 38–39, but it did not find the regulatory scheme to be sufficient on that basis alone. The Service announced at the time the 2012 rule was promulgated that “Wyoming will, and *must*, maintain a buffer to consistently meet its minimum management targets.” 77 Fed. Reg. at 55,556 (emphasis added).

FWS emphasized that point repeatedly in the published justification for the 2012 rule. *See* 77 Fed. Reg. at 55,535 (“Wyoming agreed to maintain a population of at least 10 breeding pairs and at least 100 wolves Wyoming intends to maintain an adequate buffer above the minimum population”); *id.* at 55,538 (“Wyoming’s wolf population will be *further* buffered because WGFD intends to maintain an adequate buffer above minimum population objections”) (emphasis added); *id.* at 55,539 (“Wyoming also intends to manage well above these minimum required levels”); and *id.* at 55,555 (“Wyoming intends to meet its statutory and regulatory standards by managing for a buffer above the minimum management targets”). Indeed, when the

Court specifically asked at oral argument whether the Service had relied on Wyoming's voluntary management plans in making its decision, counsel for the federal defendants acknowledged that it did.

THE COURT: . . . If you are telling me, no, in our view 10 and 100 is sufficient as long as there's the national parks and that's not counted in the 10, we think that's sufficient, period[– y]ou don't need to get to all these nonbinding commitments about how we're going to manage, because we're satisfied with the binding commitment and the parks [–] then why are you spending so much time telling me how good Wyoming's voluntary plans are? Are you relying on them or are you not relying on them?

MR. EITEL: Sorry. We are relying on the plans. So it comes down to the state mandate of 10 and 100 in its law. And Fish and Wildlife took the next steps, and is it likely that that's going to be maintained in the future? So it did look at the regulations and the management plans, and typical Administrative Procedure Act case, making sure it has a good basis for its decisions, a rational basis, so it did look at all the factors that were out there. So to make the conclusion can Fish and Wildlife actually implement this law, manage the wolf population so it never drops below that minimum population.

Tr. at 40–41. Thus, the Court concludes that the challenged delisting decision did in fact rest, at least in part, upon the statements made by the state in the Addendum that it would be managing the species to achieve a goal of more than the ten breeding pairs or 100 wolves mandated by state law.

B. The Service cannot rely solely on an unenforceable promise as a basis to delist a species.

Since the decision to delist is expressly premised on the state's intention to manage to maintain a buffer *above* 10/100, the next question for the Court to resolve is whether it was proper for FWS to rely on nonbinding and unenforceable representations when it concluded that the state's plan was adequate to ensure that the state will in fact maintain the necessary number of breeding pairs and individual wolves.

There is little legal authority governing this question. The government points to *In Re Polar Bear* as the “best case” in support of its position that the FWS can rely on nonbinding assurances made by other entities as long as it has considered the entire set of facts and circumstances reasonably. See Tr. at 42, 49, citing *In re Polar Bear*, 794 F. Supp. 2d at 112; affirmed *In re Polar Bear*, 709 F.3d 1 (D.C. Cir. 2013). But as the district court noted in its *Polar Bear* opinion, in that matter, the agency explicitly stated that it was *not* relying on unenforceable promises in support of its decision. 794 F. Supp. 2d at 112. Here, the agency expressly relied upon unenforceable statements of intent on an issue that was critical to the delisting decision. And other courts in this district and elsewhere have suggested that such reliance would be unacceptable.

In *Biodiversity Legal Foundation v. Babbitt*, 943 F. Supp. 23, the plaintiffs challenged the denial of a petition to list a different species of wolf as endangered under the ESA. In its opinion remanding the action to the agency, the district court noted that “in multiple places, the record makes reference to possible future actions of the Forest Service to provide sanctuary for the wolf. Although the Secretary has every right to do this, he cannot use promises of proposed future actions as an excuse for not making a determination based on the existing record.” *Id.* at 26. The court found the agency’s consideration of possible future actions to be contrary to the statutory requirement that the agency base its endangerment determination upon its consideration of “existing” regulatory mechanisms, and “solely on the basis of the best scientific and commercial data available.” *Id.*, quoting 16 U.S.C. §1533(a)(1)(D) and (b)(1)(A).

In *Oregon Natural Resources Council v. Daley*, 6 F. Supp. 2d 1139, the district court rejected the agency’s finding that certain coho salmon were not threatened under the ESA. The plaintiffs attacked the decision on several grounds, including a claim that the FWS should not

have relied upon the anticipated results of the Oregon Coastal Salmon Restoration Initiative, which had not yet been fully implemented and which generally involved voluntary measures. The court found that the agency acted arbitrarily and capriciously by relying upon improper factors, and as the first step in that determination, it reviewed the statute to ascertain what types of measures the agency could appropriately consider. The court took note of the tension between various sections of the statute:

[O]ne section of the ESA requires the Secretary to consider five factors in a listing decision: the fourth factor is “the adequacy of existing regulatory mechanisms.” 16 U.S.C. § 1533(a)(1)(D). The next section of the ESA requires the Secretary to consider these five factors based upon the best available data “after taking into account those efforts, if any, being made by any State . . . to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices,” 16 U.S.C. § 1533(b)(1)(B)

The statutory reference to “existing regulatory mechanisms” in § 1533(a)(1)(D) is precise and unambiguous and, if standing alone, would preclude consideration of any future or voluntary conservation efforts which, by definition, are not “existing” or “regulatory.” However, the language of § 1533(b)(1)(B) concerning “efforts” and “other conservation practices” is much broader and, if standing alone, would permit the Secretary to consider non-regulatory efforts.

6 F. Supp. 2d at 1153.

With respect to future actions, the court agreed with the court in *Biodiversity Legal Foundation* that reliance upon future initiatives would contravene the statute since even the broad language of §1533(b)(1)(B) speaks only in the present tense of “efforts . . . being made.” *Id.* at 1153–54. The court found the question of whether the ESA permits consideration of voluntary measures to be more difficult, but it found:

for the same reason that the Secretary may not rely on future actions, he should not be able to rely on unenforceable efforts. Absent some method of enforcing compliance, protection of a species can never be assured. Voluntary actions, like those planned in the future, are necessarily

speculative. . . . Therefore, voluntary or future conservation efforts by a state should be given no weight in the listing decision.

Id. at 1155. And in *Center for Biological Diversity v. Morgenweck*, 351 F. Supp. 2d 1137, 1141 (D. Colo. 2004), a Colorado district court also found reliance upon future promises of action by the states to be problematic: “the law is clear that FWS cannot consider future conservation efforts in its review of the Petition.”

The *Polar Bear* litigation opinions do not stand for a contrary principle. In 2008, after extensive administrative proceedings, the Service issued a final rule designating the polar bear as a “threatened” species under the ESA. This prompted challenges from organizations that took the position that the listing was unsupported, as well as those that maintained that the agency had not gone far enough. According the agency the deference required by law, the district court issued a lengthy and detailed opinion evaluating each of the objections raised on either side of the issue, and it concluded that the decision was a reasoned exercise of the agency’s discretion based upon the facts and the best science available at the time the decision was made. *In re Polar Bear*, 794 F. Supp. 2d at 65.

The *Polar Bear* court devoted only one page of its 116 page decision to the question at issue here. And while it is true that the court declined to find that it was arbitrary for the agency to assume that the adaptive management principles employed by most polar bear countries would continue to be flexible enough to respond to population reductions in the future, *id.* at 112, one cannot read the opinion as a decision approving FWS reliance on unenforceable assurances. Certain plaintiffs had questioned the finding that the polar bear was not in danger of extinction due to overharvesting, and the court stated:

[T]he Court is not persuaded that FWS inappropriately relied upon uncertain future management actions when it reached this conclusion.

FWS expressly considered only existing mechanisms in making its listing determination for the polar bear.

Id., quoting AR 117,284 (“[I]n making our finding we have not relied on agreements that have not been implemented.”). The Court of Appeals upheld the decision, and it did not shed additional light on this issue. *See* 709 F.3d. 1.

In this case, the agency did not merely consider the nonbinding statements in the Addendum as one aspect of the state’s overall regulatory scheme: two out of five of the original peer reviewers found the regulatory mechanisms to be inadequate in the absence of a buffer, and the Addendum was submitted by the state in response. The record reflects that FWS specifically relied on the representations in the Addendum as the basis for its conclusion that Wyoming would do what the agency had determined that it must do: manage above the 10/100 minimum. The Court finds that under those circumstances, the reliance on mere assurances was inappropriate, and it rendered the FWS decision arbitrary and capricious.⁸ This opinion does not go so far as to hold that the FWS may not ever consider nonbinding statements as part of the mix when assessing the adequacy of a set of regulatory mechanisms as a whole; it finds that it was unreasonable in this instance for FWS to determine that it was necessary for Wyoming to manage for more than ten breeding pairs and 100 wolves as a condition for delisting but then

⁸ In *Greater Yellowstone Coalition, Inc., v. Servheen*, 665 F. 3d 1015, 1030–31 (9th Cir. 2011), the plaintiffs raised concerns similar to those here that the Service had relied upon too many measures that were not legally binding when delisting the grizzly bear. But the court declined to reach the question of whether a voluntary, unenforceable measure could constitute a “regulatory mechanism” under §1533(a)(1)(D); instead it ruled that even if the Service’s consideration of the voluntary and unenforceable components of the multi-state conservation plan was error, the determination could be upheld based upon legally binding components alone. That option is not available here since the delisting decision depends expressly upon the state’s commitment to manage above the 10/100 minimum number.

accept a plan that did not commit to that.⁹ See *Colorado River Cutthroat Trout v. Salazar*, 898 F. Supp. 2d 191, 207–08 (D.D.C. 2012) (“while the FWS cannot rely on promised and unenforceable conservation agreements in evaluating regulatory mechanisms . . . its consideration of the Conservation Strategy as part of its overall assessment of ongoing management practices is not inappropriate.”).¹⁰ Accordingly, the Court holds that the Service’s determination that Wyoming’s regulatory scheme was adequate under the ESA was arbitrary and capricious.¹¹

II. FWS’s Analysis of the Species’ Genetic Connectivity is Reasonable

As explained above, the Service’s recovery goal includes a genetic component in addition to the numerical components. 77 Fed. Reg. at 55,536–37 (requiring “genetic exchange between subpopulations”). Genetic connectivity refers to the ability of wolf packs to breed across a designated range, and genetic exchange refers to the ability of new genes to enter into a subpopulation, whether by natural dispersal or with human assistance, to minimize “negative

⁹ The Court emphasizes that this ruling does not mean states cannot use flexible, adaptive management practices, such as setting hunting quotas or lethal take permits, in managing a species. *In re Polar Bear*, 709 F.3d 1 (D.C. Cir. 2013) (upholding listing rule that was based in part on Service’s consideration of nonbinding aspects of a regulatory framework).

¹⁰ In the *Colorado River Cutthroat Trout* case, environmental groups sought review of a finding by the FWS that listing the trout species as threatened or endangered under the ESA was not warranted, and the district court upheld the agency’s decision. Plaintiffs alleged that the agency had relied improperly on the Colorado River Conservation Strategy – voluntary measures undertaken in conjunction with the states – but in that case, unlike the case at hand, the FWS specifically disclaimed any reliance on those agreements. See 898 F. Supp. 2d at 207 (“In its Not Warranted Finding, the FWS noted that the voluntary agreements under the Conservation Strategy ‘do not qualify as a regulatory mechanism’ and that the FWS could not base its finding on a ‘promised or anticipated result of conservation actions[.]’”). The court also noted that there was no evidence that the FWS relied on the strategy indirectly in reaching its conclusion. *Id.*

¹¹ Because Wyoming’s regulatory scheme is inadequate for failing to legally obligate the state to manage the species at the levels FWS determined necessary to warrant delisting, the Court does not reach the question of whether other provisions within the scheme, such as those governing lethal take permits, are adequate.

effects of genetic drift and inbreeding depression.” 77 Fed. Reg. at 55,564; *see also* Fed. Defs.’ Opp. at 26, quoting AR 232 at 4166–67 (“[G]ene flow from one population to another can maintain and substantially increase variation in local populations.”). The 2012 rule provides that, “[a]s a general rule, genetic exchange of at least one effective migrant (i.e., a breeding migrant that passes on its genes) per generation” qualifies as sufficient genetic exchange to warrant delisting. 77 Fed. Reg. at 55,593. Plaintiffs challenge the Service’s determination that this standard has been met and that wolf dispersals will diminish under state management. Pls.’ Mem. at 28–39.

Data in the record show that from 1992 to 2008, there were documented dispersals of five radio-collared wolves naturally entering the Greater Yellowstone Area, two of which were confirmed to have bred. 77 Fed. Reg. at 55,593. According to FWS, it is likely that these numbers understate the actual dispersal and breeding numbers:

Because only 20 to 30 percent of the NRM wolf population has been radio-collared, it is reasonable to assume several times the documented number of radio-collared wolves likely entered the GYA. On average, about 35 percent of dispersing wolves reproduce Because a wolf generation is approximately 4 years, dispersal data indicate that more than one effective migrant per generation has likely entered into the GYA wolf population.

Id. Based on this information, FWS estimated an average of approximately one-and-a-half effective migrants into the GYA per generation since reintroduction. *Id.*

Genetic studies in the record also show that from 1995 to 2004, a minimum of 0.42 natural effective migrants entered the GYA per generation. *Id.* The 2012 rule states that this number underestimated the actual effective migrants because “only about 30 percent of the NRM wolf population was sampled.” *Id.* One expert stated that the 0.42 number was “almost certainly low by at least half.” *Id.*, citing Hebblewhite article at AR 2875 (stating the “minimum estimate of 3–5 migrants per generation was, the authors note, almost certainly low by at least half

because only about 30% of the wolves were sampled,” and because the wolf population has doubled in size and expanded in space since the study ended, “even more migrants are expected at the present time”). The Service extrapolated the data showing 0.42 natural effective migrants to conclude that it supported a finding of at least one effective migrant per generation. *Id.* The Service thus determined that the record showed sufficient genetic exchange to satisfy the recovery goal.

Plaintiffs focus their challenge of the Service’s findings on the genetic studies in the record. They contend that the Service’s extrapolation of the 0.42 statistic was improper because one of the co-authors of the study that documented the statistic, YNP wolf biologist Dan Stahler, disagreed with another scientist’s view that the statistic was low by at least fifty percent. Plaintiffs cite an email from Stahler, Pls.’ Mem. at 31, in which he wrote:

I suggest not using Hebblewhite et al. 2010 comment that our estimate of effective migration/generation is low by at least 50% I am unaware of any such data or theory to support this specific claim. In other words, it would not be necessarily accurate (certainly not based on supporting data) to say that because we showed 3 to 5 effective migrants per generation and we sample 30%, then there must be really 6–10 migrants per generation.

AR 5865.

Plaintiffs cite *Carlton v. Babbitt*, 26 F. Supp. 2d 102, 109–10 (D.D.C. 1998), and *Defenders of Wildlife v. Babbitt*, 958 F. Supp. 670, 685 (D.D.C. 1997), in support of their argument. In *Carlton*, the court ruled it was unjustified for the Service to rely on a study conducted on a large population of grizzly bears to make a mortality determination for a much smaller population of grizzly bears. *Carlton*, 26 F. Supp. 2d at 109–10. The study itself warned that the concept of “sustainable yield” discussed in the study “is not independent of the size of the population in question,” and the author explained in a separate thesis why the figure the

Service relied on in its determination should not be used for smaller populations. *Id.* at 109 (internal quotation marks omitted).

In *Defenders of Wildlife v. Babbitt*, the court ruled that FWS consistently ignored the analysis of its expert biologists in declining to list the Canada lynx as endangered or threatened. 958 F. Supp. at 685. There, FWS declined to list the Canada lynx under the ESA, even though FWS's Region 6 recommended listing the species and even though "not a single biologist or Lynx expert employed by the FWS disagreed with the recommendation of the Region 6 biologists." *Id.* at 676. In rejecting the 50-page recommendation, the acting director of the Service issued a 5-page memorandum that cited no scientific study or Lynx expert, but merely stated a number of conclusions that directly contradicted the conclusions of the Region 6 biologists. *Id.*

This case is not like *Carlton*, where the Service used a study of one population to reach conclusions about another. Here, the study in question is a genetics study of the same NRM wolves: it analyzed DNA samples from 555 NRM wolves from the three recovery areas. AR 11,355–86. And while in *Carlton*, the author of the study specifically warned against applying its conclusions to a different population, here, the author of the study recognized that some extrapolation from the 0.42 number would be appropriate: "It is safe to say that the true number of effective migrants into each recovery area is more, but by how much is difficult to say." AR 5865. Stahler did not support adopting Hebblewhite's specific suggestion that the estimate was low by at least fifty percent, but his disagreement centered on the ability to quantify the difference, not the fact that the data in his study was understated to some degree: "I'm not saying it isn't possible to be as high as this (or higher in recent years), but making statements like

this that is not supported by data could create problems and I personally am uncomfortable presenting our vonHoldt et al. 2010 data this way.” *Id.*¹²

Moreover, this case is not like *Defenders of Wildlife v. Babbitt*, in which the Service completely ignored the scientific data before it and issued a rule without any scientific underpinnings. The vonHoldt study co-authored by Stahler analyzed DNA samples of NRM wolves and found that the “population maintained high levels of variation . . . with low levels of inbreeding” and “detected genetically effective dispersal among the three recovery areas.” AR 11355. Again, the issue is not whether there has been genetic exchange, but how much.

The Supreme Court has held that where a determination “requires a high level of technical expertise, [a court] must defer to the informed discretion of the responsible federal agencies.” *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 377 (1989), quoting *Kleppe v. Sierra Club*, 427 U.S. 390, 412 (1976) (internal quotation marks omitted). Although the “presumption of agency expertise may be rebutted if its decisions, even though based on scientific expertise, are not reasoned,” *Defenders of Wildlife v. Babbitt*, 958 F. Supp. at 679, citing *ALLTEL Corp. v. FCC*, 838 F.2d 551, 562 (D.C. Cir. 1988), the Court cannot find based on the record before it that FWS’s determination is not well reasoned. The record data show that known genetic exchange in the GYA has in fact occurred at a level of 0.42 natural effective migrants per generation, and scientists – including the scientist who calculated that number – agree that it understates the actual level of genetic exchange. It was not unreasonable for the Service to extrapolate that statistic based on the sample size across the total population to conclude that there has been sufficient genetic exchange to support delisting. The Court finds

¹² Plaintiffs complain that FWS failed to cite Stahler’s warning in the 2012 rule. Although the rule does not quote the email from Dan Stahler, it does cite the email in its discussion of extrapolating the numbers from the vonHoldt study. See 77 Fed. Reg. at 55,593.

that this aspect of plaintiffs' complaint amounts "to nothing more than competing views about policy and science," *In re Polar Bear*, 794 F. Supp. 2d at 69, and therefore, the 2012 rule will not be invalidated on these grounds.¹³

III. The Service's Determination that Wolves are Not Imperiled Throughout a "Significant Portion" of Their Range is Reasonable

A. The Service's analysis of "significant portion" of the range

The Endangered Species Act applies to a species in danger or threatened with extinction "throughout all" of its range or "a significant portion of its range." 16 U.S.C. §§ 1532(6), (20). In light of this, the Service conducts a "significant portion of its range" ("SPR") analysis. 77 Fed. Reg. at 55,601 ("Having determined that [the] gray wolf in Wyoming does not meet the definition of endangered or threatened throughout its range, we must next consider whether there are any significant portions of its range that are in danger of extinction or likely to become endangered.").

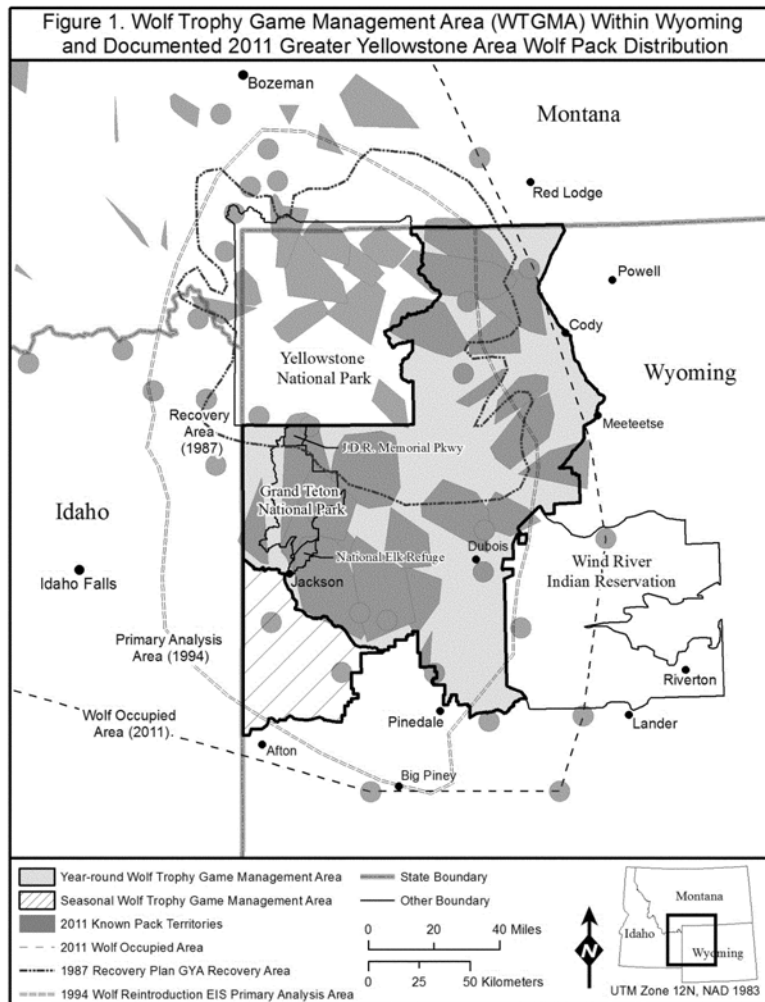
In conducting an SPR analysis, the Service first determines whether a portion or portions of the range are significant and, then, whether the species may be in danger of extinction there or is likely to become so within the foreseeable future. 77 Fed. Reg. at 55,602. If it determines that a portion of the range is not significant, it does not analyze whether the species is threatened or endangered there. *Id.* (stating "there is no purpose to analyzing portions of the range that have

¹³ Plaintiffs also argue that state management of the species will diminish genetic connectivity in the northern Rocky Mountain region because FWS unlawfully assumes that (1) the wolf population in the region will be maintained above recovery levels, (2) the management approaches of Idaho, Montana, and Wyoming take into account and limit the impact of hunting during important dispersal periods, and (3) human-assisted migration will be sufficient to make up for lack of natural genetic connectivity. Pls.' Mem. at 32–39. Because the Court finds that Wyoming's existing regulatory mechanisms are inadequate given that the state's promise to maintain the wolf population at levels required to warrant delisting is unenforceable, the Court does not reach the question of how specific regulatory mechanisms will affect genetic connectivity in the future.

no reasonable potential to be significant and threatened or endangered”). In its analysis, the Service asks whether, without the portion of range at issue, “the representation, redundancy, or resiliency of the species would be so impaired that the species would have an increased vulnerability to threats to the point that the overall species would be in danger of extinction (i.e., would be ‘endangered’).” *Id.*¹⁴

In the 2012 rule, the Service analyzed the area outside Wyoming’s trophy game area – the so-called predator area – in conducting its SPR analysis because it had “already determined wolves are not threatened or endangered in areas including protected and game portions of the State.” *Id.* The trophy game area is located in the northwestern portion of the state, as shown in the light shaded area below:

¹⁴ The Service revised its SPR analysis in response to two recent court rulings. See 77 Fed. Reg. at 55,601. The courts in *Defenders of Wildlife v. Salazar*, 729 F. Supp. 2d 1207 (D. Mont. 2010), and *WildEarth Guardians v. Salazar*, 2010 U.S. Dist. LEXIS 105253 (D. Ariz. Sept. 30, 2010), held that the ESA requires that once it is determined a species, subspecies, or DPS is “endangered” or “threatened” in a “significant portion” of its range, the species must be listed in its entirety and the Act’s protections apply to all members of that species. In the 2009 rule, FWS considered a portion of a species’ range to be significant if its contribution to the species’ “representation, resiliency, or redundancy” was “such that its loss would result in a decrease in the ability to conserve the species.” 74 Fed. Reg. at 15,153 (emphasis added). That is, in considering significance, the agency asked “whether the loss of this portion likely would eventually move the species toward extinction, but not to the point where the species should be listed as threatened or endangered throughout all of its range.” *Id.* (emphasis added). In the 2012 rule, the Service applied a more stringent threshold to the term “significant,” since finding a species to be endangered or threatened in a significant portion of its range would require listing throughout its entire range. 77 Fed. Reg. at 55,602. The agency explained that it sought to make the “significant” threshold robust enough to prevent listing when only a negligible increase in extinction risk would result from the loss of the portion but not so high that threats in the portion of the range would not be addressed. *Id.* Plaintiffs do not challenge the agency’s revised SPR analysis. See Pls.’ Mem. at 41; Pls.’ Reply at 32.



Id. at 55,534. Wolves in this area are treated as “trophy game,” meaning the state regulates how and when they can be killed and how many of them can be killed. 77 Fed. Reg. at 55,558. Wolves in the “predator area” throughout the rest of the state, are regulated as “predatory animals,” meaning they can be killed by anyone with very few restrictions. *Id.*

The Service determined that Wyoming’s predator area is not a significant portion of the wolves’ range because it contains none of the original recovery zone, it has very little suitable wolf habitat, and very few wolves, packs, or breeding pairs live in the area. *Id.* at 55,602. The agency stated that although some wolves living in trophy area could be killed if they traversed into the predator area, the “total mortality” from that circumstance “is expected to be minimal.”

Id. And it found that “while wolf mortality in the predator area could affect successful migration between subpopulations, such mortality: (1) [i]s expected to be opportunistic and minimal, and (2) is not expected to affect genetic factors to the point that it could cause the remainder of the range to become endangered.” *Id.* at 55,602–03. Further, it found that even if *all* the wolves in the predator area were extirpated, wolves in the rest of Wyoming, the GYA, and the NRM would not become endangered. *Id.* at 55,603. It therefore found that the predator area “does not represent ‘a significant portion of range.’” *Id.*

B. The Service’s conclusion that Wyoming’s predator area is not a significant portion of the species’ range is reasonable

Plaintiffs challenge the SPR finding specifically with respect to its impact on genetic connectivity. Pls.’ Mem. at 41–42. According to plaintiffs, because Wyoming wolves may traverse the predator area to reach wolves in Montana and Idaho, the area poses a risk to those wolves and, thereby, to the genetic connectivity of GYA wolves to other wolves in the region, making the predator area a significant portion of the species’ range. *See* Tr. at 12 (Plaintiffs’ counsel: “[I]f we start ramping up the mortality, we’re very likely going to make it impossible for wolves to make that movement . . .”). Plaintiffs assert that the SPR finding is an “irrational reversal by FWS of its own past scientific conclusions in the wolf delisting context,” pointing to the 2009 rule. Pls.’ Mem. at 42. In 2009, the Service found that all of Wyoming was a significant portion of wolves’ range and should be treated as a trophy game area because of genetic connectivity concerns. *Id.* at 42–43. Plaintiffs contend that the 2012 finding to the contrary is improper because the science underlying the decisions has not changed. *Id.*¹⁵

The Service’s conclusion in 2012 that the predator area contains none of the original recovery zone and has very little suitable wolf habitat, and that very few wolves, packs, or

¹⁵ Plaintiffs argue this is the case, even in light of the agency’s heightened threshold for “significant” in its SPR analysis. Reply at 32–33.

breeding pairs live there is supported by the record. 77 Fed. Reg. at 55,602. The record shows wolves did not inhabit the eastern and southern parts of the state in 2012. *See supra* Figure 1; *see also* AR 770 (stating that the predator area is “peripheral to the core regions of suitable habitat”); AR 4957 (depicting a map of “colonization probabilit[ies]” cited by plaintiffs that shows a “0–0.099” colonization probability in the southern and eastern part of the state). And this is not an irrational reversal of the 2009 rule: even though the Service found the entire state to be a significant portion of the wolves’ range in 2009, it emphasized at that time that much of the state is not suitable wolf habitat. 74 Fed. Reg. at 15,127 (stating that “portions of the Sierra Madre, the Snowy, and the Laramie Ranges” and areas “fairly intensively used by livestock” are unsuitable wolf habitat); *see id.* at 15,183 (“By identifying the entire State as a significant portion of the range we are not suggesting wolves could or should reoccupy or establish packs in unsuitable habitat.”). Thus, to the extent plaintiffs’ position is that the Service should have found that *all* of the predator area is a significant portion of the species’ range, the Court does not agree.

To the extent plaintiffs’ argument is that some part of the predator area is a significant portion of the species’ range, the Court finds the record does not support that position either. Plaintiffs cite a draft document from two FWS biologists that addresses the subject of dispersing wolves entering the predator area. *See* Tr. at 11–12, citing AR 14,194–96 (stating that “the only real issue” with respect to dispersal in the NRM is wolves entering the GYA from either northwest Montana or central Idaho). The biologists wrote, “there is not a lot of wiggle room” to assure dispersal into the GYA and called for a larger and permanent trophy area:

To have any measurable effect that might enhance the opportunity for adequate natural effective migration[,] an expanded WY trophy game area should not be treated as predatory animal during any part of the year and should include all the area north of Big Piney, WY.

AR 14,196. Wyoming addressed these dispersal concerns by establishing a permanent trophy game area, larger than the one proposed in 2009, with an annual expansion of approximately fifty miles south for four and a half months. 77 Fed. Reg. at 55,534, citing Wyo. Game and Fish Comm’n 2011, p. 2, 8, 52. This seasonal expansion was created to protect wolves traveling south of the trophy area during peak wolf dispersal periods. *Id.* This contrasts with the trophy area considered in 2009, which was smaller and which state regulators could *reduce* in size. 74 Fed. Reg. at 15,149.¹⁶

The Court finds that it was reasonable for the agency to find that the current predator area is not a significant portion of the species’ range even though GYA wolves may travel through it and be killed there. To be sure, the 2012 trophy area does not extend as far south as the FWS biologists recommended, and the expansion south is seasonal. But it does provide for additional protection for dispersing wolves. *See supra* Figure 1.¹⁷ Further, the record shows that dispersing wolves take a variety of routes to enter the GYA that do not involve their entering the predator zone. 77 Fed. Reg. at 55,564, citing Figure 2 at 55,540. And it shows that even when wolves were subject to ESA management and protection, dispersals were infrequent. AR 14,196; *see also* Pls.’ SOF ¶ 15 (stating that FWS documented only two successful wolf dispersals into the

16 Plaintiffs assert in their briefs that the problem with the 2012 SPR finding has to do with genetic connectivity, not with the differences in the trophy game management in 2009 and in 2012. Reply at 33. But in oral argument, they made clear that genetic connectivity is directly related to trophy game and predator management. Tr. at 6 (“[T]he key part of that picture with respect to that predator management zone is how you get wolves to move through that zone to connect the Wyoming and Yellowstone population up with the other subpopulations in the region which was always an essential criteria for recovery.”).

17 Plaintiffs state that “nearly half of all dispersal habitat in Wyoming falls within the ‘predator zone.’” Pls.’ Mem. at 43, citing AR 4957. The figure plaintiffs cite overlays the trophy game area over a “colonization probability” map and states that the trophy area includes fifty-six percent of the dispersal habitat, but the overlay of the trophy area does not appear to account for the seasonal expansion of the trophy area. *See* AR 4957.

GYA based upon wolf-tracking information over the thirteen year period between 1995 and 2008); Tr. at 7 (same). This suggests that wolf dispersals occur on a limited basis at best.

The record also shows, as explained above, that four of the five peer reviewers agreed that Wyoming's regulatory scheme – including its establishment of the predator area – is likely to provide for sufficient levels of gene flow within GYA and NRM. AR 732. And the peer reviewers who specifically commented on the predator area in the context of genetic connectivity stated the area does not bear meaningfully on the issue:

Establishment of the predator area encompassing much of Wyoming, where wolves will be subjected to unregulated harvest, has certainly been controversial. However there is little functional difference between Wyoming's explicitly-defined predator area and eastern Montana or southern Idaho where wolves have not become established, even under ESA protection, due to lack of suitable habitat and high potential for livestock conflicts. In any case, wolves that move into these areas are likely to be subject to removal and unlikely to persist. In Wyoming, wolves can be killed as soon as they are detected in the predator area, whereas in the other 2 states they are generally eliminated once they begin depredating livestock. Any minor difference in timing of removal has little bearing on maintaining viable wolf populations in the NRM because *these areas are peripheral to the core regions of suitable habitat and thus are not important for maintaining gene flow among the 3 recovery areas.*

AR 770 (comment of Dr. Adams) (emphasis added); *see also* AR 779 (comments of Dr. Mills) (“Although small as a percent of the state, the fact that the [Wolf Trophy Game Management Area] contains virtually all of Wyoming's wolves and wolf habitat implies to me that it will be sufficient to sustain . . . necessary levels of connectivity to other parts of the NRM population.”) (emphasis omitted). Indeed, the one peer reviewer who disagreed with the other four on the broader issue of genetic connectivity did not contend that the predator area was critical to genetic connectivity. Rather, he said Wyoming remained responsible for maintaining genetic connectivity and called on states to engage in human-assisted migration if connectivity goals are

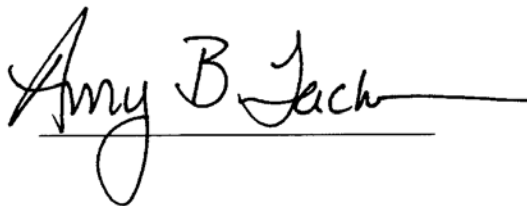
not being met. AR 805–06 (comments of Dr. Vucetich); *see also* AR 732–33 (summarizing Dr. Vucetich’s views).

Under these circumstances, the Court does not find the Service’s conclusion that the predator zone is not a significant portion of the wolves’ range to be arbitrary, capricious, or not in accordance with the law. As with other aspects of the genetic connectivity issue, the Court finds that the significance and impact of the predator area on genetic connectivity is the sort of scientific matter for which deference is required. The Court is satisfied that the agency has examined the relevant data and explained its conclusion, making a rational connection between the fact that few wolves live in or traverse the predator area and its conclusion that the predator area is not a significant portion of the wolves’ range. Further, the Court does not consider the agency’s SPR analysis to be an irrational reversal of its position in 2009, given the altered regulatory landscape the agency considered in 2012 and the scientific views presented in the record on the issue of the area’s impact on genetic connectivity. While the Court recognizes that some scientists, and plaintiffs, may reasonably disagree with the agency’s conclusion, the Court will not substitute its judgment for that of the agency given the record before it. *In re Polar Bear*, 709 F.3d at 3, citing *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. at 43.

For all of those reasons, then, the Court holds that the Service’s determination that the predator area is not a significant portion of the wolf’s range is reasonable.

CONCLUSION

For the reasons stated above, the Court will grant in part and deny in part plaintiffs' motion for summary judgment. Further, it will vacate and set aside the 2012 rule. A separate order will issue.

A handwritten signature in black ink, reading "Amy B. Jackson", written over a horizontal line. The signature is cursive and stylized.

AMY BERMAN JACKSON
United States District Judge

DATE: September 23, 2014