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UNITED STATES DISTRICT COURT

DISTRICT OF WYOMING

WESTERN WATERSHEDS PROJECT *et. al.*,

Petitioners,

v.

THOMAS J. VILSACK *et al.*,

Federal Respondents, and

STATE OF WYOMING,

Respondent-Intervenor.

Case No: 22-cv-00214-SWS

PETITIONERS' OPENING BRIEF

ORAL ARGUMENT REQUESTED

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GLOSSARY

ESA – Endangered Species Act

FEIS – Final Environmental Impact Statement

FWS – U.S. Fish and Wildlife Service

MA – Management Area

NEPA – National Environmental Policy Act

NFMA – National Forest Management Act

ROD – Record of Decision

INTRODUCTION

This case concerns the black-footed ferret—one of the most endangered mammals in the world—and the black-tailed prairie dog, the species upon which the ferret depends for both food and shelter on the Thunder Basin National Grassland. Specifically, this case challenges a 2020 decision by the United States Forest Service to amend the land and resource management plan for the Thunder Basin National Grassland in Wyoming. The Forest Service's 2020 Plan Amendment threatens to eradicate local black-tailed prairie dog populations, thereby condemning the long-term survival of the species that depend on those populations, and making it difficult if not impossible to reintroduce black-footed ferrets on the Thunder Basin.

The 2020 Plan Amendment eliminates a Management Area specially designated as Black-Footed Ferret Reintroduction Habitat. It also alters federal management of black-tailed prairie dogs by allowing increased prairie dog poisoning and recreational shooting, and reduces the maximum prairie dog colony acreage within the management area from 33,000 acres to 10,000 acres, with major exceptions allowing the Forest Service to further control prairie dog colonies down to just 7,500 acres.

The 2020 Plan Amendment prioritizes providing livestock grazing forage over black-footed ferret reintroduction needs and degrades habitat previously managed to facilitate black-footed ferret reintroduction on the Thunder Basin, in violation of Defendants' affirmative duty to "carry[] out programs for the conservation of endangered and threatened species" under Section 7(a)(1) of the Endangered Species Act ("ESA"). 16 U.S.C. § 1536(a)(1).

Additionally, the 2020 Plan Amendment Final Environmental Impact Statement and Record of Decision state an impermissibly narrow and unreasonable purpose and need, fail to consider a range of reasonable alternatives, and fail to take a hard look at impacts of the amendment

on black-tailed prairie dogs, their dependent species, and potential black-footed ferret reintroduction efforts, in violation of the National Environmental Policy Act ("NEPA"). 42 U.S.C. §§ 4321 et seq.

Finally, the 2020 Plan Amendment violates the National Forest Management Act ("NFMA"), 16 U.S.C. §§ 1600 et seq., by failing to use the best available science in the planning process, failing to provide ecological conditions necessary to contribute to the recovery of federally listed endangered and threatened species, failing to provide ecological conditions necessary to maintain viable populations of prairie dog-obligate species, and failing to maintain or restore the ecological integrity of the plan area.

For these reasons and those explained further below, Petitioners Western Watersheds Project, Rocky Mountain Wild, and WildEarth Guardians respectfully request that this Court set aside the 2020 Thunder Basin Grassland Plan Amendment.

LEGAL BACKGROUND

The Endangered Species Act

The Endangered Species Act is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978). Congress enacted the ESA "to provide a means whereby the ecosystems upon which endangered [] and threatened species depend may be conserved, [and] to provide a program for the conservation of endangered and threatened species." 16 U.S.C. § 1531(b). "The plain intent of Congress in enacting this statute was to *halt and reverse* the trend toward species extinction, whatever the cost." *Tennessee Valley Auth.*, 437 U.S. at 184 (emphasis added). To that end, Congress directed all federal agencies to "utilize their authorities in furtherance of" the ESA "by carrying out programs for the conservation of" ESA-listed species. 16 U.S.C. § 1536(a)(1).

The National Environmental Policy Act

NEPA is "[t]he centerpiece of environmental regulation in the United States." *New Mexico ex rel. Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683, 703 (10th Cir. 2009). In passing NEPA, Congress "recogniz[ed] the profound impact of man's activity on the interrelations of all components of the natural environment" and set out "to create and maintain conditions under which man and nature can exist in productive harmony." 42 U.S.C. § 4331(a). To bring federal action in line with Congress' goals and to foster environmentally informed decision-making by federal agencies, NEPA "establishes 'action-forcing' procedures that require agencies to take a 'hard look' at environmental consequences." *Metcalf v. Daley*, 214 F.3d 1135, 1141 (9th Cir. 2000) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989)).

The National Forest Management Act

NFMA requires the Forest Service to develop and periodically revise land and resource management plans ("plans") for each unit of the National Forest System. 16 U.S.C. § 1604(a). The Forest Service develops and revises plans pursuant to regulations that require, among other things, that plans "provide for diversity of plant and animal communities" in all units of the National Forest System. *Id.* § 1604(g)(3)(B). These NFMA planning regulations were updated in 2012 and 2016 ("revised 2012 Rule"). *See* 77 Fed. Reg. 21,162 (April 9, 2012); *see also* 81 Fed. Reg. 90,723 (Dec. 15, 2016) (collectively codified at 36 C.F.R. Part 219). Forest Service officials must both "use the best available scientific information to inform the planning process," and "document how the best available scientific information was used to inform" planning decisions. 36 C.F.R. § 219.3.

The revised 2012 Rule requires plans to "provide the ecological conditions necessary" to both "contribute to the recovery of federally listed endangered and threatened species" and

"maintain a viable population of each species of conservation concern within the plan area," either through plan or species-specific components. 36 C.F.R. § 219.9(b)(1). If "species of conservation concern" have not been designated for a unit, the revised 2012 Rule requires the Forest Service to identify potential species of conservation concern and treat them as formally designated species of conservation concern in the planning process. *Id.* § 219.13(b)(6). Lastly, under the revised 2012 Rule, plans must also "maintain or restore the ecological integrity of [] ecosystems in the plan area[.]" *Id.* §§ 219.8(a)(1) & 219.9(a)(1).

FACTS

Thunder Basin National Grassland

The Thunder Basin National Grassland ("Thunder Basin") is located in northeastern Wyoming. AR26625. It is a 553,000-acre combination of mixed-grass prairie, shortgrass and sagebrush steppe ecosystems. AR26625, 26690. It provides current and potential habitat for a variety of native grassland species, including black-tailed prairie dogs and their obligate species, like the endangered black-footed ferret. AR26625, 67739-43.

In 2002, the Forest Service amended the Thunder Basin plan to designate Management Area 3.63 ("MA 3.63")—a 58,000-acre expanse "[f]or the purpose of prairie dog and prairie ecosystem conservation including restoration of the black-footed ferret[.]" AR72150. This area was chosen because it "is one of the most contiguous areas of Federal land on the Thunder Basin National Grassland." AR27731. It is also the area of the Thunder Basin with the most prairie dog colonies and suitable prairie dog habitat. *Id*. From its designation, the Forest Service managed MA 3.63 "with the intent of providing a potential recovery site for the black-footed ferret as well as suitable habitat for species associated with prairie dog colonies[.]" AR72150.

Even prior to the designation of MA 3.63, the Thunder Basin was identified as a potential reintroduction site for black-footed ferrets. *Id*. This is because the Thunder Basin is one of just two areas nationally of "comparatively large and intact priority areas for the conservation of the black-tailed prairie dog." *Id*. Notably, MA 3.63 is also the only identified, currently-existing potential black-footed ferret reintroduction site on Forest Service-managed lands in Wyoming. *See* AR68977-79.

The Black-Footed Ferret

The black-footed ferret has been endangered for over 55 years. The ferret was first designated as endangered in 1967, and that designation was carried forward with the enactment of the ESA in 1973. AR5279, 67742.

The black-footed ferret is also the only ferret species native to the Americas. AR5283. It is a medium-sized weasel distinguished by its black feet, tail tip, and unique "mask" across their eyes. *Id*., AR27667. It also has large ears, eyes, and front paws. AR27667.

Black-footed ferrets historically occupied an estimated 100 million acres of grasslands in the western United States and portions of southern Canada and northern Mexico. AR67742, 26631. The ferrets' historic area corresponded with colonies of black-tailed, white-tailed, and Gunnison's prairie dogs. AR5320.

Black-footed ferrets are "intrinsically linked to the prairie dog[.]" AR27667. They require established prairie dog towns—which, in Wyoming, primarily occur in grasslands—for both food and shelter. AR27667; *see also* AR5284, 67742, 67750. As such, ferrets live in prairie dog colonies year-round. AR27667; *see also* AR5286-87.

The black-footed ferret's reliance on prairie dogs for both food and shelter was in large part the reason the species became extinct in the wild. *See* AR5320. Collectively, prairie dog

species historically occupied approximately 101 million acres of grasslands extending from Canada into Mexico. *Id*. These historic prairie dog colonies may have supported as many as 1 million black-footed ferrets. AR5284.

But from the late 1800s to mid-1900s, both prairie dog habitat and prairie dog populations were dramatically reduced by habitat destruction, poisoning, and disease. AR5320. "The ferret population declined precipitously as a result." *Id*. By the 1970s, prairie dogs were largely eradicated from their historic range, and with them went wild black-footed ferret populations. *See* AR67742, 5320. By 1979, the black-footed ferret was considered extinct. AR67742.

Against all odds, in 1981, a single remaining wild black-footed ferret population was found near Meeteetse, Wyoming. AR5320. Soon after its discovery, the Meeteese population suffered outbreaks of canine distemper and sylvatic plague, and all remaining 18 wild ferrets were captured to begin a captive breeding program. AR5320-21. Of these, "15 individuals, representing the genetic equivalent of seven distinct founders, produced a captive population lineage that is the foundation of present recovery efforts." AR5321. All living ferrets, both wild and captive, are the descendants of these last 15 remaining wild Meeteese ferrets. *Id*.

The black-footed ferret is a "conservation-reliant species," meaning its survival "depends heavily on the ability to release captive-reared individuals into the wild[.]" AR5343, 5273. Conservation-reliant species require "considerable management inputs … to maintain both the captive and reintroduced populations of the species." AR5343. For the ferret, one of those required management inputs is a plague management plan. *Id*.

Ongoing Threats to the Black-Footed Ferret

The black-footed ferret faces a number of threats including diseases like sylvatic plague, loss of genetic fitness, and prairie dog poisoning and recreational shooting, which have both direct and indirect effects on ferret populations. AR5291.

Sylvatic plague is a non-native disease that directly affects black-footed ferret populations. AR5294. Without mitigation, the disease has a high likelihood of eradicating entire ferret populations, especially when "exacerbated by other stressors such as drought and recreational [prairie dog] shooting," which "can create positive feedback loops" that magnify the effects of sylvatic plague. AR5295.

Sylvatic plague can also indirectly affect ferrets by causing dramatic declines in prairie dog populations, the ferret's primary prey. AR5294. The Forest Service has previously determined that black-footed ferrets likely need 18,000 acres of active prairie dog colonies in order to persist through a sylvatic plague event. AR66420.

The black-footed ferret is also threatened by the extreme genetic bottleneck that marked the beginning of recovery efforts for the species. AR56816-18. The black-footed ferret captive breeding program "began with the genetic equivalent of seven founder animals[.]" AR56816. The ferrets' initial extreme loss in genetic diversity is compounded by the likelihood that the founding population was, itself, isolated from other ferret populations. *Id*. "The genetic uniformity of the black-footed ferret is unprecedented" and may have already caused some abnormalities in the captive ferret population. AR56817. In order to preserve and increase the ferrets' limited genetic diversity, reintroduction programs emphasize "releasing captive-bred animals to the wild as quickly as possible[.]" AR56818.

Recreational prairie dog shooting also negatively affects black-footed ferret populations by lowering the availability of prey. AR5305. Recreational prairie dog shooting is particularly detrimental to ferrets living "in black-tailed prairie dog colonies due to [that species'] higher densities and greater accessibility to shooters[.]" *Id*. Recreational prairie dog shooting can also cause lead poisoning. "Killing large numbers of animals, not removing carcasses from the field, and using expanding bullets containing lead may present potentially dangerous amounts of lead to scavengers and predators of prairie dogs." AR5306. Recreational prairie dog shooting can also cause direct mortality to black-footed ferrets. *Id*. And, as with sylvatic plague, the combination of recreational prairie dog shooting along with other stressors further negatively affects black-footed ferret populations. *Id*.

Finally, poisoning also threatens black-footed ferrets both directly and indirectly. AR5307. Prairie dog poisoning was a major factor contributing to the extinction of black-footed ferrets in the wild and it remains a primary threat to the species' recovery to this day. AR5307-08. Ferrets are affected directly when they consume poisoned prairie dogs and are thereby poisoned themselves. AR5307. Indirectly, ferrets also lose their prairie dog prey base. *Id*. As obligate prairie dog predators, black-footed ferrets cannot readily adapt to prairie dog population declines by switching prey resources, and their population resiliency declines as a result. AR5309.

Ferret Recovery Needs

Once a species is listed under the ESA, the U.S. Fish and Wildlife Service ("FWS") develops a recovery plan. 16 U.S.C. § 1533(f). FWS has issued several recovery plans for the black-footed ferret, the first in 1978 and the most recent in 2013 ("2013 Recovery Plan"). AR56773.

The Wyoming-specific black-footed ferret recovery objectives in the 2013 Recovery Plan include maintaining a minimum of 341 breeding adults distributed among five or more populations in Wyoming. AR26756, 27769. Each of these populations must maintain a minimum of 30 breeding adult ferrets and at least two must maintain a minimum of 100 breeding adults. *Id*. Lastly, two of the populations must be established within white-tailed prairie dog habitat and one must be established in black-tailed prairie dog habitat. *Id*. The 2013 Recovery Plan also states that approximately 4,500 acres of black-tailed prairie dog colonies are necessary to support 30 breeding adult ferrets and more than 15,000 acres are likely needed to support 100 ferrets. *Id*.

As obligate predators of prairie dogs, black-footed ferrets typically need large, connected prairie dog colonies to meet their individual needs. AR5286-87. Both the FWS and the Forest Service have recognized that national grasslands contain some of the best possible habitat for black footed-ferret recovery. AR5524, 5530. The FWS also recognized that ferret recovery "may not be possible without concerted support by the Forest Service and expansion of [] recovery efforts across more of the Forest Service's vast western holdings." AR5524. The FWS further stated that "the amount of managed land actually required to meet these needs would represent a small percentage of the almost 4 million acres of National Grasslands" managed by the Forest Service. *Id*.

But of the 29 sites where black-footed ferrets have been reintroduced, only 14 remain active. AR5273. As of 2019, the FWS estimated 340 black-footed ferrets exist in the wild within these 14 sites. *Id*. Further, only two of these 14 reintroduction sites are in high resiliency condition. AR5274. Of the remaining 12, eight are in a moderate resiliency condition and four are in a low resiliency condition. *Id*. The ferret populations at the remaining 15 reintroduction sites were extripated, largely due to sylvatic plague. *Id*.

Since 2007, the wild black-footed ferret population has declined. AR5326-27. Its population resiliency is also low, with the need for continuous management—including plague management plans—to prevent extirpation at reintroduction sites. AR5343-44, 5327. The FWS has found that "the effects of sylvatic plague and the lack of suitable habitat will continue to limit the viability of the black-footed ferret," and conservation efforts must increase to ensure the future viability of the species. AR5274, 5361.

Black-Tailed Prairie Dogs

Black-tailed prairie dogs are one of five prairie dog species native to the grasslands of western North America. AR67734, 26627. They are also a "keystone species," meaning they create and maintain a unique habitat on which a variety of species depend for survival. AR67737.

Black-tailed prairie dogs are highly dependent on line-of-sight predator detection, which they achieve by clipping and maintaining short vegetation around their burrows. AR27327, 26627. "Such habitat modification has created a habitat niche to which several other species have evolved dependencies," including mountain plovers, burrowing owls, and black-footed ferrets. AR27327, 27725, 67737. This ecosystem development and habitat creation is not duplicated by any other species. *See* AR67739-40, 67738.

Prairie dog species once occupied over 247 million acres of grasslands in North America. AR67734. Their range once extended throughout the Great Plains from northern Mexico to southern Canada, but populations declined dramatically due to "broad-scale shooting and trapping," habitat loss, and sylvatic plague. AR26627, 27328. The black-tailed prairie dog has been eradicated from all but 2% of its former range, and now occupies just 0.01% of its former range in Wyoming. AR67732.

Ongoing Threats to Black-Tailed Prairie Dogs

The primary threat to the black-tailed prairie dog is sylvatic plague. AR27332. Prior to 1900, sylvatic plague did not exist on the North American continent. AR5294. Since its introduction in the 1940s, the disease has substantially reduced or even extirpated black-tailed prairie dog populations. AR27330. "Plague is now effectively endemic across the black-tailed prairie dog range, and plays a critical role in prairie dog population dynamics." *Id.*; *see also* AR5294-95.

Sylvatic plague can be present in prairie dog colonies in either an enzootic (persistent, low level of mortality) or epizootic (swift, large-scale die-offs) state. AR5294. These epizootic events can cause greater than 99% mortality within prairie dog colonies. AR27332; *see also* AR68001. They can also cause "colony extirpation and permanent reductions in colony size and connectivity." AR27332. Black-tailed prairie dogs are especially susceptible to sylvatic plague due to their highly social behavior and high population densities. AR66246.

The Thunder Basin black-tailed prairie dog populations have suffered three epizootic events: the first in 2001/2002, the second in 2005/2006, and most recent in 2017/2018. AR26628. The first Thunder Basin epizootic event reduced prairie dog populations by 85%, from an estimated 21,000 acres of active colonies to approximately 3,300 acres. AR1414. The second epizootic event reduced prairie dog colonies by 66%, from approximately 15,000 acres to approximately 5,100 acres. *Id*. And the final, most-recent epizootic event reduce prairie dog colonies by 99%, from over 48,000 acres across Thunder Basin to just 625 acres, only 250 of which occurred in the grassland's designated black-footed ferret reintroduction area. AR1413; *see also* AR27202 (table).

A critical tool for reducing the likelihood and rate of plague transmission has been the application of the insecticide deltamethrin to individual prairie dog burrows—a process called "dusting." AR5294-95. Although the Forest Service had previously granted dusting permits, in 2017, it withheld permits stating "[n]o dusting for plague control will occur this season on federal lands within the Grassland." AR68054. This lack of dusting coincided with the 2017 to 2018 plague event that eradicated 99% of the black-tailed prairie dog colonies on the Thunder Basin.

As discussed above, poisoning was a major factor in historical prairie dog population declines. AR5307. Perceptions that prairie dogs compete for forage with domestic livestock "led to the development of extensive government sponsored prairie dog poisoning programs early in the 20th century." *Id*. Between 1916 and 1920, millions of acres of prairie dog colonies were poisoned on western rangelands. AR5307-08. Between 1915 and 1965, over 37 million acres of black-tailed prairie dog colonies were poisoned throughout the species' range, with 3.7 million acres poisoned in 1923 alone. AR5307.

Zinc phosphide is the "preferred poison for prairie dog control." AR5308. It is typically lethal after a single feeding and causes death within a few hours. AR5531. Thorough enough poisoning can result in the extirpation of prairie dog populations, as it did to black-tailed prairie dog populations in Arizona. AR5309. Long-term poisoning can create "colony fragmentation and reduce overall abundance, causing increased susceptibility to stochastic events [such as sylvatic plague] and low levels of population resiliency." *Id*.

Recreational shooting is another threat to black-tailed prairie dogs. Recreational prairie dog shooting causes vigilance behavior among prairie dogs, "resulting in less time spent foraging and causing deteriorated body condition[.]" AR27331. According to a study conducted on the Thunder Basin, "shooting dramatically altered the behavior of surviving prairie dogs" which, in

turn, reduced the body condition of survivors. AR22745 (citing AR47589-678). This is particularly true for prairie dogs subjected to recreational shooting that have also survived sylvatic plague. AR66239.

Recreational prairie dog shooting negatively affects prairie dog reproductive rates, and colonies subjected to shooting "do not return to their previous population size within 1 year." AR27331. Recreational shooting also disproportionately negatively affects juvenile and female prairie dogs, and leads to increased colony emigration rates. AR5306. One study found that "after they shot 22% of the black-tailed prairie dogs on one colony … 69% (212 individuals) of the remaining prairie dogs left the colony." AR22746 (citing AR42575-89). Recreational shooting also disproportionately affects "black-tailed prairie dog colonies due to their higher densities and greater accessibility to shooters[.]" AR5305.

Drought conditions can also cause prairie dogs to suffer "decreases in body condition, reproductive rates, and adult and juvenile survival." AR5302-03. Drought causes declines in prairie dog forage, and "[f]or non-hibernating prairie dog species such as the black-tailed prairie dog, lack of abundant vegetation can suppress reproduction and decrease juvenile survival rates." AR5303.

Finally, the negative effects of sylvatic plague, poisoning, recreational shooting, and drought on black-tailed prairie dog populations are often synergistic. Recreational prairie dog shooting may decrease prairie dogs' ability to resist sylvatic plague. AR22745-46 (citing AR47589-678). Prairie dog poisoning can exacerbate the effects of sylvatic plague. AR5310. In fact, the combination of sylvatic plague and prairie dog poisoning continues today, and has resulted in reduced and fragmented black-tailed prairie dog populations range-wide, "with some cases of local extirpation." AR27328, 27331.

As the Forest Service has previously admitted, "[p]oisoning and plague, along with other known threats, can each have a significant impact to prairie dogs. However, when these threats are combined, eradication of entire populations of prairie dogs is possible." AR67751. And the extirpation of the black-tailed prairie dog, a "keystone species," would result "in a domino effect of changes which can cause a rapid decline of species diversity." AR67737.

Prairie Dog-Dependent Species on the Thunder Basin National Grassland

There are many species on the Thunder Basin that depend on black-tailed prairie dogs for prey and shelter, including mountain plover, burrowing owl, swift fox and ferruginous hawk. AR26627.

The mountain plover is a small shorebird that breeds in shortgrass prairie in the western Great Plains. AR27303. Mountain plovers are reliant on active prairie dog colonies, using them for nesting habitat. AR27307, 27303; *see also* AR67747. Mountain plovers are rarely found outside of prairie dog colonies. AR27307. Between 2015 and 2017, when prairie dog colonies on the Thunder Basin reached their greatest extent since 2000, the Forest Service observed its highest number of individual mountain plovers and mountain plover nests. AR27307.

Mountain plover populations have been declining range-wide since the middle of the 20th century and have continued to decline since 2000. AR27305. They have also been experiencing a "long-term downward trend on the [Thunder Basin] with very low numbers in 2012." AR67748. The continued loss of prairie dog colonies due to poisoning, disease, and/or recreational shooting are direct threats to mountain plover populations. AR67747; *see also* AR27305.

The burrowing owl is a small grassland raptor that nests in underground burrows. AR27226. Like the mountain plover, burrowing owl populations occur within black-tailed prairie dog colonies, "which provide burrows for nesting, hunting, cover, and food storage." *Id.* Also

like the mountain plover, burrowing owl populations have declined over the past century, "in large part due to the loss of available burrows as the abundance of burrowing mammals decline[s.]" *Id*. The continued loss of burrowing animals like prairie dogs is "[t]he most likely cause of burrowing owl population declines[.]" *Id*.

Past Thunder Basin Planning Decisions

In 2001, the Forest Service revised the Thunder Basin National Grassland Plan ("2001 Revision"). AR63790-4130. The 2001 Revision designated a 53,830-acre area as Management Area 3.63 – Black-Footed Ferret Reintroduction Habitat. AR26631. Since that time, "prairie dog management on the Thunder Basin National Grassland has focused on expanding prairie dog colonies to provide habitat and to promote reintroduction of black-footed ferrets." *Id*.

The 2001 Revision prohibited recreational shooting "[t]o help expand and maintain suitable black-footed ferret habitat." AR63895. It also prohibited prairie dog poisoning except in the immediate vicinity of homes and cemeteries and for localized public health and safety risks. AR63825. The 2001 Revision required the Forest Service to replace net losses of black-footed ferret habitat due to prairie dog poisoning within one year. AR63817.

The environmental assessment for the 2001 Revision determined that any alternative that did not allocate potential black-footed ferret reintroduction habitat was "likely to adversely affect" black-footed ferrets because, regardless of current occupation of habitat, a failure to manage for reintroduction would negatively impact the species. *See* AR73102. And to that end, the 2001 Revision required the Forest Service to manage all prairie dog colonies within MA 3.63 as though they were occupied by black-footed ferrets, and to "[a]uthorize only those uses and activities that do not reduce the suitability of the area as black-footed ferret reintroduction habitat." AR63894.

In 2009, the Forest Service amended the Thunder Basin Plan ("2009 Amendment"). *See* AR66170-363, AR66364-405. The Forest Service stated that "the purpose of this decision is to establish and maintain the public support and the biological environment needed to facilitate the reintroduction of black-footed ferrets on the [Thunder Basin]." AR66380. The Forest Service further stated that the selected alternative "would help to gain local public support for prairie dog conservation and black-footed ferret recovery on the [Thunder Basin], which would facilitate a future reintroduction while still maintaining for viability and conservation of these species." AR66387. The 2009 Amendment further stated that despite that fact that "[m]ost livestock producers in the Great Plains do not support the expansion of prairie dog colonies because . . . they are viewed as competing for forage for their livestock," that Forest Service nonetheless "remains committed to the goal of reintroducing the endangered black-footed ferret to the [Thunder Basin.]" AR66384-85.

The 2009 Amendment reduced the size of Management Area 3.63 by over 9,000 acres to 44,420 acres. AR66385-86. It also eliminated the prior requirement to mitigate losses of ferret habitat due to prairie dog poisoning. AR66374. The 2009 Amendment established four categories of prairie dog areas. AR66366-71. Management Area 3.63 encompassed the entire Category 1 area with some Category 2 areas. AR66377. Within Category 1 lands, the 2009 Amendment prohibited prairie dog poisoning unless colonies exceeded 18,000 acres. AR66379. If that acreage was exceeded, prairie dog poisoning could occur but only within a half-mile of the Thunder Basin boundary, and only after exhausting other non-lethal options to manage the spread of prairie dog colonies. AR66367. The 2009 Amendment also prohibited recreational shooting in MA 3.63 and remaining Category 2 lands, increasing the area covered by the recreational shooting closure from 72,500 to 96,000 acres. AR66379, 66383.

Finally, in 2015, the Forest Service adopted the Black-Tailed Prairie Dog Conservation Assessment and Management Strategy ("the Strategy") on the Thunder Basin. AR6406-79. The Strategy consolidated the four categories of prairie dog colonies into three categories. AR66412. It also removed restrictions on prairie dog shooting in Category 2 areas when acreage objectives were met. AR66417, 66422. However, the Strategy continued the 18,000-acre prairie dog colony objective, finding "that 18,000 acres will be sufficient habitat to allow ferrets to persist through a plague epizootic [event.]" AR66420.

The 2013 Wyoming Governor's Request

On April 17, 2013, the Wyoming Governor's Office submitted a request to the Forest Service to "alleviate prairie dog control restrictions" on the Thunder Basin. AR67732. Specifically, the Governor's office requested both expanded rodenticide use and options, and a 10,000-acre cap on prairie dog colonies. AR7743, 67751. It additionally sought to allow recreational prairie dog shooting and increased prairie dog poisoning to create a quarter-mile buffer around all state and private lands within black-tailed prairie dog management areas. AR67743.

In responding to the Wyoming Governor's request, the Forest Service produced a document to "analyze the potential effects" of the proposed changes on mountain plovers, burrowing owls, and future black-footed ferret reintroductions. AR67733-54 ("Viability Analysis"). The Viability Analysis concluded that the Governor's requested changes, including the prairie dog colony acreage cap, the quarter-mile buffer zone, increased recreational shooting, and increased poisoning both in use and in kind, would result "in the inability to sustain long-term viability" for mountain plovers and burrowing owls and would "preclude the opportunity to implement black-footed ferret reintroductions" by reducing the prairie dog acreage below the amount required for a viable population of ferrets—10,621 acres. AR67732, 67748, 67750-51;

see also AR66420 (the Strategy) (reiterating 10,621-acre threshold). As to mountain plover populations on the Thunder Basin specifically, the Viability Analysis found that based on past mountain plover occurrences on the Thunder Basin, the species "may need closer to 20,583 active acres of prairie dogs to meet viability needs." AR67748.

2020 Plan Amendment

The Forest Service published a final environmental impact statement ("FEIS") for the 2020 Thunder Basin Plan Amendment ("2020 Amendment") in May of 2020. AR26605. A final record of decision ("ROD") and an erratum to the FEIS were published in November, 2020. AR27719, 27677.

The stated purpose of the 2020 Amendment is to "provide a wider array of management options to respond to changing conditions; minimize prairie dog encroachment onto non-Federal lands; reduce resource conflicts related to prairie dog occupancy and livestock grazing; ensure continued conservation of at-risk species; and support ecological conditions that do not preclude reintroduction of the black-footed ferret." AR26610. The FEIS further states that an amendment was necessary specifically to "increase the availability of lethal prairie dog control tools[.]" *Id.*

The 2020 Plan Amendment FEIS analyzed five alternatives: one "no action" alternative and four "action" alternatives. AR26648-88. Each of the four action alternatives the Forest Service considered "de-emphasize[d]" the reintroduction of ferrets to refocus management on providing livestock forage. AR26683. All four action alternatives also decreased habitat for prairie dogs and their associated species throughout the Thunder Basin and all reduced the prairie dog acreage objective to varying degrees. AR26611-12.

All action alternatives included varying sizes of "boundary management zones" — areas abutting state or private property — that the Forest Service will keep "clear of prairie dogs." *Id.*,

27232. The alternative boundary management zones ranged from a quarter-mile to one mile inward on Forest Service land from the Thunder Basin boundary. AR26655, 58, 65, 69. The 2020 Amendment authorized the use of zinc phosphide and additional poisons within all boundary management zones. AR26611-12.

Three action alternatives reduced the size of MA 3.63 to varying degrees, and allowed recreational prairie dog shooting within the reduced area. *Id*. These same three action alternatives also allowed "density control," an "experimental activity" aimed at reducing "the number of live prairie dogs within a prairie dog colony or some portion of a colony without reducing the total area of the colony." AR26657, 26662, 27748, 27736, 27194.

The Preferred Alternative

Alternative 5, the preferred alternative, removed the black-footed ferret reintroduction area designation and replaced it with MA 3.67, an area managed with a short-stature vegetation emphasis. AR27744, 26666. It also reduced the area's size from 51,000 acres to 42,000 acres. *Id*.; *see also* AR1464 (Map).

The preferred alternative includes a quarter-mile boundary management zone around state or private land and a one-mile boundary zone around residences or other facilities. AR27745, 26669. In addition to zinc phosphide, the preferred alternative also allows fumigant poisons within the boundary zones in certain situations. AR27727.

The preferred alternative allows recreational shooting throughout the Thunder Basin, with a seasonal restriction in the former black-footed ferret reintroduction area. AR27727, 27747. The plan does not consider recreational shooting to be a prairie dog control tool and the Forest Service does not track the amount of recreational prairie dog shooting that occurs on the Thunder Basin. AR27195, 27811.

The preferred alternative also manages prairie dog colonies within the MA 3.63 (now MA 3.67) "toward an objective of 10,000 acres" with three large exceptions wherein the Forest Service may further reduce the objective to 7,500 acres. AR27727, 27735-36. One of these exceptions is "density control," which the preferred alternative authorizes at any time outside of MA 3.67 and within that area when prairie dog colonies are at or above 7,500 acres. AR27748. Outside of MA 3.67 there are no prairie dog colony acreage objectives. AR27727.

Finally, the preferred alternative does not contain a sylvatic plague management plan. Rather, it merely adopts an objective to develop a plague management plan within three years. AR27795. Even without such a plan in place, the Forest Service has preemptively noted that the plague management plan may include not dusting or otherwise preventing sylvatic plague outbreaks in Thunder Basin prairie dog colonies "for 1 or more years." AR27808-09. There is no requirement to implement the future plague management plan outside of the former black-footed reintroduction area. AR27727, 27747.

Exceptions to the 10,000-Acre Objective

The preferred alternative also carves out three situations in which the Forest Service may manage prairie dog colonies towards an even lower objective of 7,500 acres: times of drought, "while managing towards the 10,000-acre objective," and to test experimental density control activities. AR27735-36.

Droughts, as the Forest Service notes, "are likely to become more common and often span multiple years." AR27730. The Forest Service also notes that the Thunder Basin is particularly susceptible to droughts. AR26691. In fact, the entire western United States "has been in what is characterized as a significantly harsh drought in recent years[.]" AR5302.

Nonetheless, in times of drought, the preferred alternative allows the Forest Service to manage prairie dog colonies in MA 3.67 down to 7,500 acres because "the effects of drought on forage availability and prairie dog movement [] can heighten conflicts related to prairie dog occupancy and livestock grazing." AR27810. The Forest Service further states that this lower objective is "intended to help balance resource use when drought reduces forage available for livestock" and "[t]he 7,500-acre drought objective will remove some competition for forage by prairie dogs during this time." AR27730.

The preferred alternative also allows prairie dog poisoning "to a minimum of 7,500 acres of prairie dog colonies" while the Forest Service is managing towards the 10,000-acre objective. AR27736. When prairie dog colony acreage is at, approaching, anticipated to grow to, or near 10,000 acres, the Forest Service may instead manage prairie dog colonies towards 7,500 acres. *Id*. The determination of when to implement prairie dog colony control between 7,500 and 10,000 acres is "at the discretion of the responsible official or the district ranger." *Id*.

Finally, the preferred alternative also allows the Forest Service to test its new "experimental activity"—density control—whenever prairie dog colony acreage is above 7,500. *Id*. The objectives of density control "include influencing colony growth and dispersal, preventing undesirable vegetation state changes, and promoting forage availability." AR27194. Confusingly, prairie dog colonies that are subjected to density control activities still count towards the Forest Service's 10,000-acre objective. AR27810.

The Forest Service admits that "little is known about how different methods of density control affect prairie dog biology" and the outcomes of this experimental activity could be "quite variable." AR27809. Although there are non-lethal forms, the Forest Service notes that density control activities on the Thunder Basin will most often use poisons. AR27011. Despite the

unknowns, the agency nonetheless determined that density control activities would "maintain ecological conditions." AR27737. In reaching this conclusion, the Forest Service stated that the analysis of the effects of density control was necessarily encompassed by the agency's analysis of the effects of reducing prairie dog colonies to 7,500 acres. *Id*. And because the Forest Service has already concluded that reducing prairie dog colonies to 7,500 acres would "maintain ecological conditions" for black-tailed prairie dogs so too would density control. *See id*. The determination of when and where to test experimental density control activities is also left to the "discretion of the responsible official or district ranger." AR27680.

Currently, density control activities are not allowed when prairie dog colonies total less than 7,500 acres. AR27737. However, this restriction lasts only "until scientific information has been developed and Forest Service staff are able to document [] that density control can meet site-specific objectives and maintain habitat for species associated with prairie dog colonies." *Id.*, 27809. Because so little is known about the effects of density control activities, the Forest Service intends to gather its own data during implementation on the Thunder Basin, although the parameters of that data are not defined. AR27809-10. After the agency has gathered this foreordained supportive data, it may initiate a "[NEPA] Section 18 review" to authorize density control activities when prairie dog colony acreages are below 7,500. AR27012. And once again, all prairie dog colonies subject to density control still count towards the Service's 10,000-acre objective. AR27748.

Impacts to Species from the 2020 Amendment

The black-tailed prairie dog, mountain plover, burrowing owl, ferruginous hawk and swift fox are all Forest Service potential species of conservation concern on the Thunder Basin National Grassland. AR27685, 27684, 27683, 27684, 27686. The Forest Service determined that the

Amendment "may adversely impact" the black-tailed prairie dog and the species that depend upon it, but that the Amendment was "not likely to result in a loss of viability in the planning area, nor cause a trend toward Federal listing." *Id*. The Forest Service reached this conclusion stating "[e]cosystem and species-specific plan components provide the ecological conditions necessary to maintain a viable population of the species within the plan area." *Id*.

For the black-tailed prairie dog, the Forest Service determined that the species would be directly affected through prairie dog poisoning, recreational prairie dog shooting, and sylvatic plague, for which there would be "limited management intervention available," and which often causes mortality near "100 percent during an epizootic [event]." AR27338.

The Forest Service did not evaluate the combined, cumulative, or synergistic impacts of increased drought, poisoning, density control, recreational shooting, and plague on Thunder Basin prairie dog populations or the possibility that any combination of these stressors could lead to prairie dog extirpation. *See* AR27339-40. The Forest Service also did not evaluate how the potential steep decline in Thunder Basin prairie dog populations, if not their outright eradication, would impact prairie dog-dependent species. AR27311-13, 27231-32, 27258-59, 27352.

The Forest Service determined that, of all prairie dog-dependent species, mountain plovers—because of their low population densities and greater susceptibility to habitat changes—require the most prairie dog habitat to maintain a viable population. AR26673. The Forest Service determined that 10,000 acres of prairie dog colonies "is the lower limit likely to adequately provide for the long-term persistence of the mountain plover population on the [Thunder Basin]." *Id.*, 26693 (10,000 acres "approximates the minimum colony extent necessary to provide ecological conditions for prairie dog-associated species."). Thus, according to the Forest Service, meeting

the minimum acreage needs for mountain plovers will satisfy acreage needs for all other prairie dog-dependent species, including black-tailed prairie dogs themselves. AR26673.

Contrary to the 2001 Revision, both the Forest Service and FWS found that the Plan Amendment would have "no effect" on the black-footed ferret solely because no ferrets currently occupy the Thunder Basin. AR27670, 26756, 27208. According to the Forest Service, the 2020 Amendment meets the "minimum requirements for [ferret] reintroduction in Wyoming." AR26614. The Forest Service determined that the Amendment "would not preclude" future black-footed ferret reintroduction because prairie dog acreage objectives would support a population of "30 or more ferrets," although not a population of 100. AR27732.

Lastly, as to the viability of prairie dog-dependent species when prairie dog colonies are being managed at or towards 7,500 acres, the Forest Service determined that because such management is "temporary" in nature, it "is unlikely to compromise species viability" because, at some undetermined point, the Forest Service would allow prairie dog colonies to expand again. AR26693, 27735-36.

Natural Range of Variation Regarding Prairie Dog Colonies

The Forest Service stated that "prairie dog disturbance is within the natural range of variation on the Thunder Basin National Grassland." AR26691. But the Amendment "does not base the design of all plan components on those conditions common in the past relative to the natural range of variation." AR27760. The Forest Service also admits, as it must, that "anthropogenic control of prairie dogs to manipulate size, extent, and location of prairie dog colonies is not part of the natural range of variation for the ecosystem." AR27760. Citing certain provisions of the Forest Service Handbook, the agency asserted that "deviation from the natural

range of variation" was "appropriate to achieve the integrated desired conditions for management on the grassland." *Id.*

STANDARD OF REVIEW

The Administrative Procedure Act ("APA") provides for judicial review of final agency actions. 5 U.S.C. § 702. Courts in the Tenth Circuit apply the APA's "arbitrary and capricious" standard when reviewing challenges to final agency actions, including suits brought through the citizen suit provision of the ESA. *WildEarth Guardians v. Bureau of Land Mgmt.*, 870 F.3d 1222, 1233 (10th Cir. 2017); *Rio Grande Silvery Minnow v. U.S. Bureau of Land Reclamation*, 601 F.3d 1096, 1105 n.3 (10th Cir. 2010) (citations omitted); *see also* 16 U.S.C. § 1540(g). Under the APA, a reviewing court must "hold unlawful and set aside agency action, findings, and conclusions found to be … arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A).

An agency's decision is arbitrary and capricious if it "(1) entirely failed to consider an important aspect of the problem, (2) 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, (3) failed to base its decision on consideration of the relevant factors, or (4) made a clear error of judgment." *WildEarth Guardians*, 870 F.3d at 1233 (citations and quotations omitted). Further, an agency must "articulate[] a rational connection between the facts found and the decision made." *Olenhouse v. Commodity Credit Corp.*, 42 F.3d 1560, 1574 (10th Cir. 1994) (citing *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)). While review under the "arbitrary and capricious" standard is narrow, a court's inquiry must be "searching and careful," "thorough, probing, and in-depth." *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 415–16 (1971).

ARGUMENT

I. Petitioners Have Standing.

This Court has Article III jurisdiction to review Petitioners' claims. Through their staff and members' detailed declarations attesting to cognizable interests that have been and continue to be impaired by the 2020 Plan Amendment, Petitioners have established standing to challenge these actions. Exs. 1-3 (Declarations); *see also Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc.*, 528 U.S. 167, 180–81 (2000) (explaining the requirements for Article III standing).

II. The 2020 Amendment Violates the Forest Service's Affirmative ESA Duty to Conserve the Black-Footed Ferret.

Five years after Congress enacted the ESA, the Supreme Court considered the statute's breadth in the context of a $100 million dam and a small endangered fish—the snail darter. *See Tennessee Valley Auth. v. Hill*, 437 U.S. 153 (1978). In that iconic case, after thoroughly examining the language of both the ESA and its statutory predecessors, as well as the Congressional testimony regarding the Act, the Supreme Court held that the ESA "give[s] endangered species *priority* over the 'primary missions' of federal agencies." *Id.* at 185 (emphasis added). "The plain intent of Congress in enacting [the ESA] was to halt and reverse the trend toward species extinction, whatever the cost. This is reflected not only in the stated policies of the Act, but in literally every section of the statute." *Id.* at 184. The Supreme Court ultimately upheld the injunction against the dam's operation, concluding that "Congress has spoken in the plainest of words, … the balance has been struck in favor of affording endangered species the highest of priorities[.]" *Id.*, at 194.

Section 7(a)(1) of the ESA states that federal agencies, including the Forest Service, "*shall* … utilize their authorities in furtherance of the purposes of the [ESA] by carrying out programs for the conservation of endangered species," like the black-footed ferret. 16 U.S.C. § 1536(a)(1)

(emphasis added). Under the ESA, "conservation" means "to use and the use of all methods and procedures which are necessary to bring any endangered species … to the point at which the measures provided pursuant to [the ESA] are no longer necessary." 16 U.S.C. § 1532(3). Thus, "the ESA was enacted not merely to forestall the extinction of species[], but to allow a species to *recover* to the point where it may be delisted." *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1070 (9th Cir.), amended, 387 F.3d 968 (9th Cir. 2004) (emphasis added).

Section 7(a)(1) of the ESA imposes a specific affirmative duty upon all federal agencies to carry out programs to conserve endangered and threatened species. *Sierra Club v. Glickman*, 156 F.3d 606, 616 (5th Cir. 1998). Total inaction is not allowed. *Id.* at 617–18; *Nat'l Wildlife Fed'n v. Norton*, 332 F. Supp. 2d 170, 187 (D.D.C. 2004) (Section 7(a)(1) confers discretion, but that "discretion is not so broad as to excuse total inaction[.]"); *Defs. of Wildlife v. Sec'y, U.S. Dep't of the Interior*, 354 F. Supp. 2d 1156, 1174 (D. Or. 2005) ("compliance is not committed to agency discretion by law"); *Fla. Key Deer v. Paulison*, 522 F.3d 1133, 1146 (11th Cir. 2008). And "insignificant" measures that do not, or are not reasonably likely to, conserve endangered or threatened species are equally inadequate to fulfill an agency's affirmative ESA conservation duty. *Paulison*, 522 F.3d at 1147 (citing *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of Navy*, 898 F.2d 1410, 1418 n.19 (9th Cir. 1990)).

Finally, the Forest Service's own threatened and endangered species policy, derived from this affirmative conservation mandate, directs the agency to "place top priority on conservation and recovery of listed species," "avoid all adverse impacts on listed species and their habitats," and identify and prescribe measures to prevent adverse modification or destruction of "habitats essential for the conservation" of listed species. FSM 2670.31.

The 2020 Amendment prioritizes livestock grazing interests over ferret recovery needs and degrades habitat previously managed to facilitate black-footed ferret reintroduction, in violation of the Forest Service's affirmative ESA conservation mandate. One of the stated purposes of the 2020 Amendment is to "reduce resource conflicts related to prairie dog occupancy and livestock grazing." AR26610. And every action alternative that the Forest Service considered benefited livestock forage at the expense of prairie dog populations—impeding black-footed ferret recovery. Each action alternative "de-emphasize[d]" the reintroduction of ferrets, decreased habitat for prairie dogs, and increased prairie dog poisoning. AR26683. Three action alternatives, including the preferred alternative, reduced the size of the prior black-footed ferret reintroduction area, and allowed experimental density control throughout the Thunder Basin. AR26611-12, 26657, 26662, 27748, 27736, 27194. The Amendment even removes the ferret reintroduction habitat designation. AR27744, 26666.

The preferred alternative also includes plan components that prioritize livestock forage over prairie dog populations. In times of drought, the Forest Service lowers the prairie dog colony objective because "the effects of drought on forage availability and prairie dog movement [] can heighten conflicts related to prairie dog occupancy and livestock grazing." AR27810. The agency further states that this lower objective is "intended to help balance resource use when drought reduces forage available for livestock" and "will remove some competition for forage by prairie dogs." AR27730. The density control objectives even specifically include "preventing undesirable vegetation state changes" and "promoting forage availability" for livestock. AR27194. All of these plan components prioritize domestic livestock interests to the detriment of prairie dog colonies and potential ferret reintroduction habitat. And by prioritizing the interests of livestock grazing over recovery of the black-footed ferret, the Forest Service ignored its own policy

to "place top priority on conservation and recovery of listed species" and violated its affirmative ESA duty to conserve the black-footed ferret. FSM 2670.31, *Tennessee Valley Auth.*, 437 U.S. at 185.

The 2020 Amendment also severely degrades black-tailed prairie dog colony habitat that was previously set aside for black-footed ferret recovery. The Thunder Basin is one of just two large and intact areas nationally that can be used for the conservation of the black-footed ferret. AR72150. It is also the only identified, currently-existing, potential black-footed ferret reintroduction site in Wyoming on Forest Service lands. *See* AR68977-79.

Until this Amendment, the Forest Service expressly managed MA 3.63 (now MA 3.67) as a potential recovery site for black-footed ferrets. AR72150. Prairie dog colonies were allowed to expand and provide habitat for future black-footed ferret reintroductions. AR26631. Recreational prairie dog shooting was prohibited, and poisoning was restricted until prairie dog colonies reached 18,000 acres. AR66422, 66417, 66420.

But under the 2020 Amendment, the prairie dog colony objective is capped at 10,000 acres with major exceptions allowing control down to just 7,500 acres. AR27727, 27735-36. Extensive prairie dog poisoning is allowed throughout MA 3.67, including in boundary management zones, which are kept clear of prairie dogs, and through experimental density control, which is allowed throughout the area. AR27727, 27232, 27736. Recreational prairie dog shooting is only seasonally restricted and there is no plague management plan in place. AR27727, 27747, 27795. The Forest Service has even stated that when it does develop a plague management plan it may include not treating prairie dog colonies "for 1 or more years." AR27808-9.

Thus, under the 2020 Amendment, ferret reintroduction on the Thunder Basin is incredibly unlikely if not impossible because MA 3.67 is now inhospitable to black-footed ferrets. Prairie

dog poisoning and recreational shooting negatively affect ferrets both directly and indirectly. AR5305-07. The same is true of sylvatic plague, which is highly fatal to both black-footed ferrets and the prairie dog populations upon which they depend. AR5294-95. Lack of a plague management plan and intent to withhold treatments for one or more years may preclude black-footed ferret reintroduction entirely, an outcome that would further imperil the species by exacerbating its extreme genetic bottleneck. AR56818. And the prairie dog acreage objective is below the amount the Forest Service previously identified as the *minimum* necessary to support a viable population of black-footed ferrets, especially under the major exceptions allowing the Forest Service to reduce the acreage even lower, to 7,500. AR67750-51, 27735-36.

Through these management changes, the Forest Service contravenes its own policy objectives for the conservation of federally listed species and fails to fulfill its affirmative duty under the ESA to further the black-footed ferret's recovery. *See Paulison*, 522 F.3d at 1147; 16 U.S.C. § 1531(c)(1), § 1536(a)(1); *see also* FSM 2670.31 (e.g., agency must "avoid all adverse impacts on listed species and their habitats," and identify and prescribe measures to prevent adverse modification or destruction of "habitats essential for the conservation" of listed species). The 2020 Plan Amendment must be set aside as a result.

III. The 2020 Plan Amendment Violates NEPA.

A. The Purpose of the 2020 Plan Amendment Is Impermissibly Narrow and Unreasonable.

Federal agencies must "briefly specify the underlying purpose and need" for a proposed action. 40 C.F.R. § 1502.13. On review, courts examine an agencies' statement of the purpose and need under a "reasonableness standard." *League of Wilderness Defs.-Blue Mountains Biodiversity Project v. U.S. Forest Serv.*, 689 F.3d 1060, 1069 (9th Cir. 2012).

While agencies are afforded deference in specifying the purpose and need for a project, that "[d]eference … does not mean dormancy, and the rule of reason does not give agencies license to fulfill their own prophecies, whatever the parochial impulses that drive them." *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991). Further, agencies are not permitted "to define the objectives [of a proposed action] so narrowly as to preclude a reasonable consideration of alternatives." *Wyoming v. U.S. Dep't of Agric.*, 661 F.3d 1209, 1244 (10th Cir. 2011).

Finally, in defining the purpose and need of a project, "an agency should always consider … [its] other congressional directives." *Busey*, 938 F.2d at 196; *see also Friends of Animals v. U.S. Fish & Wildlife Serv.*, No. 6:14-cv-1449-AA, 2015 WL 4429147, at *5 (D. Or. July 16, 2015), *aff'd sub nom. Friends of Animals v. U.S. Fish & Wildlife Serv.*, 879 F.3d 1000 (9th Cir. 2018) ("[T]he ESA … informs the proposed action's purpose and need."), 16 U.S.C. § 1536(a)(1).

The Forest Service's stated purpose and need for the 2020 Plan Amendment directly contravenes the agency's affirmative ESA duty to contribute to the recovery of the endangered black-footed ferret. The agency's stated "purpose and need" for the 2020 Plan Amendment includes to "provide a wider array of management options to respond to changing conditions," to "minimize prairie dog encroachment onto non-Federal lands," and to "reduce resource conflicts related to prairie dog occupancy and livestock grazing." AR26610. The Forest Service also stated that a specific purpose of the 2020 Amendment was to "increase the availability of lethal prairie dog control tools[.]" *Id*. Each of these stated purposes, as well as its statement regarding increasing lethal prairie dog control, all seek to further reduce prairie dogs and prairie dog colonies—the species upon which endangered black-footed ferrets depend for survival—and thus contravene the Forest Service's affirmative ESA duty to recover the ferret.

Black-footed ferrets are "intrinsically linked" to prairie dog colonies. AR27667. They require established prairie dog colonies for both food and shelter, and live in those colonies year-round. AR27667, 5284, 5286-87, 67742, 67750. Black-footed ferrets are also a "conservation-reliant species," meaning that if they are to recover, they must first be reintroduced into suitable habitat in the wild. AR5343, 5273. But the Forest Service's stated purpose for the 2020 Amendment, at least in part, is to specifically degrade or artificially inhibit prairie dog habitat on the Thunder Basin—habitat that was previously managed for the express purpose of being able to support viable populations of reintroduced black-footed ferrets. *See* AR72150. Seeking to degrade habitat conditions at a vital potential reintroduction site for a critically endangered, conservation-reliant species directly contravenes the Forest Service's affirmative ESA mandate to recover endangered species.

Lastly, the Forest Service's final stated purpose—to "support ecological conditions that do not *preclude* reintroduction of the black-footed ferret"—marks a drastic change in the way the agency previously managed MA 3.63 (now MA 3.67). AR26610. As noted before, MA 3.63 was previously designated as a potential recovery site for black-footed ferrets. AR72150. It is one of just two areas in the nation that offer "large and intact priority areas for the conservation of the black-tailed prairie dog." *Id*. It is also the only identified, currently-existing potential black-footed ferret reintroduction site on Forest Service lands in Wyoming. AR68977-79. And the Forest Service previously determined that any management which did not allocate potential reintroduction habitat was "likely to adversely affect" black-footed ferrets because, regardless of current occupation of habitat, a failure to manage for reintroduction would negatively impact the species. *See* AR73102.

But now, the Forest Service will manage the area only to meet the "minimum requirements for reintroduction in Wyoming" and thereby "not preclude" black-footed ferret reintroduction. AR26614. Proposing to amend the Thunder Basin Grassland Plan to provide only the *minimum* necessary conditions for ferret reintroduction also directly contravenes the Forest Service's affirmative ESA mandate to use its authority in the furtherance of recovery of the black-footed ferret. The Forest Service failed to state a purpose and need for the 2020 Amendment that is consistent its ESA duty to recover endangered species. 16 U.S.C. § 1536(a)(1); *Busey*, 938 F.2d at 196; *Friends of Animals*, 2015 WL 4429147, at *5. Consequently, the 2020 Amendment purpose and need statement is impermissibly narrow and unreasonable, in violation of NEPA, and the Amendment must be set aside as arbitrary and capricious.

B. The Forest Service Did Not Consider a Reasonable Range of Alternatives

Courts also apply a "reasonableness standard" in reviewing an agency's choice of alternatives. *League of Wilderness Defs.*, 689 F.3d at 1069. In the Tenth Circuit, "courts measure the reasonableness of alternatives against two guideposts." *Dine Citizens Against Ruining our Env't v. Klein*, 747 F. Supp. 2d 1234, 1255 (D. Colo. 2010). "First, when considering agency actions taken pursuant to a statute, an alternative is reasonable only if it falls within the agency's statutory mandate. Second, reasonableness is judged with reference to an agency's objectives for a particular project." *Richardson*, 565 F.3d at 709 (citation omitted).

Here, every action alternative considered by the Forest Service directly contradicts both the agency's statutory ESA recovery mandate and the agency's statutory NFMA "diversity" mandate. The Forest Service's ESA recovery duty must inform every action the agency proposes. *See* 16 U.S.C. § 1536(a)(1); *see also Tennessee Valley Auth.*, 437 U.S. at 185. But the Forest Service again contravened this affirmative duty by analyzing an unreasonable range of alternatives

which all degrade the previously-designated black-footed ferret reintroduction site. Every action alternative "de-emphasizes" the reintroduction of ferrets, increases prairie dog poisoning, and the proposed and preferred alternatives restrict habitat for prairie dogs below the acreage needed for a viable reintroduced ferret population. AR26683, 26611-12, 67750-51. And three action alternatives, including the preferred alternative, reduce the size of MA 3.63 (now MA 3.67) and allow recreational prairie dog shooting and experimental density control—more poisoning. AR26611-12, 26657, 26662, 27748, 27736, 27194. None of these alternatives comply with the Forest Service's statutory ESA recovery mandate because they all degrade MA 3.63 (now MA 3.67) to a point where future black-footed ferret reintroductions will be extremely unlikely if not impossible.

Additionally, the Forest Service's NFMA "diversity" mandate must guide its consideration of alternatives. *See* 16 U.S.C. § 1604(g)(3)(B). As explained more fully below, NFMA's diversity mandate requires the agency to "provide the ecological conditions necessary to contribute to the recovery of federally listed threatened and endangered species" and to "maintain a viable population of each [potential] species of conservation concern" for the Thunder Basin National Grassland. 36 C.F.R. § 219.9(b)(1). But the range of alternatives considered by the agency for the 2020 Amendment also fail NFMA's "diversity" requirement because they neither "contribute to the recovery" of the black-footed ferret nor "maintain a viable population" of potential species of conservation concern. *See infra* Argument IV, B. Thus, the range of alternatives considered by the Forest Service was unreasonable as the majority of the action alternatives all directly contravene the agency's mandates under both the ESA and NFMA. *Richardson*, 565 F.3d at 709.

Finally, the action alternatives considered by the Forest Service also fail to meet two of the agency's stated purposes for the 2020 Amendment: to "ensure continued conservation of at-risk

species" and to "support ecological conditions that do not preclude reintroduction of the black-footed ferret" on the Thunder Basin. AR26610. But as outlined above, three action alternatives capped prairie dog colony acreage at levels that would *not* maintain a viable population of mountain plovers and would *not* support ecological conditions for ferret reintroduction. Thus, even judged against the agency's own purpose and need statement—*i.e.*, its objectives for the Amendment—the range of alternatives considered by the Forest Service was not reasonable, and the 2020 Amendment must be set aside as arbitrary and capricious. *Richardson*, 565 F.3d at 709.

C. The Forest Service Failed to Take a "Hard Look" at Combined Effects of Plague, Poisoning, and Recreational Shooting on Black-Tailed Prairie Dogs and Dependent Species.

"NEPA specifically requires agencies to 'take a hard look at environmental consequences' of a proposed action." *Dine Citizens Against Ruining Our Env't v. Haaland*, 59 F.4th 1016, 1034 (10th Cir. 2023) (quoting *Robertson*, 490 U.S. at 350); *see also Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976). Courts evaluate whether the agency has taken the requisite hard look "by asking whether the agency 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." *Biodiversity Conservation All. v. U.S. Forest Serv.*, 765 F.3d 1264, 1271 (10th Cir. 2014) (quoting *State Farm*, 463 U.S. at 43).

In this review, courts "consider only the agency's reasoning at the time of decisionmaking, excluding post-hoc rationalization concocted by counsel in briefs or argument." *Haaland*, 59 F.4th at 1034 (quoting *Richardson*, 565 F.3d at 704) (internal quote omitted); *see also Silverton Snowmobile Club v. U.S. Forest Serv.*, 433 F.3d 772, 781 (10th Cir. 2006) (NEPA documents must "provide a reviewing court with the necessary factual specificity to conduct its review.") (quoting

Comm. to Preserve Boomer Lake Park v. U.S. Dep't of Transp., 4 F.3d 1543, 1553 (10th Cir. 1993)).

The Forest Service failed to take a hard look at the negative combined effects of sylvatic plague, recreational prairie dog shooting, and increased prairie dog poisoning. Plague alone can cause significant prairie dog populations declines. Black-tailed prairie dogs are especially susceptible to sylvatic plague and the disease has substantially reduced or even extirpated thier populations since the 1940s. AR27332, 27330. It can cause large-scale epizootic events with greater than 99 percent mortality within colonies. AR27332; *see also* AR68001. And these epizootic events can cause colony extirpation and permanent reductions in colony size. AR27332.

Further, the Forest Service is well aware of the deadly effects of sylvatic plague on black-tailed prairie dogs as the disease nearly eradicated the Thunder Basin black-tailed prairie dog populations between 2017 and 2018—when the agency refused to dust prairie dog colonies. AR1413, 68054, 27202 (FEIS) (table). But despite this near calamity, the 2020 Amendment does not include a plague management plan. Instead, it includes an objective to develop a plague management plan within three years. AR27795. And the Forest Service has already preemptively noted that such a plan may include not dusting or otherwise treating prairie dog colonies "for 1 or more years." AR27808-9. Thus, under the 2020 Amendment, sylvatic plague alone may eradicate black-tailed prairie dog populations on the Thunder Basin.

The Forest Service also does not track the impact recreational shooting has on the Thunder Basin black-tailed prairie dog populations. AR27195, 27811. At the Conata Basin-Badlands reintroduction site, prior to the establishment of shooting closures, recreational shooting reduced the prairie dog population density and extent by an estimated 75%. AR5305-06. Recreational shooting also disproportionately affects "black-tailed prairie dog colonies due to their higher

densities and greater accessibility to shooters[.]" AR5305. It negatively affects prairie dog reproductive rates, and colonies subjected to shooting "do not return to their previous population size within 1 year." AR27331. Recreational shooting also disproportionately negatively affects juvenile and female prairie dogs, and leads to increased colony emigration rates. AR5306; *see also* AR22746, 42575-89.

Finally, as to prairie dog poisoning, the Amendment authorizes experimental density control activities, which little is known about and could have "quite variable" outcomes. AR27736, 27809. While density control activities are not currently authorized below 7,500 acres, that is only "*until*" the Forest Service is able to document that such activities "maintain habitat *for species associated with prairie dog colonies*," but not for prairie dogs themselves. AR27809, 27737 (emphasis added). Additionally, the 2020 Amendment's boundary zones will be perpetually kept "clear of prairie dogs" using either zinc phosphide or fumigant poisons. AR27232.

But the Forest Service never analyzed how the combination of untreated sylvatic plague outbreaks, increased recreational shooting, and increased poisoning would affect black-tailed prairie dog populations despite having ample data before it indicating that such a combination could have cumulative negative effects on prairie dog populations that lead to the eradication of the species. Recreational shooting can decrease prairie dogs' ability to resist sylvatic plague infection. AR22745-46 (citing AR47589-678). Prairie dog poisoning can exacerbate the effects of sylvatic plague has already caused extirpation of prairie dog populations. AR5310; *see also* AR27328, 27331. Drought conditions, which the Forest Service admits will be more frequent and prolonged on the Thunder Basin, further negatively impact black-tailed prairie dogs. AR27730, 5302-03. The Forest Service has even previously admitted that "poisoning and plague, along with

other known threats, can each have a significant impact to prairie dogs. However, *when these threats are combined, eradication of entire populations of prairie dogs is possible*." AR67751 (emphasis added).

In the FEIS for the 2020 Amendment, the Forest Service entirely failed to take a "hard look" at whether the combination of sylvatic plague, recreational shooting, and increased prairie dog poisoning through an "experimental" process—and especially during times of drought—would simply eradicate black-tailed prairie dog populations on the Thunder Basin. Further, the agency entirely failed to examine how such an outcome would affect prairie dog-dependent species like mountain plovers, or future reintroduction of black-footed ferrets. As such, the 2020 Amendment ignored an important aspect of the problem, is arbitrary and capricious, and must be set aside. *WildEarth Guardians*, 870 F.3d at 1233 (citations and quotations omitted).

IV. The 2020 Plan Amendment Violates NFMA.

A. The Forest Service Failed to Use the Best Available Science in the 2020 Plan Amendment.

NFMA requires the Forest Service to "use the best available scientific information to inform the planning process" when amending a grassland or forest plan. 36 CFR § 219.3. "[T]he 'best available science' is not just whatever the Forest Service finds on the shelf." *Ecology Ctr., Inc. v. U.S. Forest Serv.*, 451 F.3d 1183, 1193 (10th Cir. 2006). In adhering to this mandate, the Service "should seek out and consider all existing scientific evidence relevant to the decision and it cannot ignore existing data." *Ecology Ctr.*, 451 F.3d at 1195 n.4 (quoting *Heartwood, Inc. v. U.S. Forest Serv.*, 380 F.3d 428, 436 (8th Cir. 2004)) (internal quotations omitted); *see also Utah Envtl. Cong. v. Richmond*, 483 F.3d 1127, 1137 (10th Cir. 2007) (quoting *Ecology Ctr.*, 451 F.3d at 1195 n.4).

Here, the Forest Service failed to use the best available science to inform the 2020 Amendment planning process. The Forest Service previously determined, using the best available science, that a nearly identical set of management changes as adopted in the 2020 Amendment would both "create long-term viability issues" for mountain plover populations, would likely result in a loss of viability for burrowing owl populations, and would "preclude black-footed ferret reintroduction" on the Thunder Basin. AR67748, 67750-51. But both the 2020 Amendment FEIS and ROD fully ignore these prior Forest Service determinations.

Further, the Forest Service previously determined, using the best available science, that black-footed ferrets require a minimum of 10,621 acres of prairie dog colonies to support a self-sustaining reintroduced black-footed ferret population. AR67751; *see also* AR66420. The agency also determined that the best available science indicated that mountain plover populations on the Thunder Basin likely required 20,538 acres to "meet viability needs." AR67748. Yet the Forest Service now asserts a prairie dog colony acreage objective of only 10,000 acres—with major exceptions allowing control down to just 7,500 acres—will maintain viable mountain plover populations and will *not* preclude ferret reintroduction on the Thunder Basin. AR27732.

The Forest Service failed to offer any rational basis for departing from these prior determinations made using the best available science, and thus the 2020 Amendment is arbitrary and capricious, and must be set aside. *Utahns for Better Transp. v. U.S. Dep't of Transp.*, 305 F.3d 1152, 1165 (10th Cir. 2002) (an agency must provide a rational explanation for departure from precedents).

B. The Forest Service Failed to Provide Necessary Ecological Conditions for Viable Populations of Species of Conservation Concern and Endangered Species.

The Forest Service must "provide for diversity of plant and animal communities" on units of the National Forest System. 16 U.S.C. § 1604(g)(3)(B). To implement this requirement, the

revised 2012 Rule directs the agency to "provide the ecological conditions necessary" to both "contribute to the recovery of federally listed endangered and threatened species" and "maintain a viable population of each species of conservation concern within the plan area[.]" 36 C.F.R. § 219.9(b)(1). A "viable population" is one "that continues to persist over the long term with sufficient distribution to be resilient and adaptable to stressors and likely future environments." 36 C.F.R. § 219.19.

The 2020 Amendment fails to provide the ecological conditions necessary to maintain viable populations of species of conservation concern.[1] As discussed *supra*, the Forest Service previously determined that a nearly identical set of management changes as those adopted in the 2020 Amendment would result "in the inability to sustain long-term viability" for mountain plovers, a loss of viability for burrowing owl populations, and would preclude black-footed ferret reintroduction. AR7732, 67750-51. The Forest Service also previously determined that black-footed ferrets require 10,621 acres of prairie dog colonies to support a self-sustaining reintroduced population, and mountain plover populations on the Thunder Basin required 20,538 acres to "meet viability needs." AR67748, 67750-51. Yet the 2020 Amendment caps prairie dog colonies at 10,000 acres with major exceptions allowing control down to 7,500 acres—well below what the Forest Service recognized as necessary to ensure mountain plover population viability and black-footed ferret reintroduction needs.

The 2020 Amendment neither provides ecological conditions that will contribute to the recovery of the endangered black-footed ferret nor maintain viable populations of mountain

[1] For purposes of the 2020 Amendment, the Forest Service determined that black-tailed prairie dogs, mountain plovers, and burrowing owls are all potential species of conservation concern and as such, must be treated as species of conservation concern under the revised 2012 Rule. *See* 36 C.F.R. § 219.13(b)(6).

plovers or burrowing owls, both potential species of conservation concern. The 2020 Amendment thus violates 36 C.F.R. § 219.9(b)(1) and NFMA, is counter to the evidence before the agency, and must be set aside as arbitrary and capricious.

C. The Forest Service Failed to Maintain or Restore Ecological Integrity.

Under the revised 2012 Rule, the Forest Service must "maintain or restore the ecological integrity" in the plan area through plan components. 36 C.F.R. §§ 219.8(a)(1) & 219.9(a)(1). "Ecological integrity" is defined as "[t]he quality or condition of an ecosystem when its dominant ecological characteristics … occur within the natural range of variation and can withstand and recover from most perturbation imposed by natural environmental dynamics or human influence." 36 C.F.R. § 219.19.

Here, the Forest Service concedes that the ecological site descriptions and modeling relied upon by the agency for the 2020 Amendment do not include prairie dog colony occupancy as a key characteristic, despite recognition that prairie dog disturbance is within the natural range of variation on the Thunder Basin. AR26691, 26703. The Forest Service admits that the 2020 Amendment "does not base the design of all plan components on those conditions common in the past relative to the natural range of variation," and that "anthropogenic control of prairie dogs to manipulate the size, extent, and location of prairie dog colonies is not part of the natural range of variation for the ecosystem." AR27760.

The Forest Service contends such "deviation from the natural range of variation" is "appropriate to achieve the integrated desired conditions for management on the grassland," citing provisions of the Forest Service Handbook adopted after the promulgation of the 2012 Rule. AR27760 (citing FSH 1909.12, Ch. 20, 23.11a(2)(f)). But this justification runs afoul of the unambiguous, mandatory language of 36 C.F.R. § 219.8(a)(1) and 36 C.F.R. § 219.9(a)(1). An

agency's interpretation of a duly promulgated regulatory provision warrants no deference where it is plainly erroneous or inconsistent with language of the regulation itself. *Sierra Club v. Envtl. Prot. Agency*, 964 F.3d 882, 891 (10th Cir. 2020) (citing *Auer v. Robbins*, 519 U.S. 452, 461 (1997)).

The 2020 Plan Amendment fails to ensure that prairie dogs and prairie dog-dependent species will be able to "withstand and recover from most perturbation imposed by natural environmental dynamics or human influence," such as sylvatic plague, poisoning, recreational shooting, drought, or the combined effects these stressors. *See* 36 C.F.R. § 219.19. Rather, the record shows that restricting prairie dog colony expansion to 10,000 acres—with major exceptions allowing the Forest Service to manage prairie dog colonies down to 7,500 acres—combined with the expansion of poisoning and recreational shooting, and the lack of a plague management plan, could very well lead to the extirpation of prairie dogs from the Thunder Basin. *See supra*. Such extirpation would, in turn, lead to a loss of viability for mountain plovers and burrowing owls, and further foreclose potential black-footed ferret reintroduction on the Grassland.

By failing to base the 2020 Amendment on the natural range of variation related to prairie dog colony expansion, and failing to ensure plan components will maintain or restore the ecological integrity of the Thunder Basin, the Forest Service ignored an important aspect of the problem, in violation of NFMA, and the 2020 Amendment must be set aside as arbitrary and capricious.

CONCLUSION

For the foregoing reasons, Petitioners respectfully request that the Court declare that the Forest Service's 2020 Plan Amendment for the Thunder Basin National Grassland violates the ESA, NEPA, and NFMA. Petitioners respectfully request that the Court set aside the 2020 Plan

Amendment and enjoin its implementation pending full compliance with the ESA, NEPA, and NFMA by the Forest Service.

Respectfully submitted this 2nd day of May, 2023.

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CERTIFICATE OF COMPLIANCE

I hereby certify to the following:

1. This document complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because, excluding the parts of the document exempted by Fed. R. App. P. 32(f), it contains 12,133 words. I relied on my word processor to obtain this word count.

2. This document complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because it has been prepared in a proportionately-spaced typeface—Times New Roman, 12-point font size—using Microsoft Word version 15.41 in plain, roman style.

Dated May 2, 2023

/s/ Megan Backsen

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CERTIFICATE OF SERVICE

I, Megan Backsen, hereby certify that on May 2, 2023, I electronically filed the foregoing Reply Brief through the Court's CM/ECF system, which caused all counsel of record to be served by electronic means.

Dated May 2, 2023

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