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Working to protect and restore Western Watersheds

By US Mail and Internet

February 29, 2016

Superintendent
Yellowstone National Park
Attn: Quarantine Relocation Program for Yellowstone Bison
P.O. Box 168
Yellowstone National Park
Wyoming 82190

The Use of Quarantine to Identify Brucellosis-free Yellowstone Bison for Relocation Elsewhere
Environmental Assessment

Dear Supervisor:

Western Watersheds Project is pleased to provide the following comments on your Environmental Assessment regarding "The Use of Quarantine to Identify Brucellosis-free Yellowstone Bison for Relocation Elsewhere". On February 12, 2016 the Park Service announced that the February 15, 2016 deadline for comments was extended until February 29, 2016 so these comments are timely filed.

Western Watersheds Project works to protect and conserve the wildlife, vegetation, wilderness, and natural and cultural resources of the public lands of the American West through education, scientific study, research, public policy initiatives, and litigation. Western Watersheds Project and its staff and members use and enjoy the National Park and adjacent lands at issue here, for health, recreational, scientific, spiritual, educational, aesthetic, and other purposes. Western Watersheds Project has a specific, long held interest in the Yellowstone bison and submitted comments on the related Draft Bison Management Plan. Because the Bison Management Plan EIS is closely related to this project we are attaching a copy of those comments to this letter and hereby incorporate those comments into this comment letter.

Please consider the following issues in your planning process.

Public Involvement

The NEPA process is intended to help public officials make better decisions that are based on an understanding of environmental consequences. 40 CFR § 1500.1. Agencies are to "Encourage and facilitate public involvement in decisions which affect the quality of the human environment." 40 CFR § 1500.2. The Park Service has provided a limited electronic web-portal

for submission of text but that will not accept formatted comments, photographs or attachments. This makes it difficult for the public to provide copies of scientific papers, reports, and data that will be useful to the Park Service in this analysis and limits public involvement. Limiting the ability of the public to provide input into a project that will impact America's premier National Park is something the Park Service should be deprecating not practicing. The Park Service should at least provide an ftp uplink or file upload facility so that the public can fully engage in the planning process and submit scientific papers and reports that may help the Supervisor make a better decision.

Purpose and Need for Action

The Park must clearly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including any proposed action. 40 CFR § 1502.13. Here, the stated purpose of the quarantine program would be to (1) augment or establish new conservation and cultural herds of plains bison, (2) enhance the culture and nutrition of Native Americans, (3) conserve a viable, wild population of Yellowstone bison, (4) maintain the low risk of brucellosis transmission from bison to cattle, and (5) reduce the shipment of Yellowstone bison to meat processing facilities.

The purpose and needs statement for the quarantine program mimics that given for the ongoing planning process for the new bison management plan, other than the addition of the loosely phrased purpose to "enhance the culture and nutrition of Native Americans" which purpose seems not only patronizing to First Nation peoples but is of no direct concern to the Park Service nor does it have any clear relation to the proposed quarantine facility.

According to the Park's March 2015 Public Scoping Newsletter the purpose and need for that management plan is:

> Purpose: The purpose of management is to conserve a wild and migratory population of Yellowstone-area bison, while minimizing the risk of brucellosis transmission between bison and livestock to the extent practicable.
> Need: Because of new information and changed conditions since the adoption of the 2000 IBMP, a new bison management plan is needed.

Although the Park Service avers that "implementation [of the quarantine project] would not preclude the consideration of alternatives for the future management of Yellowstone bison during the new planning process, which is expected to take several years and may include additional discussions of whether to use quarantine" (EA at 2) there is clear overlap here of the purposes of the quarantine program and the YNP Bison Management Plan planning processes. The Park Service has not provided a logical rationale of why it needs to separate this proposed 50 year quarantine program from its ongoing and overlapping IBMP revision process. The two NEPA processes are clearly closely related covering the same activities in the same time span and the projects themselves clearly overlap. If the Park honestly believes that these processes are unrelated then it needs to explain how the purpose and needs for the two differ. It has not done so in this EA. Indeed, rather than working to complete the Bison Management EIS process the Park Service seems to be setting the stage for litigation that will likely delay it even more.

Impacts to the Yellowstone Bison

In its recent 90-day response to two listing petitions (including one submitted by Western Watersheds Project, available at: http://www.westernwatersheds.org/wp-content/uploads/2014/11/11-13-14-Yellowstone-Bison-Petition.pdf), the United States Fish and Wildlife Service recognized that the Yellowstone bison constitute a Distinct Population Segment ("DPS") of plains bison. 81 FR 1368. Given the taxon's current range, the Park Service is responsible for managing almost the entire Yellowstone bison DPS. The Park Service needs to follow the lead of the Fish and Wildlife Service and treat the Yellowstone bison as a DPS in both the Quarantine and Bison Management Plan planning processes.

The Yellowstone bison DPS consist of multiple (at least 2 or 3) subpopulations that show evidence of genetic diversity. As we explained at length in our listing petition (cf. pages 15-23), culling, hunting and removal of bison are having differential impacts on individual herds to the potential detriment of the DPS.

In essence, the Yellowstone bison DPS is an isolated meta-population of two to three genetically distinct herds (Halbert *et al*., 2012). It is the presence of these subpopulations that contributes to the high levels of genetic variation observed among Yellowstone bison compared to other populations (Halbert *et al*., 2012 p. 9). Yellowstone bison congregate in three geographically distinct breeding areas: Hayden Valley, Lamar Valley, and Mirror Plateau during the mid-summer rut (Meagher, 1973 p. 76; Taper *et al*., 2000; Meagher *et al.*, 2002; Gardipee, 2007 p. 32; Geremia *et al*., 2009). Bison that rut in the Lamar Valley and Mirror Plateau are generally termed the northern range herd. Their winter ranges extend from the central and northern ranges within Yellowstone National Park to public and private lands outside the park in Montana. Northern range bison move between the Gardiner Basin (elevation 5,900 feet), the Lamar Valley floor, up to the Cache Calfee ridge, and the Mirror Plateau (elevation 8,200 feet). The central range bison herd which ruts in Hayden Valley, ranges from Pelican Valley, Hayden Valley, Mary Mountain (elevation 8,200 feet), Firehole River basin, the Madison Junction, and to their traditional winter ranges located outside the west and north entrances of Yellowstone National Park. Yellowstone bison are the only free-roaming, wild population known to have continuously ranged across high altitudinal gradients, which represents the conservation of a unique ecological adaptation for American bison.

Halbert *et al*., 2012 also identified differences in migration patterns between the two larger subpopulations. The identification of cryptic population subdivision and genetic differentiation is critical to the management of these bison as wildlife. The two major subpopulations correspond to the Central range and Northern range herds. Based on historical observations Meagher (1973) had described a third distinctive herd in the Pelican Valley. Halbert *et al*., 2012 had only two capture samples from bison in the Pelican Valley. Radio-telemetry studies indicate extensive co-mingling of bison between the Pelican Valley and the Hayden Valley during the summer breeding season (Olexa and Gogan, 2007) suggesting a high likelihood of genetic exchange between bison at those locations (Halbert *et al*., 2012 p. 8). However, the extent of genetic exchange between subpopulations cannot be determined without knowing when and where individual bison breed (Olexa and Gogan, 2007 p. 1536), so the possibility of a third genetic cluster cannot be discounted. That there are at least two genetically

distinct populations coexisting geographically in Yellowstone provides important information for future population management of the herd.

Halbert *et al*., 2012 confirmed that the culling occurring near the Park boundary is having differential impacts on individual herds. Based on 1996-1997 counts, they estimated that culling of bison removed 57% of the entire Northern subpopulation compared to 20% of the Central subpopulation (Halbert *et al*., 2012 p. 9). The different rate of loss between the subpopulations has significant implications for Yellowstone bison conservation because current IBMP culling – **that this quarantine plan seeks to tier from** - is based on overall population numbers. The winter of 2007-2008 is recorded as the largest slaughter of wild plains bison since the 19th Century with over 1,716 animals killed. More than 1,000 bison were also killed during the winter of 2005-2006. The Park's 2014 Central herd count was estimated at 1,400 bison, a sharp decline from the 3,531 bison in 2005 (Geremia *et al*., 2011 p. 2). These culls removed more calf and female bison from the central breeding herd which, if continued over time, could result in unintended consequences on the demography of Yellowstone bison (White *et al*. 2011). Pringle (2011) has also raised concerns that culling migratory bison could reduce the overall health and resilience of the Yellowstone bison by favoring less migratory bison, which may also select for a mitochondrial gene defect that decreases their fitness for escaping predators and tolerating the cold. The continued practice of culling bison without regard to subpopulation structure has the potentially negative long-term consequences of reducing genetic diversity and permanently changing the genetic constitution within subpopulations and across the Yellowstone metapopulation (Halbert *et al*., 2012 p. 9).

Individual herds or clusters should have an effective population size of 1,000 (census number of 2,000-3,000) to avoid inbreeding depression and maintain genetic variation (Hedrick, 2009 p. 419). "Effective population sizes" differ from actual census counts because factors such as unequal sex ratios, differential reproductive success, overlapping generations, and non-random mating result in the "effective" population size always being less than the census size. For bison, estimates of the ratio of effective population size to the census population size vary from 0.09 to 0.42. The effective population sizes for the two or three Yellowstone bison subpopulations are unknown, and a through population viability analysis to determine the appropriate effective population size for the long-term sustainability of the subpopulations has not been conducted (Gates *et al*., 2005 p. 123; Halbert *et al*., 2012 p. 9). However, the size of the Northern range herd is marginal and that of the Central range herd is clearly below an effective population size of 1,000. The Northern range herd count also includes the Pelican Valley bison. Pelican Valley was the location of the original remnant wild herd and these bison may form a third distinctive herd (Meagher, 1974 p. 26; Halbert *et al*., 2012 p. 8). Thus, the biologically significant Yellowstone bison sub-populations are below viability and cannot afford subjection to continued indiscriminate culling.

The science shows that a thorough appreciation and understanding of the genetic backgrounds of the Yellowstone bison sub-populations are essential to maintain and appropriately manage the Yellowstone bison DPS. Unfortunately, the quarantine EA is grossly deficient in both appreciating the significance of the genetic differences of the Yellowstone bison DPS sub-populations and in proposing inadequate remedies should quarantine management produce the problematic outcomes that we fully expect to occur and predicted in our petition. In

the EA, the Park Service recognizes that there may be some genetic concerns but then assures the public these concerns will be dealt with after the fact. According to the EA at 32, "If genetic diversity decreases, bison from populations established through quarantine could be reintroduced into the Yellowstone population to restore rare alleles." This claim by the Park Service borders on the irresponsible. It completely ignores the science showing the significance of the subpopulations in Yellowstone National Park in the maintenance of the genetic diversity of the Yellowstone bison. Furthermore, it punts solving a clearly foreseeable risk caused by the proposed action to some future date that relies on monitoring and surveys that may never occur.

The Park Service needs to take the requisite "hard look" at each of the alternatives including "no action" on the Yellowstone bison it supposedly seeks to protect. It simply has not done so in this draft EA.

Moreover, impacts to the Yellowstone bison DPS clearly constitute significant effects to the human environment. These have not been addressed or mitigated for in the EA and full EIS is required.

Alternatives

The NEPA implementing regulations refer to the selection and review of alternatives as "the heart" of the environmental review. 40 CFR § 1502.14. NEPA requires that an agency "succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration." 40 CFR § 1502.15. Obviously, without a stable and detailed description of the baseline environmental conditions, there is nothing with which to compare the alternatives being considered. Therefore, in order to make an informed decision in choosing from alternatives the range must include current management (which provides the baseline conditions). Comparison of the alternatives will help in "sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public." The regulations provide clear guidelines on how to select alternatives:

> (a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
> (b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.
> (c) Include reasonable alternatives not within the jurisdiction of the lead agency.
> (d) Include the alternative of no action.
> (e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.
> (f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

None of the alternatives analyzed in the Quarantine EA achieve the stated purpose of (1) augment or establish new conservation and cultural herds of plains bison, (2) enhance the culture and nutrition of Native Americans, (3) conserve a viable, wild population of Yellowstone bison,

(4) maintain the low risk of brucellosis transmission from bison to cattle, and (5) reduce the shipment of Yellowstone bison to meat processing facilities."

The reason why this is the case is that the alternatives analyzed in the EA are simply perpetuating the principles underlying current IBMP management that are geared towards managing bison numbers to somehow manage brucellosis transmission to livestock. But it is continued livestock grazing on bison habitat - even on public lands - that is promoting the perceived need for disease risk-management operations involving bison. The IBMP was not designed to protect bison and their habitat but rather to keep bison out of their habitat outside of the Park. Although the threat of brucellosis transmission could be more easily pacified through management of domesticated cattle rather than bison, the Park Service has chosen to manage the wrong ungulate (Lancaster, 2005). Moreover, the CDC shows that while brucellosis transmission from bison to cattle has not been documented, seventeen instances of brucellosis transmission from elk to livestock were reported during the last decade (Rhyan *et al.*, 2013). Brucellosis transmission from elk not bison is the significant problem from a livestock perspective. If the Park Service is seriously interested in conserving "a viable, wild population of Yellowstone bison" and maintaining "the low risk of brucellosis transmission from bison to cattle," the proposed alternatives should be heavily geared towards managing, limiting and constraining livestock on public lands not constraining Yellowstone bison.

In our comments on the IBMP, we proposed that the Park Service consider the following two alternatives. Because of the clear relationship between the proposed quarantine plan and IBMP management, the Park Service should consider these alternatives in its revised NEPA analysis. In addition we propose a third alternative to "enhance the culture and nutrition of Native Americans" named the Enhanced Nutrition for Native Americans alternative:

Bison Conservation Alternative:

This alternative prioritizes bison conservation and minimizes human intervention in the management of Yellowstone bison. Bison abundance would primarily be regulated through natural processes. There would be no bison population limits set under this alternative. Other wildlife management tools, such as habitat enhancement, could also be implemented. The risk of disease transmission from livestock (cattle and sheep) to bison would be managed through physical separation by eliminating all livestock use on public lands in bison tolerance habitat. Continued livestock grazing on private lands would require that ranchers take responsibility for keeping their cattle and sheep separate from bison in bison habitat. There would be no hazing of bison. Disease suppression efforts in livestock or research to improve suppression techniques in livestock would be encouraged since this would best protect migrating bison from disease carried by livestock.

Federal Agency Only Bison Conservation Alternative:

This alternative would prioritize bison conservation and minimize human intervention in the management of Yellowstone bison on public lands. Bison abundance would primarily be regulated through natural processes. There would be no bison population limits set under this alternative. The Park Service would withdraw from the IBMP. Other wildlife management tools,

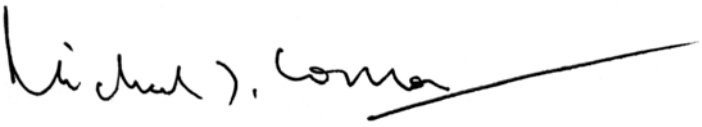
such as habitat enhancement, could also be implemented. The risk of disease transmission from livestock (cattle and sheep) to bison would be managed through physical separation by eliminating all livestock use on public lands in bison tolerance habitat. There would be no hazing of bison. Disease suppression efforts in livestock or research to improve suppression techniques in livestock would be encouraged since this would best protect migrating bison from disease carried by livestock.

Enhanced Nutrition for Native Americans:

The recent USDA Dietary Guidelines report (available at: http://health.gov/dietaryguidelines/2015/guidelines/)found that more than 80 percent of Americans do not consume the daily recommended amount of vegetables, and more than 60 percent do not consume enough fruit . A majority of people are still eating too much saturated fat, sodium, and added sugar. Under the **Enhanced Nutrition for Native Americans alternative**, the Park service would hire Native American nutritionists to develop and implement nutrition education specifically tailored to Native American communities in the region. These programs would encourage improved Native American community health by promoting reductions in meat consumption and increases in vegetable and fruit consumption. This would be in line with USDA recommendations to promote "Eating nutritious foods across food groups, including all types of vegetables; fruits; grains, at least half of which should be whole grains; fat-free or low-fat dairy; proteins, from plants and lean meats; and healthy oils."

Western Watersheds Project thanks you for this opportunity to assist the National Park Service by providing comments for the Quarantine Relocation Program for Yellowstone Bison. Please add Western Watersheds Project to the list of interested public for this project and please keep us informed of all further substantive stages in the NEPA process for this and other planning processes. We have a mailed a hard copy of these comments with a CD of literature cited since the Park Service's limited web-portal does not accept this information

Sincerely,



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Attachment: Western Watersheds Project Scoping Comments re: Environmental Impact Statement for a Management Plan for Yellowstone-Area Bison dated June 15, 2015.

Literature Citations

Connor, M. J. 2014. Petition to List the Yellowstone Bison as Threatened or Endangered Under the Endangered Species Act. Western Watersheds Project and Buffalo Field Campaign. Available at: http://www.westernwatersheds.org/wp-content/uploads/2014/11/11-13-14-Yellowstone-Bison-Petition.pdf

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