~~EXPLOITERS~~
FRIENDS
of ANIMALS

January 6, 2020

VIA U.S. Certified Mail, Return Receipt Requested

David Bernhardt
Secretary of Interior
Department of the Interior
1849 C Street, N.W.
Washington D.C. 20240

Aurelia Skipwith
Director
United States Fish and Wildlife Service
5275 Leesburg Pike
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Re: Notice of Intent to Sue for Violations of the Endangered Species Act

To whom it may concern:

This letter serves as 60-day notice by Buffalo Field Campaign, Western Watersheds Project, and Friends of Animals (collectively, "Petitioners") to sue David Bernhardt, in his official capacity as the Secretary of the Interior, the United States Department of the Interior; Aurelia Skipwith, in her official capacity as Director of the United States Fish and Wildlife Service; and the United States Fish and Wildlife Service (collectively, "FWS") over violations of Section 4 of the Endangered Species Act (ESA) (16 U.S.C. § 1531 *et seq*.) for the decision to issue a negative 90-day finding declining to list the Yellowstone bison as an endangered or threatened distinct population segment (DPS) of plains bison, *Bison bison bison*. Federal Docket No. FWS-R6-ES-2019-0085; Endangered and Threatened Wildlife; 90-day Findings for Three Species, 84 Fed. Reg. 46927 (Sept. 6, 2019). In making this finding, FWS failed to correct the deficiencies addressed by the district court, applied an incorrect legal standard to the Petitions, failed to rely upon the best available science, failed to consider the fact that the present and historical curtailment of habitat and range has already resulted in placing the Yellowstone bison at risk of extinction, and ignored the plain language of the ESA that

requires FWS initiate a status review if a petition presents substantial evidence that a species **may** be threatened or endangered due to one or more of the five factors listed in 16 U.S.C. §1533(a)(1).

90-DAY FINDINGS UNDER THE ENDANGERED SPECIES ACT

Pursuant to the ESA, a species is "endangered" if it "is in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1532(6). A species is considered "threatened" if it is "likely to become an endangered species within the foreseeable future." *Id*. § 1532(20). In considering whether a species is either threatened or endangered, FWS must consider the following criteria: (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 (collectively, "listing factors"). 16 U.S.C. § 1533(a)(1). The presence of any one factor triggers listing, and the Secretary's discretion in deciding whether to list a species is limited solely to consideration of these five factors. *Sw. Center for Biological Diversity v. Babbitt*, 215 F.3d 58, 60 (D.C. Cir. 2000).

Any interested person can begin the listing process by filing a petition to list a species. 16 U.S.C. § 1533(b)(3)(A); 50 C.F.R. § 424.14(a). Upon receipt of a petition to list a species, FWS is required to make an initial finding known as a "90-day finding" on whether the petition presents "substantial scientific or commercial information indicating that the petitioned action may be warranted." 16 U.S.C. § 1533(b)(3)(A).

The Secretary, by regulation, has stated that a petition is deemed to contain substantial scientific or commercial information if it contains "credible scientific or commercial information in support of the petition's claims such that a reasonable person conducting an impartial scientific review would conclude that the action proposed in the petition may be warranted." 50 C.F.R. § 424.14(h)(1)(i). The "substantial evidence" standard applied at the 90-day finding stage is not a rigorous one. A petitioner need not present "conclusive evidence regarding" threats to a species. *Humane Soc'y of U.S. v. Pritzker*, 75 F. Supp. 3d 1, 14 (D.D.C. 2014); *see also Ctr. for Biological Diversity v. Morgenweck*, 351 F. Supp. 2d 1137, 1140 (D.D.C. 2004) ("[T]he ESA does not require such conclusive evidence that listing is warranted to go to the next step.").

If FWS issues a "positive" 90-day finding, concluding that listing may be warranted, the agency must publish the finding in the Federal Register and commence a "status review" of the species, to be completed within one year. 16 U.S.C. §§ 1533(b)(3)(A)-(B). After completion of the status review, the agency is required to determine in a "twelve-month finding" whether the petitioned action is in fact warranted, based on the best scientific and commercial evidence available. 16 U.S.C. § 1533(b)(1)(A); 50 C.F.R. § 424.11(b).

A "negative" 90-day finding constitutes a denial of a petition and is subject to judicial review as a final agency action under the standards prescribed by the Administrative Procedure Act (APA) and Section 4 of the ESA. 16 U.S.C. § 1533(b)(3)(C)(ii).

BACKGROUND

Yellowstone bison occur in and around Yellowstone National Park and are the largest remnant population of plains bison remaining in North America. Yellowstone bison comprise the only conservation population today that (1) descends from indigenous bison that have continuously persisted in a wild state since prehistoric times; (2) has not tested positive for introgression of cattle genes; and (3) is considered sufficiently large and unique enough to contribute to overall bison genetic diversity, if properly protected. Indeed, Yellowstone bison represent an ecological microcosm of historic bison populations and a genetic well-spring for restoration of the species.

As FWS recognized in previous administrative reviews, plains bison once numbered in the tens of millions, but have been reduced – primarily as a result of hunting – by 99% or more from its historic range.[1] *See* Endangered and Threatened Wildlife and Plants: 90-Day Finding on a Petition to List the Wild Plains Bison or Each of Four Distinct Population Segments as Threatened, 76 Fed. Reg. 10299, 10302 (Feb. 24, 2011). Yellowstone bison suffered similar declines in range. Yellowstone bison historically occupied approximately 7,720 square miles within and surrounding the northern Greater Yellowstone area, but have been restricted to the use of only 16% (1,126 square miles) of its historic range.

The Yellowstone bison population consists of two subpopulations, known as the "Central" and "Northern" herds. Scientific literature indicates that these two subpopulations show a statistically significant level of genetic subdivision—meaning that in order to preserve the total genetic diversity of the Yellowstone bison and avoid inbreeding depression, each herd/subpopulation must be maintained at or above the same minimum population size that is currently being allotted to the two herds combined.[2] However, some experts contend that the two herds were artificially created and thus no distinction should be maintained.[3]

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[1] FWS acknowledged that historically, "habitat for the wild plains bison encompassed approximately 2.8 million square miles." 76 Fed. Reg. at 10301.

[2] *See* Natalie D. Halbert et al., *Genetic Population Substructure in Bison at Yellowstone National Park*, 103 J. Heredity 360, 367 (2012) (hereinafter, "Halbert study").

[3] *See* Patrick J. White & Rick L. Wallen, *Yellowstone Bison—Should We Preserve Artificial Population Substructure or Rely on Ecological Processes?* 103 J. Heredity 751, 752 (2012) (hereinafter, "White and Wallen letter"). Notably, the 2012 White and Wallen letter is not a study. It is simply a two-and-a-half-page letter to the editor of *Journal of Heredity* critiquing the Halbert study. As the Halbert team of geneticists noted in

Yellowstone bison exhibit seasonal migrations along altitudinal elevations during winter and return to summer ranges in June and July. FWS estimates that, in 2018, there were approximately 4,527 Yellowstone bison – 3,337 in the Northern herd and 1,190 in the Central herd.

At this time, the DPS of Yellowstone bison are not listed as either endangered or threatened under the ESA. Instead, Yellowstone bison are managed by the Interagency Bison Management Plan for the State of Montana and Yellowstone National Park (IBMP). The IBMP sets a target of 3,000 for the entire population of Yellowstone bison, covering both the Central and Northern herds. It also establishes boundaries for the population's territory. Additionally, the IBMP allows for Yellowstone bison to be hazed, captured, culled, and hunted as they exit Yellowstone National Park boundaries as part of winter migration patterns near the northern and western park entrances. During bison's winter migrations, Yellowstone National Park captures bison for slaughter and operates a quarantine at Stephens Creek. On surrounding National Forest habitat, state managers haze, capture, and permit migrating bison to be hunted.

On November 13, 2014, Buffalo Field Campaign and Western Watersheds Project filed a citizen petition to list the DPS of Yellowstone bison as endangered or threatened under the ESA. On March 2, 2015, Mr. James A. Horsley filed a second petition requesting similar action on the Yellowstone bison.

On January 12, 2016, FWS rejected the petitions and published a negative 90-day finding refusing to conduct a comprehensive review of the species' conservation status. FWS concluded that the Petitions "do not present substantial scientific or commercial information indicating that the petitioned action may be warranted" under any of the five listing factors. 81 Fed. Reg. 1368, 1375 (Jan. 12, 2016); *see also* Federal Docket No. FWS-R6-ES-2015-0123, 90-Day Finding on Two Petitions to List a Distinct Population Segment of Yellowstone Bison as Threatened or Endangered Under the Endangered Species Act ("2016 Finding").

On September 26, 2016, Petitioners filed suit in the U.S. District Court for the District of Columbia challenging this decision on several grounds, including that FWS had applied an incorrect evidentiary standard in evaluating the petition under Section 4 of the ESA.

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response to the White and Wallen letter, the details of the movement study and the genetic study relied upon for White and Wallen's unsupported conclusions are unpublished and are not peer-reviewed. *See* Natalie D. Halbert, Peter J. P. Gogan, Philip W. Hedrick, Jacquelyn M. Wahl, James N. Derr, *Yellowstone Bison Genetics: Let Us Move Forward*, Journal of Heredity, Volume 103, Issue 5, September-October 2012, Pages 754–755, https://doi.org/10.1093/jhered/ess051.

On January 31, 2018, U.S. District Judge Christopher R. Cooper, issued a decision granting in part Petitioners' Motion for Summary Judgment in that action. *Buffalo Field Campaign v. Zinke*, 289 F. Supp. 3d 103 (D.D.C. 2018). Judge Cooper found that FWS had indeed "applied an improper standard when evaluating [the] petition," and, thus acted arbitrary and capriciously in issuing the negative 90-day finding. *Id*. at 105. Accordingly, the court remanded "the case for the agency to conduct a new 90-day finding using the proper standard." *Id*.

On March 16, 2018, FWS received a third petition from Mr. Horsley requesting emergency listing for the Yellowstone bison.

On May 15, 2019, after FWS failed to comply with its mandatory duties to conduct a proper 90-day finding on the Petitions to list the DPS of Yellowstone bison as endangered or threatened under the ESA, Petitioners again filed suit in the U.S. District Court for the District of Columbia seeking declaratory and injunctive relief requiring Defendants to comply with the ESA and conduct a proper 90-day finding on the Petitions.

On September 6, 2019, FWS issued another negative 90-day finding. Addressing all three petitions, FWS found that the petitions "did not present substantial scientific and commercial information indicating that the petitioned action may be warranted." 84 Fed. Reg. at 46928; *see also* Federal Docket No. FWS-R6-ES-2019-0085, 90-Day Finding on Three Petitions to List the Yellowstone Bison as Threatened or Endangered Under the Endangered Species Act ("2019 Finding"). In light of the new finding, on September 19, 2019, the parties agreed to dismiss the May 15, 2019 lawsuit.

ENDANGERED SPECIES ACT VIOLATIONS

A. FWS failed to correct the deficiencies addressed by the district court, and instead, continued to apply an improper legal standard.

Rather than fixing the problems with its 2016 Finding, FWS changed tactics in the 2019 Finding in order to come to the forgone conclusion "that the petitions do not provide substantial scientific or commercial information indicating that listing the [Yellowstone bison] as a DPS of Plains bison (*Bison bison bison*) as a threatened or endangered species may be warranted." 2019 Finding at 16. Similar to the 2016 Finding, the 2019 Finding had a near singular focus, but this time it was on alleged "stable" population numbers and the estimated park-wide carrying capacity despite persistent threats to the last remaining, free-roaming population of bison in the United States. The fact that this was FWS's second attempt at reviewing and assessing the overwhelming evidence that supports listing the DPS of Yellowstone bison as endangered or threatened makes its current violations of the ESA particularly egregious.

In reviewing the 2016 Finding, the district court held that FWS "applied an improperly heightened standard in making its 90-day determination" and remanded the case back to the agency "to allow it to conduct a 90-day finding using the appropriate standard." *Buffalo Field Campaign*, 289 F. Supp. 3d at 111-12. To do so, the district court clarified that the agency "must explain why the evidence supporting the petition is unreliable, irrelevant, or otherwise unreasonable to credit" rather than simply picking and choosing between contradictory scientific studies. *Id*. Here, FWS once again failed to do so.

For example, in analyzing Factor A and range curtailment, the 2019 Finding inexplicably dismisses the district court's finding regarding conflicting scientific studies concerning whether the Central and Northern subpopulations of Yellowstone bison should be managed as separate populations of around 3,000 bison each or whether Yellowstone bison should be managed at a target of 3,000 bison for the entire herd. As explained by the district court, the Halbert study suggests that both the Central and Northern herd each need a population that is large enough to ensure each herd's individual survival. In contrast, the White and Wallen letter suggests that the current target of 3,000 total bison for both subpopulations is sufficient and hazing and culling Yellowstone bison is not a threat to the survival of the species. *Id*. at 110. The district court further cites to "other studies" indicating that around 3,000 bison are needed to ensure a herd's survival, and notes that "this suggests that the 3,000 bison population target for *both* herds is too low to ensure that *each* herd will survive." *Id*. (citing Perez-Figueroa *et al*. 2012[4] and Plumb *et a*l. 2009[5]); *see also* Hedrick 2009[6] at 419 ("Individual herds or clusters should have an effective population size of 1000 (census number of 2000-3000) to avoid inbreeding depression and maintain genetic variation.").

Yet, in the Factor A analysis in the 2019 Finding, FWS dismisses the district court's finding and simply concludes, without further analysis, that the Halbert study "does not recommend specific herd sizes; instead, the study recommends that a population viability analysis be conducted." 2019 Finding at 7. However, as the district court specifically discussed, the Halbert study presents strong evidence for the existence of "[t]wo genetically distinct and clearly defined subpopulations" of bison within Yellowstone, while the "other studies" expressly recommend specific herd sizes. *See* Halbert study at 1 ("Two genetically distinct and clearly defined subpopulations were identified based on both

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[4] Perez-Figueroa. A.. R. Wallen. T. Antao. J. Coombs. M. Schwartz. P. White, and G. Luikart. 2012. *Conserving genomic variability in large mammals: effect of population fluctuations and variance in male reproductive success on variability in Yellowstone bison*. Biological Conservation 150:159-166.

[5] Plumb. G.E.. P.J. White. M.B. Coughenour. and R.L. Wallen. 2009. *Carrying capacity, migration. and dispersal in Yellowstone bison*. Biological Conservation 142:2377-2387.

[6] Philip W. Hendrick. 2009*. Conservation Genetics and North American Bison (Bison bison)*. Journal of Heredity 100(4): 411-420.

genotypic diversity and allelic distributions[.]"; Halbert study at 9 ("In conclusion, we have presented strong evidence for the existence of 2 genetically distinct subpopulations of bison within Yellowstone National Park."); *see also* Perez Figueroa *et al*. 2012 at 165 ("[O]ur simulations suggest that the conservation of high allelic diversity (>95%) at loci with many alleles (≥ 5) will require the maintenance of a populations size greater than ~3250 (mean Nc) and removal of mainly or only juveniles."); Plumb *et al*. 2009 at 2385 ("Analyses estimate that 1000–2000 bison likely are needed in each of the central and northern breeding herds to retain enough genetic diversity to enable bison to adapt to a changing environment through natural selection, drift, and mutation.[7] Also, many thousands of bison are likely necessary to fully express their ecological role . . . . Thus, while the IBMP initially indicated that 2100 bison would satisfy conservation values . . . strong scientific and management support has developed for managing the Yellowstone population above a minimum conservation target of 2500 bison."). The Halbert study further notes that a population viability analysis should be conducted "[t]o determine the appropriate effective population size for the long-term sustainability of the subpopulations." Halbert study at 9. In analyzing range curtailment, the 2019 Finding fails to discuss the scientific dispute concerning subpopulations, completely ignores the concerns addressed in the Halbert study and analyzed by the district court, and fails to explain why the scientific evidence regarding two genetically distinct subpopulations that should each be managed at an appropriate effective population size of at least 3,000 bison is unreliable, irrelevant, or otherwise unreasonable to credit.

FWS also addresses the district court's opinion in its analysis of Factor E concerning genetic diversity. 2019 Finding at 13-14. Once again, contrary to Judge Cooper's Opinion and Order, FWS attempts to resolve disagreement (conflicting findings) among scientists, in this instance the Halbert study and Forgacs 2016.[8] Importantly, the Halbert study found "[t]wo genetically distinct and clearly defined subpopulations . . . based on both genotypic diversity and allelic distributions." Halbert study at 1. FWS again fails to explain why this finding is unreliable, irrelevant, or otherwise unreasonable to credit. Instead, citing the Forgacs study, the White and Wallen letter, and status reports, the 2019 Finding states that

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[7] Citing Gross, J.E., Wang, G., 2005. *Effects of Population Control Strategies in Retention of Genetic Diversity in National Park Service Bison (Bison bison) Herds*. US Geological Survey, Biological Resources Division, Department of Biology, Montana State University, Bozeman.; Gross, J.E., Wang, G., Halbert, N.D., Gogan, P.A., Derr, J.N., Templeton, J.W., 2006. *Effects of Population Control Strategies on Retention of Genetic Diversity in National Park Service Bison (Bison bison) Herds*. US Geological Survey, Biological Resources Division, Department of Biology, Montana State University, Bozeman.; Freese, C.H., Aune, K.E., Boyd, D.P., Derr, J.N., Forrest, S.C., Gates, C.C., Gogan, P.J.P., Grassel, S.M., Halbert, N.D., Kunkel, K., Redford, K.H., 2007. *Second chance for the plains bison*. Biological Conservation 136, 175–184.

[8] Forgacs, D., R. Wallen, L. Dobson, and J. Derr. 2016. *Mitochondrial genome analysis reveals historical lineages in Yellowstone bison*. PLoS ONE 11(11). 15 pp. (hereinafter, "Forgacs study"). Notably, the Forgacs study relies on the White and Wallen letter to support its conclusions concerning a single population. Forgacs study at 5.

"the two herds have experienced increased mixing." 2019 Finding at 14. The Finding goes on to conclude, without reference to any scientific studies,[9] that "this mixing suggests that the substructure of two distinct lineages in two distinct herds may not be sustained over time." *Id*. In support of its predetermined position, FWS notes that "[r]ecent spatial analysis of mitochondrial DNA did not detect geographic population subdivision" and thus supports FWS's position that Yellowstone bison should be considered a single population. 2019 Finding at 15 (citing the Forgacs study). This is yet another example of a scientific dispute concerning subpopulations of Yellowstone Bison. Rather than addressing the scientific dispute, FWS simply picks and chooses the evidence it relies upon and fails to explain why the evidence in the Halbert study as well as the evidence in Perez-Figueroa et al. 2012, Plumb 2009, and Hedrick 2009 is unreliable, irrelevant, or otherwise unreasonable to credit.

As the district court expressly noted, "the 90-day standard does not allow the Service to simply discount scientific studies that support the petition or to resolve reasonable extant scientific disputes against the petition." *Buffalo Field Campaign*, 289 F. Supp. 3d at 110. Thus, "it simply cannot resolve outstanding disputes between reasonable scientists over relevant matters in the course of a 90-day review." *Id*. at 111. The issue of whether the two distinct subpopulations of Yellowstone bison need to be managed as such is a relevant matter that is disputed by reasonable scientists and therefore cannot be resolved in the 90-day finding stage. FWS failed to correct this deficiency, and rather than explaining why the evidence supporting the Petitions was unreliable, irrelevant, or otherwise unreasonable to credit, simply chose the studies that supported its conclusion and discarded the studies that did not.

B. FWS failed to properly consider whether Yellowstone bison may be threatened or endangered due to habitat curtailment in all or a significant portion of its range.

The ESA requires the Secretary of the Interior to list a species if it is in danger of extinction or likely to become in danger of an extinction throughout all or a significant portion of its range. 16 U.S.C. § 1532(6), (20). FWS's failure to analyze whether the loss of nearly 85% of the Yellowstone bison's historical range constitutes curtailment in a significant portion of its range is arbitrary and capricious and violates the ESA. Under the standard articulated by the Ninth Circuit in *Defenders of Wildlife v. Norton*, 258 F.3d 1136, 1145 (9th Cir. 2001) and repeatedly adopted by D.C. Courts, "where . . . it is on the record apparent that the area in which the [species] is expected to survive is much smaller than its historical range, the

[9] In support of this conclusion, the 2019 Finding cites to "Geremia et al. 2017, p. 9" which is an annual status report on the Yellowstone bison population. The status report contains no citations or references to any documents or scientific studies and is not a peer-reviewed scientific study. Indeed, the statement FWS cites to is in Appendix A: Population Modeling Methods.

Secretary must at least explain [his] conclusion that the area in which the species can no longer live is not a 'significant portion of its range.'" *WildEarth Guardians v. Salazar*, 741 F. Supp. 2d 89, 98-99 (D.D.C. 2010). It is undisputed that the Yellowstone bison's current range and habitat has shrunk by nearly 85% as compared to its historical range. *See* 2019 Finding at 2 (noting that the historic range is approximately 7,720 square miles (20,000 square kilometers) in and around Yellowstone National Park, and the current range is approximately 1,226 square miles (3,175 square kilometers) in and around Yellowstone National Park). It is also undisputed that the remaining Yellowstone bison's contribution to the viability of the species is so important that, without the members in that portion, the species would be in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range.

In the 2019 Finding, FWS does not analyze whether the Yellowstone bison's effective extinction throughout a majority of its historical range constituted at least a threat of curtailment throughout all or a "significant portion of its range." The 2019 Finding acknowledges that Yellowstone bison now occupy only about 16% of their historic range in and around Yellowstone National Park. 2019 Finding at 6 (citing Plumb et al. 2009 at 2377-78). FWS failed to explain why this reduction in the Yellowstone bison's historical range, coupled with indisputable evidence concerning the uniqueness of these subpopulation and the threats the populations face, does not indicate that listing the Yellowstone bison may be warranted.

Rather than supplying the appropriate analysis, FWS simply notes the migration patterns of the two subpopulations and acknowledges that it "recognizes that range curtailment due to the loss of migration routes and the lack of tolerance for bison beyond [Yellowstone National Park] boundaries has occurred." 2019 Finding at 6. FWS further acknowledges that management actions taken pursuant to the IBMP, including culling, hunting, and hazing, "may exasperate impacts from range curtailment." *Id*. Yet, FWS inexplicably concludes that population estimates "do not support an assertion that listing may be warranted due to range curtailment." *Id*. Thus, rather than considering that the Yellowstone bison's population across 85% of its historic range has effectively fallen to zero, and remains that low due to ongoing efforts to haze, trap, capture, or kill bison, FWS based its determination solely on alleged "stable" population numbers within this small remaining fragment of the Yellowstone bison's former range and an estimated park-wide carrying capacity.

Moreover, FWS erroneously relied on the estimated "carrying capacity" of Yellowstone National Park in evaluating the threat to Yellowstone bison due to range curtailment and habitat loss rather than looking at the ecosystem upon which bison depend for survival in the wild. 2019 Finding at 7. For example, FWS relied on observations recorded during a time when bison were being extirpated across their range in North America to surmise that

bison are beyond "carrying capacity" and "4X greater than historical estimates." *Id*. at 6 (noting that the historical population estimate of Yellowstone bison was approximately 1,000, and that estimates from 1870-1890 were 500 bison or less); *see also id.* at 7. Yet, FWS ignores evidence in the Petition that "bison appear to have been living everywhere in Greater Yellowstone where habitats were suitable" and "[i]n almost no case prior to 1880 . . . does the written historical record provide the means of calculating any herd size for any locale." Schullery and Wittlesey 2006[10] at 136.

C. The Petitions present substantial information that Yellowstone Bison are overutilized and threatened by hunting and culling.

FWS failed to rationally address the threat of overutilization on the DPS of Yellowstone bison. The Petitions present multiple sources of information showing that Yellowstone bison are threatened by aggressive over-hunting and culling, which is adversely affecting the demographic and genetic makeup of the herds and potentially impairing their future genetic health and viability. For example, the Petitions provide evidence that Yellowstone bison are hunted in the Custer Gallatin National Forest between fall and spring in the Gardiner Basin area north of the Park and Hebgen Basin area west of the Park; Yellowstone bison are captured and culled at the northern and western borders of the Park; and this hunting and culling is having a differential impact on the two genetically discrete subpopulations of Yellowstone bison and causing other adverse demographic changes. These practices may in turn impair the ability of Yellowstone bison to maintain viable effective population sizes and reduce the health, resilience, and defining characteristics of the herds. *See* Western Watershed Project & Buffalo Field Campaigns' Petition to List the Yellowstone Bison at 36-44.

The 2019 Finding notes that the purpose of the winter culling "is to minimize the risk of brucellosis transmission to domestic cattle grazing outside" of Yellowstone National Park as well as political and social concerns. 2019 Finding at 9. Although the 2019 Finding briefly mentions that the Petitions raised concerns about the effectiveness of the cull to minimize the spread of the disease because there are no management actions in place concerning elk, which also carry and transmit the disease, the 2019 Finding completely ignores this concern. *See* 2019 Finding at 9-10. The 2019 Finding mentions the issue of elk again in the analysis of Factor C – Disease and Predation. 2019 Finding at 12. In neither section, however, does FWS actually analyze the issue of whether elk are the primary source of transmission of brucellosis to cattle. FWS cannot ignore this issue. Importantly,

[10] Schullery, P. and Whittlesey, L. H. 2006. Greater Yellowstone bison distribution and abundance in the early historic period. In: Biel, A.W. (Ed.), Greater Yellowstone Public Lands: Proceedings of the Eighth Biennial Scientific Conference on the Greater Yellowstone Ecosystem, Yellowstone National Park, Wyoming, pp. 135-140.

although the 2019 Finding briefly notes that "[t]he primary concern of the petitions is disease risk management under the IBMP, which the petitions assert is carried out to protect the livestock industry rather than protecting" Yellowstone bison, the 2019 Finding fails to address the fact that these management methods provide no benefit to Yellowstone bison. Indeed, the issue of whether a management method protects the livestock industry is not a factor that should be considered when determining whether a species should be protected under the ESA. *See* 16 U.S.C. § 1533(a)(1).

Indeed, FWS appears to acknowledge that the annual culling and hazing of Yellowstone bison in Yellowstone National Park and on National Forest habitat has a significant impact on the populations, but concludes that "overall numbers of bison are stable despite culling and the presence of brucellosis and are approaching the carrying capacity of [Yellowstone National Park]." 2019 Finding at 12. As already noted above, these broad and misleading conclusions and lack of analysis are contrary to the ESA. Indeed, the fact that the population has remained "stable" despite multiple threats and inadequate management does not indicate that Yellowstone bison are not in danger of extinction throughout all or a significant portion of its range.

D. The 2019 Finding improperly relies on the IBMP as an adequate source of regulatory protection.

The Petitions provide substantial scientific evidence indicating that Yellowstone bison may be threatened or endangered due to inadequate regulatory mechanisms. Contrary to FWS's assertions in the 2019 Finding, the IBMP's management scheme treating the Northern and Central Yellowstone bison herds as though they are genetically the same and contribute equally to one interbreeding population is not based on the best available science. *See* Western Watershed Project & Buffalo Field Campaigns' Petition to List the Yellowstone Bison at 22-23, 31, 39-45. Importantly, the original environmental impact statement for the IBMP is outdated and there has been no action to update the scientific basis for management of Yellowstone bison. *See* Environmental Impact Statement for a Management Plan for Yellowstone-Area Bison, 80 Fed. Reg. 13603 (Mar. 16, 2015).

As explained in the Petitions, the management goals of the IBMP, which require a minimum population threshold of only 2,100 total bison, fall short of adequately protecting the Yellowstone bison and do not guard against the deleterious effects of genetic drift, inbreeding, and demographic and environmental stochasticity. *See* Western Watershed Project & Buffalo Field Campaigns' Petition to List the Yellowstone Bison at 22-23; 43-44. As stated in the Petitions, a sufficient effective population size of 2,000 to 3,000 bison per subpopulation must be maintained to avoid inbreeding and loss of genetic diversity in Yellowstone bison. *See id*. at 44; *see also* Halbert study at 8. The 2019 Finding ignores this evidence and concludes that the "existing regulatory mechanisms (primarily the IBMP) are not inadequate." 2019 Finding at 15.

CONCLUSION

If FWS does not act within 60 days to correct these violations, Petitioners intend to pursue litigation in federal court against FWS. However, this is not our preference. The purpose of the 60-day notice provision in the ESA is for violators of the law to come into compliance, therefore avoiding the need for litigation. Accordingly, if you have any plans to issue a positive 90-day finding for the DPS of Yellowstone Bison and proceed to a 12-month status review, please contact me to discuss the matter.

Sincerely,

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