

Superintendent Cameron Sholly Attn: Bison Management Plan

P.O. Box 168

Yellowstone National Park, WY 82190

Submitted online to: https://parkplanning.nps.gov/YellowstonebisonEIS

Dear Superintendent Cameron Sholly,

Please consider the following comments on behalf of the Greater Yellowstone Coalition for Yellowstone National Park's Draft Environmental Impact Statement (DEIS) for a new Yellowstone Bison Management Plan.

The Greater Yellowstone Coalition (GYC) represents over 109,000 supporters, both in Montana and nationally, who have a continued interest in the conservation and management of wild bison in Montana and throughout the Greater Yellowstone Ecosystem (GYE) and beyond. GYC has a long history of involvement with issues of bison management surrounding Yellowstone National Park (YNP) and we consider bison one of the most treasured and iconic species in the region. Ultimately, we are working to ensure wild bison are valued and managed like other wildlife in Greater Yellowstone. Specifically, we envision a day when Yellowstone bison are sustainably managed as healthy, free roaming wildlife throughout national parks, national forests and other suitable habitats within the GYE, and are used to restore cultural and conservation herds elsewhere on Tribal and public lands across North America.

We appreciate the Park continuing the process of developing a new Yellowstone bison management plan for this iconic and irreplaceable population of wild bison. Yellowstone National Park is a longstanding leader in bison management, from preventing the extinction of the species to providing a source population for conservation herds around North America.

This planning process is an exciting opportunity to update and shift Yellowstone bison management to reflect new information, changed circumstances and regulations, and significant progress made since the Interagency Bison Management Plan (IBMP) was finalized in 2000. Through this process, we see a tangible opportunity to shift from the outdated model of population reduction through the controversial ship-to-slaughter program to a management regime that aims to *conserve* our last remaining genetically valuable, culturally significant, wild and free-roaming bison population through the rehoming of Yellowstone bison to Tribal and public lands across North America and restoring these bison to the larger landscape outside of Yellowstone.

GYC provided extensive comments during scoping, and we ask that those be considered here as well.

In summary, we recommend a modified alternative that incorporates elements of Alternative's 2 and 3 in addition to the recommendations below. Overall, the new plan should reflect and serve to protect the last 20 years of progress made in bison conservation while incorporating enough flexibility to allow for future adaptive management of Yellowstone bison in response to a variety of factors, including changes in climate, range quality, improved and expanded social tolerance for bison, and successes in conflict reduction outside the park. In general, the new plan should aim to *conserve* Greater Yellowstone bison and support their long-term genetic and ecological health and viability while allowing these bison ample opportunity to play their ecosystem role on the broader GYE landscape. The new plan should focus on managing Yellowstone bison as a valued native *migratory wildlife* species with habitat needs that extend beyond the Park boundary by accommodating and managing for the natural migration of bison to and from winter range and calving grounds outside the Park. And lastly, the new plan should adequately support Tribal treaty rights and access to bison, and the ecological and cultural restoration of Yellowstone-origin bison on Tribal and ancestral lands across the continent. The Greater Yellowstone Coalition urges Yellowstone National Park to adopt a bold, science-driven management plan to write the next chapter in this great American conservation story.

More specifically, the final alternative and new plan should:

- Move away from bison management focused on population reduction, total population targets and/or IBMP annual removal objectives. Instead, bison management should focus on supporting bison migration into tolerance areas, supporting Tribal treaty rights and access to bison, and responding to large episodic migrations and real on-the-ground conflicts.
- 2. Commit to phasing out slaughter and instead focus on using improved/expanded Tribal and public hunting and the Bison Conservation Transfer Program (BCTP) to manage bison numbers.
- 3. Maintain a population of at least 4,000 to 7,000 bison to support natural migratory behavior and dispersal of bison into new areas both within YNP and outside the park within tolerance areas to expand their ecological role on the larger GYE landscape, and to support sufficient Tribal access to bison through improved hunting and the BCTP.
- 4. Support successful cross-jurisdictional management of bison as migratory wildlife including close collaboration with the Tribes and Forest Service to support bison migration, dispersal, and the long-term viability of the species on lands within and outside Yellowstone National Park.
- 5. Commit to the continued use, further expansion, and improved efficiency of the Bison Conservation Transfer Program to manage bison numbers, significantly reduce the number of bison sent to slaughter, preserve the unique Yellowstone genome, and support the cultural and ecological restoration of the species.
- 6. Prioritize working cooperatively with the Tribes to improve/expand Tribal and state hunting opportunities as the primary means to manage bison numbers and to promote broad dispersal of bison throughout tolerance areas.
- 7. Establish and support a cooperative plan with American Indian Tribes for sustainable bison management with improved Tribal coordination, consultation, information sharing, and support of treaty rights across Greater Yellowstone.
- 8. Focus disease management on livestock instead of wild bison.
- 9. Support conflict management that is driven by real conflicts in space and time rather than the current blanket approach that limits bison numbers and access to lands outside the Park.
- 10. Reflect the desires of all constituents and support bison as an economic asset for local communities.

11. Be science-based and incorporate the use of adaptive management to adjust to changing conditions and move toward desired conditions and goals for bison management.

We appreciate the time and effort put forth by the National Park Service (NPS) to continue this process and your commitment to improving Yellowstone bison management. We have arranged our comments around a series of goals, principles, and management tools that should be included in the final alternative and plan, and specific comments for and practical considerations of actions and elements both common to all and unique to each proposed alternative(s) as outlined in the Draft EIS.

Please consider the following suggestions for a new Yellowstone bison management plan.

Recommended components of a modified alternative and new Yellowstone Bison Management Plan:

The new plan should move away from bison management focused on population reduction, total
population targets and/or IBMP annual removal objectives. Instead, bison management should focus
on supporting bison migration into tolerance areas, supporting Tribal treaty rights and access to bison,
and responding to large episodic migrations and real on-the-ground conflicts.

This process represents a tangible opportunity for the Park to shift away from the heavy-handed management of bison and population reduction that has characterized this issue for too long, towards a management regime that aims to *conserve* our most iconic, ecologically, and culturally significant wild bison herd. Ideally, the Park should not engage in population reduction efforts for *any* of its native wildlife species complying with NPS mandates and desire for allowing populations to fluctuate naturally with minimal human intervention (NPS 2006). The new plan should better reflect this desire and take a more hands-off approach to bison management allowing bison numbers to naturally increase and fluctuate within a reasonable range (see section below) and bison to freely migrate to and from winter habitat and calving grounds outside the Park. In other words, the new plan should focus on managing Yellowstone bison more like how other migrating ungulates (e.g. elk) are managed today - recognizing and supporting bison as a valued native *migratory wildlife* species with habitat needs that extend beyond the Park boundary.

Management focused on reaching strict total population targets and/or annual removal objectives is a set-up for failure and creates unneeded pressure on the Park to constantly capture for bison removal/decreasing bison numbers. As the past has demonstrated, not only is this approach ineffective (outmigration and ability to trap is largely determined by forces the Park has no control over), but the constant pressure to capture bison as they're leaving the Park directly impedes their ability to freely migrate and disperse on to the larger landscape outside of the Park. Naturally, this interferes with the ecological and cultural restoration of bison on the larger GYE landscape and impedes treaty hunting opportunities, resulting in a scenario where Tribes must compete with the Park and amongst each other for access to a limited resource. Instead, management actions (i.e. capture) should be triggered by bison numbers *outside* the Park (i.e. outmigration) that exceed biologically or socially acceptable levels, that result in the inability to effectively respond to real conflicts or contain bison within existing tolerance areas and/or if bison numbers have exceeded food-limited carrying capacity estimates.

2. The new plan should commit to phasing out slaughter and instead focus on using improved/expanded Tribal and public hunting and the Bison Conservation Transfer Program (BCTP) to manage bison numbers.

Shipping bison to slaughter presents undesirable social, economic, and ecological costs. To most people, this represents an inconceivable and unacceptable waste of our most iconic and ecologically and culturally significant wild bison herd. In the modified alternative/final plan, the Park should commit to phasing out the use of slaughter and move toward operating Steven's creek facility as a *live-trap only* operation, where bison are only captured for the purpose of entering animals into the Bison Conservation Transfer Program (BCTP). Captured animals that are determined to be quarantine-*ineligible* should be turned back out on the landscape and made available for treaty hunting or held and later released depending on the number of bison outside the Park and/or total population levels.

Instead of slaughter, improved Tribal and state hunting, natural selection, dispersal, and the BCTP should be used to manage bison numbers. As stated above, shipment-to-slaughter should only be used as a last case scenario after all other non-slaughter management tools have been exhausted and the population is nearing/or has exceeded food limited carrying capacity estimates and/or bison are unable to be contained within the northern tolerance area and significant conflicts are inevitable. If the population is not nearing or has not exceeded food limited carrying capacity estimates in a year of mass exodus from the Park where bison cannot be contained within the Northern Tolerance area and without significant on-ground conflicts, the Park should initiate captures and hold bison for later release back out on to the landscape once numbers outside the Park have decreased to a manageable level.

The development of a new or temporary capture facility, managed by the state and/or the Tribes near or in Cutler Meadows at the far end of the Northern bison tolerance area near Yankee Jim Canyon should be considered. While we want to see the phasing-out of slaughter altogether, this capture facility could serve as a last resort in managing bison numbers that are approaching the food-limited carrying capacity, in years of mass exodus from the Park, and/or to prevent dispersal beyond the tolerance area (and allow Steven's creek to serve as a live-capture facility only). In addition, as social and political tolerance improves over time, translocation of bison to nearby appropriate available lands not currently occupied within existing tolerance areas should also be considered before slaughter, especially in years of mass exodus when hunting and trapping for the BCTP alone may not be sufficient to limit numbers outside the Park and reduce conflicts.

We realize that to move away from (and ideally end) slaughter, especially as population levels rise towards 7,000 or more bison, or in years of mass exodus, the Tribes will have to significantly expand the distribution of the hunt in order for hunting to serve as an effective population management tool and to stabilize population numbers. Last winter showed that hunting *can* serve as an effective tool to reduce significant numbers of bison *if* bison and hunters are broadly distributed throughout the Gardiner basin. Tribal hunters congregating at the boundary impeding bison dispersal as in previous years will *never* result in enough bison being removed to stabilize numbers at higher population levels. In close cooperation and partnership with the Tribes, the Park should provide a detailed framework and plan for effectively managing bison numbers once they reach population/containment thresholds and/or carrying capacity estimates that utilizes improved and more dispersed hunting in conjunction with the BCTP to stabilize numbers. This should include annual estimates for the number of bison that can be safely and reasonably removed from the landscape via Tribal hunting, as well as through the BCTP <u>and a</u> commitment and plan for how Tribes will cooperatively promote an expanded hunt on the landscape.

3. Yellowstone should maintain a population of at least 4,000 to 7,000 bison to support natural migratory behavior and dispersal of bison into new areas both within YNP and outside the park within tolerance areas to expand their ecological role on the larger GYE landscape, and to support sufficient Tribal access to bison through improved hunting and the BCTP.

The population target under the original IBMP (3000-3500) is outdated, arbitrary, and meant to restrict bison dispersal and use of the landscape outside the Park. One of the primary goals of the Interagency Bison Management Plan (IBMP), "to maintain a wild, free-ranging bison population", is <u>not being met</u>. Between hunting and the continuous push to slaughter to meet current population objectives, these bison are still largely constrained to the Park (with the exception of last winter when bison numbers reached 6,000). The new population range should do the opposite – encourage bison dispersal into tolerance areas outside the Park as well as new areas within YNP, support the natural migratory behavior of the species, expand the ecological role of bison across the entire landscape where they are allowed, and adequately support Tribal treaty rights and access to Yellowstone bison. Again, the total population size should not drive management *actions* (with the exception of those scenarios previously outlined) and in general the population should be allowed to *increase* and *fluctuate* broadly within a scientifically justified range and in response to changing environmental and climatic conditions, amount of available habitat, management constraints, and real (not perceived) conflicts on the landscape.

Yellowstone should maintain a population of at least 4,000 bison. We are concerned that the lower population level of 3500 (across all Alternatives) is outdated (since 2012 bison numbers have ranged between 4,200 and 6,000), politically driven, and won't adequately support bison outmigration. In general, the lower threshold of the desired population range should be high enough to encourage bison dispersal into new areas both in and outside the Park, support the expansion of their ecological role on the larger GYE landscape, and ensure the long-term demographic and genetic integrity and health of both the northern and central herds is maintained. For the latter, this could mean no less than 3,250 bison for the total population, with at least 1,000 bison in each breeding herd (see Pérez-Figueroa et al. 2012, Halbert et al. 2012), provided intermixing and gene flow continue between bison in the two primary breeding herds (Pérez-Figueroa et al. 2012). However, as Pérez-Figueroa et al. 2012 points out, even if total abundance averages 3000-3500 bison, "more diversity is expected to be lost unless removals are mainly or only juveniles" (emphasis added). Apart from quarantine, current removals, whether through hunting or slaughter, are not "mainly or only" juveniles.

Furthermore, we are concerned that the lower population threshold of 3500 is not high enough to support outmigration of bison. The original intent of the 2000 IBMP population objective of 3,000 was to keep bison from leaving the Park - "Negotiators of the [2000] IBMP chose a population target of 3,000 bison in late winter and early spring to <u>reduce migration outside YNP</u>, which equates to about 3,600 to 3,700 bison after calving during summer" (emphasis added, Cheville et al. 1998, USDOI and USDA 2000b, Angliss 2003). The DEIS further notes that "the population target of 3,000 bison in spring (~3,600 to 3,700 bison after calving) did not prioritize Tribal treaty hunting outside the park" (see page 28). Since the lower threshold of 3500 across all alternatives is "after calving", this actually means <3,000 during the winter/spring months. The possible cessation of migration as a result (see also Geremia et al. 2011, Geremia et al. 2014), would negatively impact Tribal treaty rights and access to bison, both in terms of hunting opportunity outside the Park and rehoming bison to Tribal lands through the BCTP, and would certainly not support the ecological restoration of bison across the entire landscape where they are allowed.

Appropriate thresholds should be established for each breeding herd and for the total population, and specific management actions put in place, to ensure that scientifically justified bison population numbers are maintained in the event of seasonal mass exoduses from the Park. For example, there should be a clear plan for what will happen if/when the population reaches the lower threshold. The Park should establish with the Tribes and state of Montana an agreement to stop all hunting and removal of bison from the population until numbers are restored.

The population should be allowed to increase to 7,000 bison or more. The upper limit to the population range should be based on the estimated food-limited carrying capacity and available suitable habitat that bison have access to, while taking into consideration management constraints to effectively respond to real conflicts. First and foremost, "research indicates there is sufficient forage in the park to sustain about 10,000 bison during summer and 6,500 during winter" (DEIS, page iii) and the Park was considering a preliminary alternative (3) during scoping that would allow for "5,500 to 8,000 or more bison based on food-limited carrying capacity". There should be a clear scientific justification for not allowing the population to reach carrying capacity estimates.

Since 2012, bison numbers have ranged between 4,200 and 6,000 with an average of 5,000 animals with "no documented transmission of brucellosis from bison to cattle, fewer conflicts with people and property, high visitor enjoyment and economic contributions to gateway communities, increased hunting opportunities, and more brucellosis-free bison sent to Tribal lands" (DEIS, page V). Even with last year's record high outmigration and the largest population (6,000) of Yellowstone bison in over 100 years, relatively few conflicts were reported, and bison were contained within the Northern Tolerance area. Arguably, if 6,000 bison can be successfully managed during a winter as severe as last years that has a once in a 20 or 30-year occurrence, then surely bison could be successfully managed at a higher number (i.e., 7,000 or more) during the average year with average conditions. As noted within the DEIS, if significant conflicts or issues of containment within tolerance areas do arise then more aggressive management actions (i.e., capture, lethal removal, hazing, etc.) can be taken in response. Simply put, there is no good biological or social reason for not supporting a larger Yellowstone bison population. Doing so would support the natural migratory behavior of the species, encourage bison dispersal into new areas both in and outside the Park within tolerance areas, provide more bison to the Tribes through treaty hunting and the BCTP, and ultimately support the ecological and cultural restoration of the species across the entire GYE landscape where they are allowed.

4. The new plan should support successful cross-jurisdictional management of bison as migratory wildlife including close collaboration with the Tribes and Forest Service to support bison migration, dispersal, and the long-term viability of the species on lands within and outside Yellowstone National Park.

Yellowstone bison are a native *migratory wildlife* species with a historical distribution and habitat needs and behaviors that extend well beyond the Park boundary. Though Yellowstone bison now have access to ~380,000 acres of land outside the Park, they are still only using a small fraction of this area. The significantly constrained distribution of bison outside the Park not only raises concerns over the long-term genetic health and population viability of the species (see USFWS ESA Status Review: <u>Federal Register 87: 34228–34231</u>), it also further perpetuates the significant management issues surrounding this population (i.e. dependence on the unacceptable practice of shipping bison to slaughter, unsafe and inhumane hunting in overcrowded small patches of land, etc.). Plumb et al. (2009) noted the concern

over restricted distribution for the conservation of the Yellowstone herd stating that "management agencies should continue to prioritize conservation of bison migration to essential winter range area within and adjacent to the park." From an ecological perspective, bison restoration to new areas within and outside the Park has the potential to improve the productivity and nutritional quality of forage (Geremia et al. 2019) promote regeneration of grassland ecosystems, support climate resiliency (Freese at al. 2014, Ratajczak et al. 2022, Shamon at al. 2022), and benefit a whole host of other species including amphibians and grassland birds.

Successful cross-jurisdictional management of bison that accommodates and manages for the natural migration of bison to and from winter range and calving grounds outside the Park is essential. The Park should commit to working closely with the Tribes, the Custer Gallatin National Forest (CGNF), and other IBMP partners/stakeholders where appropriate to develop unified goals, and potential options and accompanying management actions to support this. Proactive measures to consider include assisted migration/low-stress hazing toward the Park boundary on the west-side, translocation of bison to suitable CGNF lands within tolerance areas, the development of a new or temporary capture facility at the far end of the Northern tolerance area, spatial and temporal hunt restrictions, habitat expansion, and habitat improvement projects/prescribed burns within and adjacent to YNP.

Habitat Improvement Projects: The Custer Gallatin National Forest's new Land Management Plan allows for expanded tolerance of bison on the national forest, including a desired condition to have a self-sustaining population of bison on the forest year-round, and an objective to complete three habitat improvement projects every three years to create or connect suitable habitat for bison on the forest (USDA, USFS 2022). The Park should help to inform/support such habitat improvement projects. For example, thinning, prescribed burns, meadow and aspen restoration, restoration of native grass species and fertilization can enhance forage production in lodgepole pine stands (Lindgren and Sullivan, 2014) that predominate over much of the lower elevation Forest lands west of the Park. Habitat enhancement could be used to encourage bison to utilize certain conflict-free areas and to expand/improve hunting opportunities and would also benefit many other wildlife species.

Translocation of bison: In addition, translocation of bison to nearby available lands not currently occupied within existing tolerance areas (for example, the Upper Gallatin watershed) should also be considered to reduce shipments to slaughter and increase conservation and hunting opportunities. Though the Upper Gallatin watershed has been approved for year-round use by bison (Bullock 2015), bison are unlikely to naturally recolonize this area due to intervening highways and current tolerance lines and potential livestock conflicts inhibiting bison use of the few remaining natural corridors into this area.

New or temporary capture facility at the far end of the Northern tolerance area: The current location of the capture facility inside YNP results in the removal of bison that could otherwise be available for harvest if they were allowed to continue migrating beyond the Park boundary. The development of a new or temporary capture facility, managed by the state and/or the Tribes in Cutler Meadows at the far end of the Northern bison tolerance area near Yankee Jim Canyon should be considered. And while we want to see the phasing-out of slaughter altogether, this capture facility could serve as a last resort in managing bison numbers that are approaching the food-limited carrying capacity, in years of mass exodus from the Park, and/or to prevent dispersal beyond the tolerance area. This shift, especially if done in conjunction with hunt restrictions, closures, and/or buffer zones in or around Beattie Gulch, could promote bison dispersal into and throughout the northern tolerance area and significantly

increase treaty and state hunting opportunities in the Gardiner basin near/in Cutler Meadows, and overall, the safety and effectiveness of the hunt.

5. The new plan should commit to the continued use, further expansion, and improved efficiency of the Bison Conservation Transfer Program to manage bison numbers, significantly reduce the number of bison sent to slaughter, preserve the unique Yellowstone genome, and support the cultural and ecological restoration of the species.

Thanks to Yellowstone's leadership, significant progress has been made since 2015 in developing, and more recently expanding, the Bison Conservation Transfer Program (BCTP) as an alternative to shipping bison to slaughter. The new plan should reflect and expand on this progress, shifting population management away from slaughter, and instead focusing on the use, continued expansion, and improved efficiency of the BCTP.

Even with recent expansion efforts, there will continue to be bottleneck issues at the phase 1 and 2, and possibly phase 3 quarantine facilities, and many hundreds of brucellosis-negative bison could be sent to slaughter each year. The Park should *commit* to supporting future efforts to develop one or more additional full phase quarantine facilities within Greater Yellowstone to further expand this program with the goal of ensuring that *no quarantine-eligible bison are sent to slaughter* and to create a steady pipeline of brucellosis-free Yellowstone bison available for ecological and cultural restoration efforts across North America.

In addition, we ask that the Park continue to work with APHIS to shorten the duration of time it takes for both male and female bison to complete the quarantine process based on the best available science and data supporting this. Since the program began (including the quarantine feasibility study), no animals have seroconverted to positive once they have reached day 1 of phase 2 (between 200-230 days) (personal communication, NPS). These data suggest that the required time in quarantine could be drastically shortened from the current 1.5 years (bulls) and 2.5-3 years (cows) required to complete just the first two phases of the process. Similarly, the time-to-event model developed by the NPS and APHIS based on this data predicted 99.9% of both male and female bison with brucellosis would seroconvert by 294 days suggesting that "testing timelines could be reduced to allow animals to complete quarantine within one year with negligible risk of brucellosis transmission" (Springer Browne et al. 2023).

6. The new plan should prioritize working cooperatively with the Tribes to improve/expand Tribal and state hunting opportunities as the primary means to manage bison numbers and to promote broad dispersal of bison throughout tolerance areas.

Minimizing or (ideally) ending the dependency on the ship-to-slaughter program to manage bison numbers is only possible through increased public and Tribal hunting opportunities, and further expansion of the BCTP. Apart from last winter (due to early, heavy snowfall), hunting is not currently an effective population management tool for bison due primarily to Tribal hunting pressure at the Park boundary and the limited footprint where hunting can occur. The firing line at Beattie Gulch restricts bison dispersal into the northern tolerance area and presents a serious public safety concern. Most Tribal hunting takes place close to roads and other developed areas, significantly affecting visitor perception and experience and negatively impacting locals and local businesses. Furthermore, this is directly impeding the much-desired restoration of bison, and their ecosystem services, on the larger GYE

landscape. Designated tolerance zones should be areas where at least some bison are allowed to safely migrate, calve and access winter forage, and then return to the Park, rather than a place of no return (i.e. lethal removal) for most bison.

Addressing these issues, including increasing the effectiveness and safety of the hunt, will depend on bison, first and foremost, being allowed farther out on the larger landscape outside of YNP.

Though "the NPS would continue to have no authority or jurisdiction over when, where, and how hunter harvests of wildlife occur outside the park" (DEIS, page 14) we believe the Park should do more to advocate for, and work with the Tribes to support migratory behavior and broad use of tolerance areas. As stated in the DEIS, "hunting in Montana could become more effective over time if hunters move away from the park boundary and bison can distribute across the landscape year-round so hunting seasons and locations can be adjusted to more traditional autumn and early winter time periods in certain areas" (page 27). The status quo approach is not sufficient. The Park should work closely with the Tribes to implement creative measures such as the development or designation of areas near the Park boundary where carefully controlled limited hunting would occur for the purpose of protecting and restoring bison migration corridors and connectivity to habitat areas within tolerance zones. Other considerations could include multi-day rest periods during which time all hunting is prohibited to encourage bison to move through bottleneck areas (i.e. Beattie Gulch), setting sustainable hunting limits, and encourage hunting well away from other human activity.

While we fully support treaty hunting and Tribal access to bison, the current situation is unsustainable and unacceptable to most bison supporters and for those who live within these communities where this is taking place. The future success of Yellowstone bison management (i.e. moving away from slaughter) and the long-term conservation of the species on the broader GYE landscape hinges on the resolution of this issue.

7. The new plan should establish and support a cooperative plan with American Indian Tribes for sustainable bison management with improved Tribal coordination, consultation, information sharing, and support of treaty rights across Greater Yellowstone.

With current efforts underway and massive momentum to restore bison to Tribal and appropriate public lands across the country, many people are looking to Yellowstone and the surrounding landscape as an example of what returning bison to the modern landscape could look like. Simply put, what happens in and around Yellowstone matters, not only for local/regional efforts, but for the broader, continental-level conservation effort. We believe it is in the best interest of the Department of the Interior, with its stated goals around Tribal shared stewardship in restoring bison to federal and Tribal lands (DOI 2020 Bison Conservation Initiative; Secretarial Orders 3342, 3410, and 3403) to take the lead on bringing the Yellowstone Treaty/IBMP partner Tribes together, outside of the IBMP process, to create a unified, sustainable plan that will support the ecological and cultural restoration of bison on the broader GYE landscape and that could serve as a cooperative partnerships model of landscape scale bison restoration and sustainable management going forward.

Such an effort could serve to foster improved trust, communication, coordination, and unity amongst Tribes, and better support Tribal consultation, treaty rights, and access to bison which remain threatened by current management practices (i.e. capture), a significantly constrained footprint where hunting can occur, and by competing Tribes over access to this limited resource (bison). This could also serve as an avenue to share and integrate Traditional Ecological Knowledge into the sustainable

management of bison and bison habitat (see White House guidance for Federal Departments and Agencies on Indigenous Knowledge - OSTP and CEQ 2022).

Recommended goals for a cooperative process and plan could include:1) Development of a decision-making framework for cooperatively working with the Tribes, with clearly defined partner roles and responsibilities; 2) Develop agreed upon goals, expectations, steps, and timelines for Tribal consultation and supporting treaty rights and Tribal access to Yellowstone bison; 3) Identify ways to balance Tribal hunting desires and if needed, population management, with the goal of broader dispersal, safeguarding natural migratory behavior and bison restoration throughout tolerance areas; 4) Work with partners to identify potential areas for habitat expansion; 5) Expand, improve, and better support hunting opportunities for all treaty Tribes; 6) Continue to support and expand on opportunities to rehome Yellowstone bison to Tribal lands; 7) Work with the CGNF to identify and implement bison habitat improvement projects; 8) Address potential conflicts related to the hunt (i.e. through carcass clean-up efforts and policies); 9) Share and integrate Traditional Ecological Knowledge in to the sustainable management of bison and bison habitat.

8. Disease management should be focused on livestock instead of wild bison and focus on real threats instead of perceived risk.

Managing for disease transmission risk should be focused on livestock rather than wild bison and managing agencies should do away entirely with costly and ineffective efforts to suppress brucellosis in bison or other wildlife. Brucellosis is a livestock issue, not a wildlife issue; it appears to have no significant negative effects on wildlife populations in the GYE (Ebinger et al. 2011, Cross et al. 2015, Foley et al. 2015), and numerous studies have demonstrated the ineffectiveness of trying to suppress this disease (i.e. through opportunistic and/or remote vaccination) in GYE wildlife (see the National Park Service's Final EIS for Remote Vaccination Program to Reduce the Prevalence of Brucellosis in Yellowstone Bison). Attempting to eradicate this disease in Greater Yellowstone wildlife is simply an unrealistic and unattainable goal at this time.

As well, newer U.S. Department of Agriculture brucellosis rules have reduced the economic and regulatory impacts on the livestock industry since the original IBMP was finalized/implemented in 2000. These rules established the Designated Surveillance Area (DSA) policy that is effective and works to limit infection risk from elk and bison through required RB51 vaccination of cattle and selective infected livestock removal. Under the rule, APHIS abandoned the requirement for whole-herd slaughter following a transmission event, opting instead for testing and removal of infected animals only. Likewise, two brucellosis infections in two years no longer trigger the loss of a state's brucellosis-free status. Brucellosis suppression should apply only to livestock and be implemented through the Designated Surveillance Area (DSA) program.

Furthermore, though very few livestock producers remain in areas north and west of the park, the risk of brucellosis transmission from wild bison to domestic cattle is extremely small and recent studies have concluded that elk, not bison, pose the greatest threat to spreading brucellosis to livestock on the GYE landscape (National Academy of Sciences 2017). To date, there has been no documented transmission of brucellosis from Yellowstone bison to cattle on the landscape due to a combination of factors including "management actions to maintain separation between cattle and bison, synchrony of bison parturition events (i.e., parturition concentrated in a short period, with abortion cycle earlier than the live birth cycle), bison parturition locations (i.e., spatial separation from cattle summer ranges), bison behavior (i.e., thorough cleaning of birth sites), environmental degradation of Brucella (i.e., short persistence

period in late spring weather conditions), and scavenger removal of potentially infectious birth tissues that makes it unlikely that substantial quantities of viable B. abortus would remain for cattle to encounter (Jones et al., 2010)" (from White et al. 2011, page 1327). Bull bison, calves, and cow bison with calves pose little, if any, transmission threat. Furthermore, studies have shown that the *brucella* bacterium is virtually non-existent in the environment by June 15th (Aune et al. 2012), making transmission practically impossible to livestock that are typically not on the landscape anyways until mid-June. The new plan should reflect these real threats accurately and move away from the use of population control and arbitrary tolerance lines to manage brucellosis transmission risk.

Efforts to manage the risk of brucellosis transmission from wild bison to domestic livestock should instead be managed on a case-by-case basis as conflicts arise on-the-ground. Producers should work with the Montana Department of Livestock (DOL) on developing individual site-based brucellosis management plans to minimize their risk of disease exposure. These plans can outline best practices to reduce the risk of brucellosis transmission, using common sense solutions focused on spatial/temporal separation of wild bison and livestock during the transmission period (February – mid-June) and other livestock management practices including fencing, delayed allotment turn-on dates, transitioning from cow-calf to all steer livestock operations, and vaccination of livestock. Montana Fish Wildlife and Parks initiated a program designed to prevent conflicts between potentially infected elk and livestock within the DSA during the primary window of potential brucellosis transmission (Feb. 15 – June 15). FWP field staff are on call to address any elk potentially comingling with livestock in the Madison and Paradise Valleys and this or similar programs could be used to respond to potential bison conflicts as well. If bison outside of the park come into close proximity to a livestock operation or damage private property where they are not wanted, property owners could contact FWP to initiate a game damage hunt or hazing operation if necessary to move bison out of the area.

GYC is willing and ready to work cooperatively with landowners/producers to provide support towards implementing the above tools as well as finding creative new ways to minimize the risk of brucellosis transmission to cattle and help offset the financial impacts if transmission does occur. For example, in 2022, GYC partnered with The Property and Environment Research Center, Rocky Mountain Elk Foundation, Spruance Foundation and Credova, to launch the Paradise Valley Brucellosis Compensation Fund. The fund, available to cattle ranchers in Paradise Valley and the Gardiner Basin, is a three-year pilot project to cover a portion of the costs of mandatory cattle quarantine ranchers incur after a positive brucellosis test. If successful, the fund could be expanded into other areas in the future or lay the groundwork for a more formal financial risk-transfer tool (e.g., a "brucellosis bond") to address brucellosis risks over the long run.

9. Conflict management in general, should be driven by real conflicts in space and time rather than the current blanket approach that limits bison numbers and access to lands outside the Park.

With the exception of mass exodus events, the potential for bison conflicts on the landscape outside the Park should not drive Yellowstone Park bison management, including drastic population reduction efforts or limiting bison access to agreed-upon expansion areas beyond the Park boundary. Rather, managing bison conflict should be site-specific by dealing with conflicts as they arise, and by the appropriate agency based on where the conflict occurs. There are proven tools to mitigate potential conflicts such as property damage and the transmission of brucellosis (as noted above). Elk frequently contribute to property damage (e.g., destruction of fencing, competition for grass, eating hay bales, vehicle strikes, etc.) and occasional human injuries. And yet, they are allowed to roam freely and without such intrusive measures to significantly restrict their abundance and distribution as in the case

of wild bison. In fact, the state of Montana has intentionally rejected more intensive management of elk opting instead to rely on fencing, hazing, and hunting in certain areas to keep elk separate from cattle during periods of high risk (MFWP 2015). Bison are a native wildlife species to Montana and should be managed as other wildlife populations are and by the appropriate managing authority and jurisdiction.

As previously mentioned, mechanisms to respond to potential conflicts (including disease transmission) between livestock and other wildlife (i.e. elk) are already in place and effective. State agencies are committed to responding to residents who have conflicts with bison, and while there is low potential for conflicts near park boundaries north and west of the park, these possible conflicts can be efficiently managed under existing laws protecting livestock interests. MCA 81-2-121 leaves the Department of Livestock on call 24-7 at landowner request to remove a bison threatening livestock from private property.

The Greater Yellowstone Coalition, Defenders of Wildlife, Sierra Club, and the Natural Resources Defense Council together established the Yellowstone Bison Coexistence Program which provides help with fencing on private property where landowners would prefer not to have bison roaming (e.g., backyards, gardens, etc.). Since the program was initiated in 2011, we have completed 58 projects in the Gardiner and Hebgen Basins and collectively contributed more than \$55,000 in reimbursements and materials. Cost-share programs similar to this, could be implemented to support larger-scale fencing projects on private/agricultural lands (e.g. the development of a bison fencing fund). Other tools that could be implemented and that have proven effective here in the GYE and elsewhere include land/grazing lease agreements (e.g. the Royal Teton Ranch agreement to end cattle grazing on their property for 30 years), allotment buyouts, and transition from cow-calf to steer operations (e.g. the Pinto Ranch in Grand Teton National Park successfully transitioned to an all steer operation due to bison conflicts), creative fencing solutions that are wildlife friendly but exclude bison, agreements that delay when and where cattle graze on private and public lands, occupancy agreements such as "Pay for Presence" or other Block Management type opportunities for private landowners in the basin, and habitat enhancement projects (i.e. using prescribed burns or irrigation) to draw bison away from livestock and/or conflict areas. Highway safety management could be implemented through speed limits, signage, fencing or at-grade crossings with animal detection systems. Building a conflict mitigation trust account from agency dollars spent in the past on hazing and slaughter programs could help fund similar projects in areas north and west of Yellowstone Park (e.g. an example includes the Wyoming Wildlife and Natural Resource Trust).

GYC is committed to providing additional resources and continuing to work with agencies and producers to find and support novel and common-sense solutions to mitigate bison conflicts on the landscape and encourage long-term and acceptable coexistence with bison and other native wildlife throughout the GYE.

10. The new plan should reflect the desires of all constituents and support bison as an economic asset for local communities.

The Greater Yellowstone Coalition and partners recently contracted Breakthrough Campaigns to conduct state-wide interviews across Montana covering a variety of natural resource and wildlife related issues. A total of 731 registered voters in Montana were interviewed from May 20-28, 2023, with an oversampling of voters who live near the Gallatin and Madison Mountain ranges so we could look specifically at attitudes of the voters who live there. The sample was weighted to ensure it was proportionately representative of registered voters statewide. Included in this survey were two bison-

related questions. In summary, voters (74% overall) are overwhelmingly on the side of treating bison like wildlife and restoring them to public lands (see Figure 1).

Wildlife > Livestock: In a head-to-head argument on bison management, voters are overwhelmingly on the side of treating them like wildlife and restoring them to public lands Arg 1 Bison

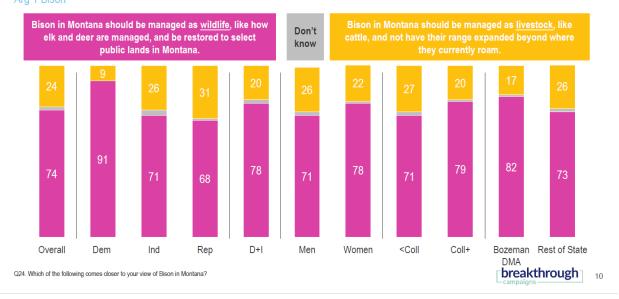


Figure 1: Results from Breakthrough Campaign's survey of Montana voters - Bison Question 1.

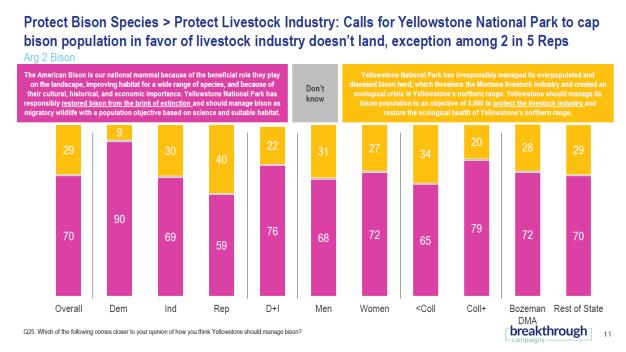


Figure 2: Results from Breakthrough Campaign's survey of Montana voters – Bison Question 2.

Seventy percent of voters felt that Yellowstone National Park has responsibly restored bison from the brink of extinction and should manage bison as migratory wildlife with a population objective based on science and suitable habitat (Figure 2).

Previous polling surveys also showed that the vast majority of Montanan's support bison being managed as "wildlife" (72% support) instead of livestock, as well as efforts to restore wild bison on public (76% support) and Tribal (78%) lands in Montana (see the Tulchin Research survey – "Poll Finds Strong Support for Protecting Bison in Montana – January 2015). Another study in 2015 looked at resident attitudes towards migratory wildlife (including bison) in the communities of Gardiner and West Yellowstone and overall, found broad support for greater tolerance for bison within the basins, a lack of support for current management actions using slaughter and hazing, a strong desire for bison management approaches more consistent with other native wildlife, and a desire for detailed plans on how and where bison would be managed (see Human Dimensions of Migratory Wildlife by Metcalf at al. 2016). Furthermore, well over 100,000 calls and emails were received in support of efforts to significantly expand habitat outside the park for Yellowstone bison during Montana's EA process for Year-round Habitat for Yellowstone Bison. This is an opportunity to shift how Yellowstone manages bison that better reflects the desires and interests of Montanan's and all stakeholders, particularly the Tribes, wildlife tourism and sporting industries, which arguably have the greatest stake in wild bison conservation.

Free-ranging bison on the landscape has the potential to be a significant asset to the people and economy of Montana if we allow it. Every year thousands of sportsmen and sportswomen apply for bison tags in Montana, however less than a hundred licenses are issued due mostly to habitat constraints that result in undesirable social effects. More fair-chase hunting opportunities through bison dispersal into tolerance areas, and a shift in the management regime for Yellowstone bison following the recommendations outlined here, could further shift public perception around wild bison on the landscape, towards bison as valued native wildlife and a highly desired revenue-generating game species.

11. The new plan should be science-based and incorporate the use of adaptive management to adjust to changing conditions and move toward desired conditions and goals for bison management.

In general, the new plan should be based upon and constantly updated with the best available science and allow for adaptive management and decision-making based on changes in social tolerance, land uses, regulatory changes, new science, lessons learned, and habitat changes. Any adaptive management plan must include explicit hard and soft triggers for action, clear monitoring indicators and a well-articulated plan for management implementation.

The NPS defines adaptive management as "a system of management practices based on clearly identified outcomes and monitoring to determine whether management actions are meeting desired outcomes; and if not, facilitating management changes that will best ensure that outcomes are met or re-evaluated" (43 CFR 46.30). We ask that NPS provide clear "desired outcomes" for bison management going forward and develop actions or steps to achieve those outcomes, monitor progress toward desired outcomes and adjust actions to improve progress.

We realize some of the above recommendations are dependent on agreement and cooperation with other partner agencies and Tribes and may, in part, be outside the scope of this NPS process. The Park should therefore consider a stepped or "adaptive" approach toward implementing recommendations

that are outside the scope of this process. This approach would allow the Park to set longer-term goals/desired outcomes for bison management, design a path/mechanism for how to get there over time, and demonstrate your commitment to continually improve how these bison are treated and managed overtime.

Through the adaptive management process, thresholds for the Yellowstone bison population (including total carrying capacity and numbers of animals outside the Park) and corresponding management actions should be regularly updated based upon the best available science, changing conditions on the landscape including increases in tolerance and/or improvement in conflict prevention tools, changes in forage quality and quantity, and improvements to non-slaughter population management tools. For example, as hunting and other management actions allow for improved dispersal and bison access to/use of habitat areas outside of Yellowstone, the upper population threshold could be increased to reflect the additional forage available and reduced potential for conflicts as bison are less congregated and more spread out on the larger landscape. Population ranges could also be adjusted following habitat-improvement projects, for example on CGNF lands outside the Park, and/or with further increases in social tolerance or expansion of tolerance areas. Conversely, upper population thresholds may need to be reduced if range conditions deteriorate, and there is a significant reduction in food-limited carrying capacity.

In addition, providing clear benchmarks that will trigger a change in action on the Park's part, could be a strong motivating factor for other managing partners/Tribes. For example, if Tribes are unable to remove enough bison from the landscape through hunting as bison numbers increase toward or exceed population thresholds, this could trigger the Park to initiate population control actions including the use of capture and slaughter. Conversely, as Tribes demonstrate that they can effectively manage and or stabilize bison numbers through continued improvements and dispersal of hunting by meeting defined benchmarks (i.e., a certain number of bison harvested but without significant conflicts), the Park could/should incrementally reduce capture/shipments to slaughter. Over time as more bison are harvested through improved/dispersed hunting, fewer bison will be sent to slaughter and eventually slaughter eliminated altogether through adaptive management.

Comments Regarding Actions Common to All Alternatives

In general, we support all actions common to each alternative and ask that the Park include specific, actionable steps, goals, desired conditions, and timelines for how each of those actions will be achieved. In addition, please consider the following recommendations.

Support of the 2014 Buffalo Treaty and 2020 Bison Conservation Initiative. As stated, NPS will continue to support the 2014 Buffalo Treaty and 2020 Bison Conservation Initiative by "engaging Buffalo Nations associated with Yellowstone bison to explore ways to increase the efficiency and safety of hunting outside the park and increase the restoration of brucellosis-free bison to Tribal and public lands." The former is one of the most critical pieces to significantly improving Tribal access to Yellowstone bison in addition to improving Yellowstone bison management in general, supporting bison as a native migratory wildlife species, and moving away from slaughter to manage numbers. We are concerned that the current "status quo" approach will not result in significant improvements to the "efficiency and safety of hunting", and we are headed towards a catastrophic result if something does not change. Through this process, we ask the Park to take an assertive role and consider all possible avenues/approaches,

including those recommended above, through consultation and cooperative partnerships with affected Tribes to better support and achieve a significantly improved and expanded Tribal hunt. <u>Continuing with the status quo approach within the existing IBMP framework is not sufficient and any improvement or progress in how bison are managed going forward depends on real progress made in this area.</u>

Forage Production and Grazing Research. We have considerable concerns about the long-term health of Yellowstone's northern range grasslands and riparian areas considering the significant proportion of non-native and exotic species, especially in the face climate change (see the Greater Yellowstone Climate Assessment - Hostetler et al. 2021), drought, fires, and other unforeseen circumstances. We urge the Park to continue forage production and grazing research, and rangeland health monitoring following the best available science and adjust population thresholds and management actions accordingly. Also, we encourage the Park to consider and support any reasonable, scientifically backed efforts to restore rangeland health across the Northern range, both in and outside the Park.

Continued monitoring and adaptation of food-limited carrying capacity, population viability, and genetic diversity. Relatedly, the NPS should provide continued and regular monitoring of food-limited carrying capacity estimates to reflect the large variations in weather, grass production, ungulate numbers (i.e. elk, bison, and other species), and future climate change impacts, in addition to ongoing population viability analyses and genetic diversity monitoring, and adapt population threshold ranges and accompanying management actions for bison accordingly.

Comments specific to each Draft Alternative

Alternative 1 (No Action):

Alternative 1 (No Action Alternative) should not be reasonably considered for obvious reasons. Arguably, one of the primary goals of the IBMP, to maintain a wild, *free-ranging* bison population, is simply not being met. Tremendous effort has gone in to securing additional habitat for bison outside the Park to help support this most basic goal of the IBMP, but to this day the vast majority of it sits empty. Between hunting and the continuous push to slaughter to meet current overly restrictive population objectives, these bison are still largely constrained to the Park. Furthermore, this alternative fails to meet the purpose and need of the new plan (i.e. to preserve an ecologically sustainable population of wild, *migratory* bison) and it is well accepted by Montanans, Americans in general, and the various agencies and partners involved with Yellowstone bison management (i.e. NPS, USFS, and the Tribes), that the current IBMP and bison management practices are outdated and unacceptable.

To move away from the highly controversial ship-to-slaughter program as a primary means for population control, bison need to be managed as *migratory wildlife* and allowed significantly *more access* to year-round and seasonal habitat outside the park in existing tolerance areas to support increased Tribal and fair-chase public hunting opportunities as the primary means to manage the bison population. This is not possible under the current population objective and plan that emphasizes population reduction meant to restrict bison dispersal into Montana.

Finally, this alternative does not adequately support Tribal treaty rights and access to bison and does not reflect the significant progress made over the last two decades. To continue on with reduced population numbers and slaughter is simply unacceptable when the conflicts they were meant to prevent are no longer there.

Action Alternative's 2 and 3:

We support certain elements of both Alternative 2 and Alternative 3 and recommend a modified alternative that incorporates these elements in addition to the recommendations outlined above. In summary, we support a modified alternative that will support a population of at least 4,000 to 7,000 bison and rely on natural selection, bison dispersal, significantly improved and expanded Tribal cooperation and public and Tribal harvests in Montana, and the continued use and further expansion of the Bison Conservation Transfer Program to manage bison numbers and support restoration. More specifically, please consider the following comments regarding specific elements in each action alternative.

Alternative 2 elements that we support. We like that this alternative would prioritize "the NPS's trust responsibilities to Tribes by using the BCTP to restore bison to Tribal lands and treaty hunting outside the park to provide Tribes with access to traditional food, cultural, and material sources" (DEIS, page 25). In addition, we support the NPS working with Tribal partners to "increase their hunting opportunities and the number of live bison sent to Tribal lands through the BCTP", shifting away from slaughter, and use of the BCPT to transfer more bison to Tribes. Again, it is critical that NPS commits to actionable steps within the new plan to expand the BCTP and support/facilitate the increase in hunter harvest over a broader landscape.

In addition, we support the following (with any caveats in italics):

- "The NPS may collaborate with interested partners to establish additional quarantine and assurance testing facilities outside the park." We would like to see the Park commit to this.
- "Bison ineligible for the BCTP due to age or prior brucellosis exposure could be released from
 the capture facility and be available for hunting opportunities." The NPS should release all bison
 ineligible for the BCTP unless population thresholds have been exceeded and significant conflicts
 could result from more bison outside the Park.
- "Alternatively, the NPS could hold some or all ineligible animals when migrations are severe to reduce numbers of animals moving outside the park."
- "The NPS could also release all ineligible animals back into the park in spring." This should be
 considered if/when the population has dropped below 4,000 to safeguard against further
 reductions in bison numbers, and/or there are too many bison and/or hunters already outside of
 the Park.
- "To reduce stress on animals from shipping them to slaughter or to address a lack of slaughter facility availability or capacity, NPS staff may cull some captured bison on-site by shooting them within the fenced pastures of the bison facility at Stephens Creek Administrative Area (Humane Slaughter Association 2018). This process would involve collaborative management between the NPS and Tribes to determine the timing of culling, number of tribal members on-site for processing, and options for carcass removal." We support this if all other non-slaughter methods have been exhausted and bison numbers have exceeded 7,000 or more bison and significant conflicts are inevitable.
- "The NPS could collaborate with other IBMP members and treaty Tribes to evaluate the need, design, specifications, and potential location for temporary capture facilities in the northern management area."

 "The NPS would continue engaging with Tribes associated with Yellowstone bison, the Custer Gallatin National Forest, MFWP, residents, and NGOs to explore ways to increase the efficiency and safety of hunting outside the park." This is a must.

Alternative 2 elements that we do not support. Our primary concern with this alternative is the anticipated population range. Under this alternative, the NPS expects bison numbers to range between 3,500 and 6,000 after calving. Even though the upper limit of the population range in this alternative is somewhat higher than current management under the IBMP, it is equivalent to the actual number of bison that we have had over the last decade (ranging from 4200 to most recently 6000 bison) which has not resulted in any significant changes in how bison use the landscape nor has it promoted bison dispersal into new unoccupied suitable habitat areas inside or outside the Park. Furthermore, one could argue that Tribal treaty rights and access to bison have not been adequately supported under these numbers over the past decade. This population range is significantly less than the park's estimated foodlimited carrying capacity (8,000-10,000 bison) and as mentioned previously, 6,000 bison were successfully managed during last winter's record outmigration and unusually severe winter snowpack and conditions. Why shouldn't 7,000 bison be manageable under normal/average conditions? With all the available conflict reduction tools (as outlined above) and very few, if any, cattle remaining in existing tolerance areas there is simply no good reason not to allow numbers to increase towards 7,000 or more bison to support the ecological and cultural restoration of the species on lands outside Yellowstone and beyond. And lastly, we already outlined our concerns over allowing bison numbers to decrease down to 3500.

Alternative 3. In general, we support Alternative 3 and believe it is the alternative that would most support the purpose of this new plan – to preserve an ecologically sustainable population of wild, migratory bison. We especially like that it would "prioritize treating bison more like other ungulates such as elk in the GYA". We support NPS relying on natural selection, bison dispersal, and public and Tribal harvests in Montana as the primary tools to regulate bison numbers and ceasing the slaughter program to allow bison numbers to increase towards biologically and socially acceptable levels. This hands-off approach prioritizes bison conservation, minimizes human intervention, and is the alternative that would most support managing these bison as true migratory wildlife inside and outside the Park, more similar to how other wildlife species are managed in the GYE.

In addition, we support the NPS reinstituting shipments to slaughter and the use of other tools as described for Alternatives 1 and 2, "if higher bison numbers threaten the efficacy of management efforts to keep them in the existing management areas, even with more hunting opportunities." However, we ask that shipment to slaughter serve as the last resort tool to manage numbers and/or conflicts.

We do not agree with the NPS that under this alternative, "the risk of brucellosis transmission from bison to cattle in Montana may increase compared to Alternative 1 from more bison on the landscape and a broader distribution, which could increase the likelihood of contact with cattle" (DEIS, page 27). With very few, if any, remaining cattle within tolerance areas, how would transmission risk increase if bison remain inside tolerance areas (which is a goal of all alternatives, including our modified alternative)?

We support bison numbers increasing to 7,000 bison. However, we would like to see the bottom number increased to at least 4,000 for reasons outlined above. As stated in the DEIS, "larger hunter harvests would have to occur more frequently outside the park for this alternative to be effective, which may necessitate Tribal and public hunters allowing bison to distribute across a larger landscape before hunting them" (page 27). As bison numbers increase toward 7,000 bison it will become increasingly difficult to remove enough bison from the landscape to stabilize the population through non-slaughter tools *if* an actionable plan and agreements are not put in to place to allow bison to distribute across a larger landscape to avoid the need for massive culling through slaughter. Again, it is imperative that the Park/DOI take the lead on creating a cooperative plan/agreement that includes a commitment and actionable steps for cohesively implementing an expanded hunt as part of this, or any action alternative.

Conclusion

Thank you for the opportunity to comment on the draft EIS for a new Yellowstone Bison Management Plan. Bison management is one of the most contentious wildlife issues in the GYE and we appreciate the NPS's dedication and commitment to improving Yellowstone bison management and conserving our most iconic, and ecologically and culturally significant wild bison herd. The Greater Yellowstone Coalition is committed to seeing Yellowstone bison managed as valued migratory wildlife outside of Yellowstone National Park, just like all other native wildlife are managed today in Montana. It is both reasonable and realistic that a bold, contemporary, and science-driven Yellowstone Bison Management Plan can result from this process. We look forward to continuing to work with the Park Service, the Tribes, landowners, and other IBMP partners on creative solutions to resolve long-standing conflicts and to ensure the success of Yellowstone bison management into the future.

Sincerely,

Shana Drimal

Senior Wildlife Conservation Associate

Greater Yellowstone Coalition

Shana Drimal

Literature Cited

A. K. Knapp et al., The keystone role of bison in North American tallgrass prairie: Bison increase habitat heterogeneity and alter a broad array of plant, community, and ecosystem processes. Bioscience 49,39–50 (1999).

Aune, K, J. Rhyan, R. Russell, T. Roffe, B. Corso. 2012. Environmental persistence of *Brucella abortus* in the Greater Yellowstone Area. Journal of Wildlife Management 76(2):253–261.

Bullock, S. 2015. Decision notice. Year-round habitat for Yellowstone bison environmental assessment. Helena, Montana.

Clarke, P. R., R. K. Frey, J. C. Rhyan, M. P. McCollum, P. Nol, and K. Aune. 2014. Feasibility of quarantine procedures for bison (*Bison bison*) calves from Yellowstone National Park for conservation of brucellosisfree bison. Journal of the American Veterinary Medical Association 244:588-591.

Cross, PC, E Maichak, J Rogerson, KM Irvine, J Jones, D Heisey, WH Edwards, BM Scurlock. *Online*. 2015. Estimating the phenology of elk brucellosis transmission with hierarchical models of cause-specific and baseline hazards. *J. of Wildlife Management* doi: 10.1002/jwmg.883

Ebinger, MR, PC Cross, R Wallen, PJ White & J Treanor. 2011. Modeling Brucellosis Management in Bison: A Heuristic Model of Management Actions on Disease Dynamics. *Ecological Applications* 21:2944-2959

Freese, C.H., S.D. Fuhlendorf, and K. Kunkel. 2014. A management framework for the transition from livestock production toward biodiversity conservation on Great Plains rangelands. *Ecological Restoration* 32:358-368.

Foley, AM, PC Cross, DA Christianson, BM Scurlock, Scott Creel. *Accepted*. Influences on winter elk calf:cow ratios in southern Greater Yellowstone Ecosystem. *J. Wildlife Management*.

Geremia, C., P. J. White, R. L. Wallen, F. G. R. Watson, J. J. Treanor, J. Borkowski, C. S. Potter, and R. L. Crabtree. 2011. Predicting bison migration out of Yellowstone National Park using Bayesian models. PLoS ONE 6:e16848.

Geremia, C., White, P. J., Hoeting, J. A., Wallen, R. L., Watson, F. G. R., Blanton, D., & Hobbs, N. T. (2014). Integrating population- and individual-level information in a movement model of Yellowstone bison. *Ecological Applications*, *24*(2), 346–362. http://www.jstor.org/stable/24432151

Geremia, C., J.A. Merkle, D.R. Eacker, R.L. Wallen, P.J. White, M. Hebblewhite, and M.J. Kauffman, Migrating bison engineer the green wave. Proc. Natl. Acad. Sci. U.S.A. 116, 25707–25713 (2019).

Halbert, N. D., P. J. P. Gogan, P. W. Hedrick, J. M. Wahl, and J. N. Derr. 2012. Genetic population substructure in bison at Yellowstone National Park. Journal of Heredity 103:360-370.

Hostetler S, Whitlock C, Shuman B, Liefert D, Drimal C, Bischke S. 2021. Greater Yellowstone climate assessment: past, present, and future climate change in greater Yellowstone watersheds. Bozeman MT: Montana State University, Institute on Ecosystems. 260 p. .https://doi.org/10.15788/GYCA2021.

Land Management Plan, Custer Gallatin National Forest. 2022. 2020 Land Management Plan for the Custer Gallatin National Forest (usda.gov)

Lindgren, P.M.F. and Sullivan, T.P., 2014. Response of forage yield and quality to thinning and fertilization of young forests: implications for silvopasture management. Canadian Journal of Forest 15 Research 44(4): 281-289. http://www.nrcresearchpress.com/doi/abs/10.1139/cjfr-2013 0248?journalCode=cjfr#.Vx_NXtUrlwF

Metcalf, P., E. Covelli Metcalf, W. Freimund, R. \Vallen, and P. J. White. 2016. The human dimensions of migratory wildlife: documenting the attitudes and values of gateway community residents in Greater

Yellowstone. College of Forestry and Conservation, University of Montana, Missoula, Montana and the National Park Service, Yellowstone National Park, Mammoth, Wyoming.

MFWP [Montana Fish, Wildlife & Parks]. 2015. Elk management in areas with brucellosis. 2015 final work plan. Adopted November 13, 2014. Helena, Montana.

National Academy of Sciences, Engineering and Medicine. Revisiting Brucellosis in the Greater Yellowstone Area. 2017. https://www.nationalacademies.org/our-work/revisiting-brucellosis-in-the-greater-yellowstone-area. (Accessed: Feb. 11, 2022).

National Park Service. 2006. Management policies 2006. U.S. Department of the Interior, Washington, D.C.

National Park Service. 2014. Final EIS for Remote Vaccination Program to Reduce the Prevalence of Brucellosis in Yellowstone Bison.

Pérez-Figueroa, A., R. L. Wallen, T. Antao, J. A. Coombs, M. K. Schwartz, P.J. White, 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

Plumb, G.E., P.J. White, Michael B. Coughenour & Rick L. Wallen, Carrying capacity, migration, and dispersal in Yellowstone bison, 2009. Biological Conservation 2377-2387.

Ratajczak, Z., Scott L. Collins, John M. Blair, Sally E. Koerner, Allison M. Louthan, Melinda D. Smith, Jeffrey H. Taylor, and Jesse B. Nippert. Reintroducing bison results in long-running and resilient increases in grassland diversity, 2022. PNAS, Vol. 119, No. 36, e2210433119 https://doi.org/10.1073/pnas.2210433119

Shamon, H., Cosby, O.G., Andersen, C.L., Augare, H., BearCub, Stiffarm J., Bresnan, C.E., Brock, B.L., Carlson, E., Deichmann, J.L., Epps A, Guernsey, N., Hartway, C., Jørgensen, D., Kipp, W., Kinsey, D., Komatsu, K.J., Kunkel, K., Magnan, R., Martin, J.M., Maxwell, B.D., McShea, W.J. 2022. The Potential of Bison Reintroduction as an Ecological Approach to Future Tribal Food Sovereignty on the Northern Great Plains. Frontiers in Ecology and Evolution. doi:10.33.89/fevo.2022.826282.

USDOI (US Department of the Interior). 2020. Bison conservation initiative. Washington, DC.

USDOI, NPS. 2016c. Identifying opportunities for cooperative and collaborative partnerships with federally recognized Indian tribes in the management of federal lands and resources. Secretarial Order 3342 issued Oct. 21, 2016, Washington, DC.

USDOI and USDA. 2021. Joint Secretarial Order on Fulfilling the Trust Responsibility to Indian Tribes in the Stewardship of Federal Lands and Waters. Secretary's Order 3403 issued November 15, 2021, Washington, DC.

White, P.J., R. L. Wallen, C. Geremia, J. J. Treanor, D. W. Blanton. 2011. Management of Yellowstone bison and brucellosis transmission risk – Implications for conservation and restoration. Biological Conservation 144 (2011) 1322–1334