

February 23, 2016

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

Superintendent Daniel Wenk,

Buffalo Field Campaign is submitting the enclosed comments on Yellowstone National Park's proposal to set-up a 50-year program to remove wild buffalo from Yellowstone National Park for quarantine and terminal pastures, and to continue capturing wild buffalo for slaughter.

Buffalo Field Campaign is including a copy of all sources cited in our comments, which are incorporated by reference and made part of our comments.

Sincerely,

Daniel Brister, MS Executive Director

Daniel Brute



About Buffalo Field Campaign

Buffalo Field Campaign was founded in 1997 to protect the natural habitat of wild migratory buffalo and native wildlife, to stop the slaughter and harassment of America's last wild buffalo as well as to advocate for their lasting protection, and to work with people of all Nations to honor the sacredness of wild buffalo.

Buffalo Field Campaign is located in West Yellowstone, Gallatin County, Montana, and is supported by volunteers and other citizens in Montana, Idaho, and Wyoming and by people from around the world who value America's native wildlife and the ecosystems upon which they depend, and enjoy the natural wonders of our irreplaceable public lands.

As an organization and on behalf of our members, Buffalo Field Campaign is deeply concerned and actively involved in protecting the last remaining descendants of indigenous buffalo in North America to occupy their original range.

Buffalo Field Campaign publicizes the plight of the buffalo, works to end their slaughter and harassment by government agencies, and advocates for the long-term protection of viable populations of wild buffalo and year-round habitat.

Buffalo Field Campaign actively engages the American public to honor and protect our cultural heritage by allowing wild buffalo to exist as an indigenous wildlife species fulfilling their ecological role on their native habitats.

Buffalo Field Campaign volunteers patrol habitat where buffalo migrate within the Yellowstone and Madison River valleys. These direct experiences with buffalo on their native habitats inform our actions and strengthen our commitment to gaining permanent protections for America's last wild buffalo.

Executive Summary

The cumulative impacts of Yellowstone National Park's ongoing buffalo capture for slaughter and 50-year quarantine programs require the agency take a hard look using the best available information in a comprehensive Environmental Impact Statement.

The U.S. Congress never intended for wild buffalo in Yellowstone to be declared "surplus" and did not authorize the Secretary of the Interior to remove wild buffalo as "surplus" for quarantine.

Federal rules prohibit Yellowstone National Park from providing "surplus" buffalo to applicants "when the animals are to be slaughtered, or are to be released without adequate protection from premature hunting." 36 C.F.R. § 10.3(d) (2015).

Yellowstone National Park's 50-year quarantine plan includes removing wild buffalo in Yellowstone for commercial purposes, in contravention of the purposes of the Organic Act and National Park Service policies.

Yellowstone National Park's desired condition of reducing the population in Yellowstone to 3,000 wild buffalo through quarantine, terminal pastures, and capture for slaughter operations adversely impacts the wild population's natural immunity to introduced diseases, including brucellosis from cattle, and increases the risk of more virulent and persistent strains arising in the wild population.

The cumulative impacts of Yellowstone National Park's ongoing buffalo capture for slaughter and 50-year quarantine programs require the agency undertake an impairment review.

Yellowstone National Park's recent track record of permitting wild buffalo to be removed from Yellowstone for quarantine led to the wildlife species being commercially exploited and subject to domestication, artificial selection, and invasive livestock management practices.

Quarantining wild buffalo subjects the wildlife species to domestication, artificial selection, and livestock management practices. The U.S. Department of Agriculture's costly, restrictive, and burdensome quarantine requirements are a detriment to wild buffalo in Yellowstone, and are unlikely to lead to recovery of buffalo as a wildlife species elsewhere.

The effects of quarantining wild buffalo and Yellowstone National Park's ongoing buffalo capture for slaughter program adversely impact tribes with cultural and traditional ties to buffalo roaming wild and free in Yellowstone.

Quarantining wild buffalo in combination with Yellowstone National Park's buffalo capture for slaughter program adversely impacts tribes with treaty rights to hunt buffalo on open and unclaimed public lands including National Forests in the region.

Quarantining wild buffalo adversely impacts herd social structure and modifies behavior in unnatural ways. In quarantine, wild buffalo are subject to conditioning, artificial selection, and continuing pressures of domestication. Quarantined buffalo are managed like livestock on electrified and fenced range units of limited acreage. Compare and contrast the free and wild migrations of buffalo as a wildlife species with the U.S. Department of Agriculture's costly, restrictive, and burdensome quarantine requirements.

Under the voluntarily agreed to Interagency Bison Management Plan, Yellowstone National Park, along with your government counterparts, continues to operate under faulty assumptions and outdated information, in contravention of the agency's mandate to use the best available science to inform decision makers and the public.

Yellowstone National Park must fund an independent population viability analysis to determine if cumulative impacts and cumulative management actions pose a threat to the long-term viability and diversity of wild buffalo in Yellowstone.

The health, well-being, cultural traditions, and treaty rights of American Indian people can in part be restored through natural restoration of wild buffalo populations. Natural restoration must begin by protecting the wild buffalo population in Yellowstone. To do so, the states and public trust land management agencies must protect migration corridors for the wild species first and foremost in Yellowstone – public lands and corridors that buffalo continue to be denied under current management.

The cumulative impacts of Yellowstone National Park's ongoing buffalo capture for slaughter and 50-year quarantine programs require the agency take a hard look using the best available information in a comprehensive Environmental Impact Statement.

Buffalo Field Campaign requests Yellowstone National Park undertake an Environmental Impact Statement for the agency's proposal to programmatically remove wild buffalo from Yellowstone National Park for the next 50 years.

Cumulative impacts of management actions on the integrity and viability of wild buffalo and the ecosystem they inhabit require a comprehensive Environmental Impact Statement, not a piecemeal environmental assessment.

Like many aspects of your assessment, Yellowstone National Park did not review the cumulative impacts of management actions on removing buffalo in agency capture for slaughter operations, quarantine, and terminal pastures. An honest evaluation requires analysis of the cumulative impacts of quarantine *together with* all other management actions against wild buffalo. This defect in the agency's analysis can and must be corrected in a comprehensive Environmental Impact Statement.

The National Environmental Policy Act is designed for decision makers and the public to have a common reference point to judge the consequences of the connected actions the government is proposing. 42 U.S.C. § 4321 *et seq.*, (2014). To proceed without knowing will result in unintended consequences and adverse impacts for the wildlife and ecosystem in and beyond Yellowstone National Park. The public expects and relies upon Yellowstone National Park to conduct due diligence so the public and decision makers are not only informed but in a position to make excellent, informed decisions.

Given that Yellowstone buffalo "are considered the only sustainable, wild population of plains bison due to their large numbers, high genetic diversity, and adaptive capabilities . . ." Yellowstone National Park must take a hard look at the cumulative impacts of using capture for quarantine and terminal pastures with capture for slaughter to drive the wild population down to 3,000 buffalo – the agency's desired condition. (EA at 81).

Yellowstone National Park's proposal binds the agency's decision to capture wild buffalo for quarantine with its capture buffalo for slaughter program to meet its 'desired condition' of 3,000 buffalo in Yellowstone. Hence, Yellowstone National

Park must evaluate cumulative impacts of management actions on the wild population for the next 50 years.

Cumulative impacts of management actions on wild buffalo require that Yellowstone National Park's decision reflect the best available science and information in an Environmental Impact Statement.

Relying upon a false assumption that Yellowstone National Park's buffalo capture for slaughter operations are random or performed in an "unselective manner" is a significant flaw in your assessment and must be corrected in an Environmental Impact Statement. (EA at 24, 54, 55).

However, numbers of bison exiting the park far exceeded expectations and approximately 3,700 animals were culled during 2001–2009. Culls were non-random [11,12], which could have adverse demographic and genetic effects if continued over the long term [1,13]. The successful, long-term conservation of Yellowstone bison depends on migration to lower-elevation winter ranges in and adjacent to the park [14]. Thus, there was a need to improve predictions of the magnitude of migrations and provide managers with a tool for making informed decisions regarding tolerance for bison in cattle-free areas outside the park and numbers of bison that should be managed in the park. (Geremia 2011 at e16848).

The expected long-term effect of continued, sporadic, large- scale culls is a slower-growing bison population with large fluctuations in abundance. Removing juvenile cohorts creates gaps in the population age structure, while removing young adult females that contribute the most to population productivity could reduce the resiliency of Yellowstone bison to quickly recover from reductions. Also, the large-scale culling of Yellowstone bison could have consequences that persist for multiple generations after culling has ceased. In long-lived, age-structured populations such as bison, a rapid increase in population density after release from culling can lead to a sequence of changes in age-specific fecundity and survival that affect fluctuations in population size for many years (Eberhardt, 2002). For example, different vital rates responded to increased density at different rates in red deer, causing long-term changes to the demographic structure of

the population that persisted for decades (Coulson et al., 2004). Thus, sporadic, non-random, large-scale culls of bison have the potential to maintain population instability (i.e., large fluctuations) by altering age structure and increasing the variability of associated vital rates. Long-term bison conservation would likely benefit from management practices that maintain more population stability and productivity. (White 2011 at 1331).

In addition to large-scale, non-random killing of buffalo in agency capture for slaughter operations, Yellowstone National Park does not recognize peer-reviewed science of genetically distinct subpopulations. Hence, Yellowstone National Park's assessment does not take into account that management actions could also be disproportionately impacting genetic distinction found in the buffalo population.

[T]he identification of genetic subpopulations in this study raises serious concerns for the management and long-term conservation of Yellowstone bison.

Yellowstone bison have long been treated as a single metapopulation whereby the total number of bison is assumed to be the most important factor in determining appropriate winter cull levels (US Department of Interior and US Department of Agriculture 2000; Plumb et al. 2009). However, the unequal census sizes of the 2 subpopulations call this strategy into question: The Northern subpopulation ranges from 16% to 31% of the total population (US Department of Interior and US Department of Agriculture 2000; Gates et al. 2005). It is highly likely, therefore, that the 2 subpopulations have been disproportionately culled in some years. For example, approximately 735 bison were culled near Gardiner at the park's northern boundary during the 1996–1997 winter. Applying our estimate that around 68% of the bison culled near Gardiner that year originated from the Northern subpopulation (Figure 3A), we calculate that approximately 500 of the bison culled during the 1996–1997 winter were from the Northern subpopulation. Given the prewinter estimate for the Northern subpopulation of 877 bison (US Department of Interior and US Department of Agriculture 2000; Gates et al. 2005), the 500 culled bison represent approximately 57% of the entire subpopulation.

It is not clear at this point how the subpopulations may be changing over time or how the current bison management plan (US Department of Interior and US Department of Agriculture 2000) might influence the genetic integrity of the subpopulations.

In conclusion, we have presented strong evidence for the existence of 2 genetically distinct subpopulations of bison within Yellowstone National Park. Our study has also revealed longitudinal differences in migration patterns among Yellowstone bison, as it appears that bison moving to the park boundary in the vicinity of West Yellowstone are consistently from the Central subpopulation, whereas those moving to the park boundary in the vicinity of Gardiner may originate from either the Central or Northern subpopulation. These observations warrant serious reconsideration of current management practices. The continued practice of culling bison without regard to possible 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. Population subdivision is a critically important force for maintaining genetic diversity and yet has been assessed in only a handful of species to date. The identification of cryptic population subdivision of the magnitude identified in this study exemplifies the importance of genetic studies in the management of wildlife species ..." (Halbert 2012 at 9).

Selectively removing wild buffalo testing negative for brucellosis to quarantine, and slaughter, as Yellowstone National Park has done in prior and on-going management actions, "could increase brucellosis prevalence in the population and could have some unintended consequences to breeding herd and age structure." (EA at 54).

We do not recommend the selective removal of bison based on their brucellosis exposure status. Removal of small (25-50 animals), entire groups of bison gathered through weekly efforts should mimic random culling, which is a preferable alternative for conservation. Management culling is the dominant source of mortality for Yellowstone bison.

Random removal, in contrast to selective removal based on brucellosis exposure, avoids artificially allowing brucellosis to act as a key selective force on the bison population. (Geremia 2014 at 19).

In a span of just 16 years, management actions have unnaturally and adversely impacted the age, sex, and distinct breeding groups in the wild buffalo population. (White 2011 at 1322).

Relying upon outdated analyses performed in 2000 are no substitute for actual data on how management actions have artificially selected and interfered with natural selection processes in wild buffalo for the past 16 years, and how they will for the next 50 years.

Yellowstone National Park needs to use the best available science and information to evaluate actual data from management actions targeting wild buffalo in an Environmental Impact Statement.

Yellowstone National Park also failed to provide data on how cumulative management actions may be removing wild buffalo with natural resistance to diseases including brucellosis because the agency does not know how this natural resistance works in wild buffalo. (EA at 51–52, 54; Kubinak 2014).

After more than 16 years of management actions targeting wild buffalo for brucellosis, the lack of data and scientific uncertainty in your assessment demonstrate that Yellowstone National Park has not taken the requisite hard look the National Environmental Policy Act calls for.

Yellowstone National Park must update the Pérez-Figueroa (2012) model with actual data on how the cumulative impacts of management actions are impacting the buffalo population, subpopulations, breeding groups, independent lineages, and family groups.

If Yellowstone National Park's No Action alternative is to continue capturing buffalo for slaughter within the park, then the agency must take a hard look at the cumulative impacts of capturing for slaughter and removing wild buffalo through quarantine for the next 50 years.

Cumulative impacts of management actions are significant and raise major concerns and uncertainties about the viability of wild buffalo remaining in Yellowstone.

Cumulative impacts in Yellowstone National Park's environmental baseline are significant, adverse, and long-term for wild buffalo. In fact, cumulative impacts throughout the Yellowstone ecosystem are significant, adverse, and long-term for many natural values including migration corridors, wildlife habitat, and water quality. Taken together, cumulative impacts in the ecosystem and cumulative impacts of management actions present major problems for fully recovering wild buffalo in Yellowstone.

The U.S. Congress never intended for wild buffalo in Yellowstone to be declared "surplus" and did not authorize the Secretary of the Interior to remove wild buffalo as "surplus" for quarantine.

The United States Congress never intended that "wild" buffalo be declared surplus:

The "tame" herd of buffalo in Yellowstone National Park was established under authority contained in the act of July 1, 1902 (32 Stat. 574), with an appropriation of \$15,000 for the purpose. Twenty-one animals were purchased in the fall of that year, and these have multiplied until now the herd contains 578. It is estimated that the "wild" herd, a remnant of the vast hordes that once roamed this region, numbers from 125 to 150, but it has no place in the present discussion. (U.S. Congress 1923 at 46).

Yellowstone National Park needs to address the purpose of what the U.S. Congress intended and acknowledge that "surplus buffalo" is an artifact of captive, introduced buffalo on the Lamar Buffalo Ranch, which by design could only hold so many captive or "tame" buffalo.

Yellowstone National Park's decision must abide by the intent and purpose of the United States Congress in enacting 16 U.S.C. § 36 in 1923 for the disposition of surplus elk, buffalo, bear, beaver, and predatory animals.

Clearly, the United States Congress distinguished "wild" from "tame" buffalo. (U.S. Congress 1923 at 46). Your decision needs to address how Yellowstone National Park intends to treat this Congressional distinction in removing wild buffalo in Yellowstone for quarantine and terminal pastures.

If the U.S. Congress had not intended that wild buffalo be declared "surplus" then "surplus" must be an artifact of Yellowstone National Park's management participation in the Interagency Bison Management Plan.

Through hazing or harassment from habitat and capturing in traps, the plan severely limits the distribution and migration of buffalo in Yellowstone National Park, on National Forests, and on private lands where buffalo are welcome.

As a consequence of limiting natural migrations of wild buffalo and population abundance, the plan seeks a desired condition without regard for subpopulation distinction and breeding group lineages that could impact the population's

adaptability and fitness. Thus, elements of the plan, which Yellowstone National Park created and voluntarily agreed to, produce the artificial conditions that lead management to declare a "surplus" for shipping buffalo to slaughter, quarantine, population control experiments, and terminal pastures.

For Yellowstone National Park to make a determination that buffalo exceed a politically derived population target, and any number above this desired condition is "surplus," is arbitrary and capricious and not supported by the best available information.

Federal rules prohibit Yellowstone National Park from providing "surplus" buffalo to applicants "when the animals are to be slaughtered, or are to be released without adequate protection from premature hunting." 36 C.F.R. § 10.3(d) (2015).

Yellowstone National Park is prohibited from providing applicants "surplus" buffalo from Yellowstone if the buffalo are to be slaughtered or subject to premature hunting.

Applications will not be granted when the animals are to be slaughtered, or are to be released without adequate protection from premature hunting. 36 C.F.R. § 10.3(d) (2015).

By the agency's definition, buffalo sent to "terminal pastures" will be killed. Thus, Yellowstone National Park's plan of providing buffalo to other parties for quarantine or "terminal pastures" is in conflict with federal regulation.

Yellowstone National Park's adoption of livestock management techniques to manage wild buffalo in Yellowstone is in conflict with widely held public values that respect management of wild buffalo as an indigenous wildlife species.

Public opinion is shifting toward more tolerance for bison in the GYE (Tulchin Research 2015) and, as a result, a new paradigm is needed to accommodate larger numbers and allow bison to move more freely on suitable public lands. (EA at 83).

Public lands are also a public trust, and it is clear that the public overwhelmingly favors protecting migratory buffalo as a wildlife species on public lands.

It is Yellowstone National Park's decisions that need to change to reflect this widely held public sentiment that wild buffalo belong as wildlife on public lands including Yellowstone National Park, National Forests adjacent to the park and beyond.

Yellowstone National Park's 50-year quarantine plan includes removing wild buffalo in Yellowstone for commercial purposes, in contravention of the purposes of the Organic Act and National Park Service policies.

The quarantine program would entail testing bison captured to reduce abundance and segregating some bison testing negative for brucellosis exposure from other bison. These test-negative bison would be tested repeatedly over time using established protocols to evaluate if they remain free of brucellosis (USDA, APHIS 2003; Clarke et al. 2014). Animals that remain test-negative for brucellosis through these protocols would be sent alive to other public, tribal, or private lands for conservation, cultural, or commercial purposes. Animals not selected for quarantine would be released or sent to terminal pastures⁸, meat processing facilities, or research facilities. (Programmatic Actions Common to All Action Alternatives, EA at 22).

Because Yellowstone National Park is evaluating removing wild buffalo in Yellowstone for commercial purposes, the agency can decide to remove wild buffalo once belonging to the public trust for private, commercial benefit. (EA at 22, 32). In doing so, the agency would be acting in contravention of the fundamental purpose of our National Park System to act as a trustee for future generations, and for the common benefit of all the people of the United States. 54 U.S.C. § 100101 *et seq.*, (2014).

The fundamental purpose of all parks also includes providing for the enjoyment of park resources and values by the people of the United States. The enjoyment that is contemplated by the statute is broad; it is the enjoyment of all the people of the United States and includes enjoyment both by people who visit parks and by those who appreciate them from afar. (NPS 2006 1.4.3 at 10-11).

Because Yellowstone National Park is evaluating the removal of buffalo from Yellowstone for commercial purposes, once the agency has made a programmatic decision it can modify its decision at any time to permit commercial exploitation of wild buffalo.

The public is right to strongly contest and object to Yellowstone National Park setting up a 50-year program to take wild buffalo belonging to the public trust for private, commercial business elsewhere.

Wild buffalo in Yellowstone "are considered the only sustainable, wild population of plains bison due to their large numbers, high genetic diversity, and adaptive capabilities (Freeze et al. 2007, White et al. 2015d)." (EA at 81). These irreplaceable values are in part what make buffalo in Yellowstone so unique, widely cherished, and important for all Americans and people worldwide.

It is wrong for Yellowstone National Park to make decisions that benefit private, for profit commercial interests to the detriment of wild buffalo belonging to the public trust.

Yellowstone National Park's desired condition of reducing the population in Yellowstone to 3,000 wild buffalo through quarantine, terminal pastures, and capture for slaughter operations adversely impacts the wild population's natural immunity to introduced diseases, including brucellosis from cattle, and increases the risk of more virulent and persistent strains arising in the wild population.

Yellowstone National Park did not properly evaluate the cumulative impacts of management actions on wild buffalo's natural immunity to diseases, and resistance to disease infection. This defect in your assessment can and must be addressed in an Environmental Impact Statement.

Low diversity in immune system genes may enable parasites and pathogens to replicate more quickly and become more virulent (Kubinak et al. 2015). Having more genetic diversity within a single herd or population may counter the ability of diseases to adapt and replicate quickly (Kubinak et al. 2015). (EA at 51).

Yellowstone National Park admits it does not know how cumulative management actions are impacting the buffalo's natural resistance to disease. The agency has not even developed a way to measure such an impact on the buffalo population in Yellowstone.

Thus, while removing bison testing negative for brucellosis exposure could inadvertently remove some animals with some level of natural genetic resistance, further investigation is necessary to identify these brucellosis-resistant bison based on genetic screening (Adams and Schutta 2010, Herman 2013). Regardless, few bison with innate immunity characteristics would likely be removed from the Yellowstone population if 50 to 100 bison are culled in a given year for quarantine. These effects are likely to be adverse, minor, short-term, and regional. (EA at 52).

It is highly likely that many buffalo with innate immunity characteristics have been killed because more than 5,587 wild buffalo have been killed in management actions since 2001. (EA at 49).

The fact remains that 16 years into an outdated management plan, Yellowstone National Park does not even understand buffalo's natural resistance to disease, let alone the cumulative impacts of management actions upon the population. This uncertainty presents potentially grave risks to wild buffalo in Yellowstone and needs to be evaluated using the best available science in an Environmental Impact Statement.

Yellowstone bison are managed pursuant to the Interagency Bison Management Plan, as adjusted, which was signed in December 2000 by the Secretaries of Agriculture and Interior and the Governor of Montana. Under this plan, numbers of Yellowstone bison are supposed to be managed towards an end-of-winter guideline of 3,000 animals. (EA at ii).

Yellowstone National Park failed to take a hard look at the cumulative impacts of driving the wild buffalo population down to 3,000 through capture for slaughter, quarantine, and terminal pastures.

Because the agency's No Action alternative includes capturing buffalo for slaughter in Yellowstone, and its Preferred Alternative to remove buffalo for quarantine and terminal pastures elsewhere, Yellowstone National Park must evaluate the cumulative impacts of management actions on wild buffalo's natural immunity to diseases and resistance to disease infection.

[L]arger brucellosis transmission events could become more likely if more resistant animals are removed and naïve animals make up a larger portion of the population. This should not be a substantial concern if bison are culled from the population in an unselective manner with regards to brucellosis exposure. (EA at 55).

Larger brucellosis transmission events and the spread of more virulent strains are a substantial concern because wild buffalo in Yellowstone are not "culled" in an unselective manner. Management actions have "differentially affected breeding herds," altered sex and age structures, and disproportionately removed female and calf cohorts" among other impacts identified by Yellowstone National Park scientists:

Due to risk management and other concerns, more than 3,600 bison were removed from the population during 2001 to 2010, with more than 1,000 bison and 1,700 bison being removed from the population during winters 2006 and 2008, respectively. These culls unintentionally removed more calf and female bison from the central breeding herd which, if continued over time, could result in alterations of the sex and age structure of the population and consequent changes in demographic processes that could persist for decades (White et al. 2011). Also, productivity in the northern breeding herd increased, resulting in record abundance in 2011, with higher proportions of females and calves in the herd (Geremia Sept. 2011 at 2). (White 2011 at 1322).

The cumulative impacts of Yellowstone National Park's ongoing buffalo capture for slaughter and 50-year quarantine programs require the agency undertake an impairment review.

Yellowstone National Park is prohibited from impairing park resources and values. (NPS 2006 1.4.1-1.4.7.1 at 10-12).

The fundamental purpose of Yellowstone National Park is to conserve "the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." (NPS 2006 1.4.1 at 10).

"The Service recognizes that natural processes and species are evolving, and the Service will allow this evolution to continue – minimally influenced by human actions." (NPS 2006 Introduction at 36).

"NPS managers must always seek ways to avoid, or to minimize to the greatest extent practicable, adverse impacts on park resources and values." (NPS 2006 1.4.3 at 10).

National Park Service general management concepts require that Yellowstone National Park "maintain all the components and processes of naturally evolving park ecosystems, including the natural abundance, diversity, and genetic and ecological integrity of the plant and animal species native to those ecosystems." (NPS 2006 4.1 at 36).

Buffalo Field Campaign requests Yellowstone National Park undertake an impairment review and disclose in your analysis and decision whether consigning migratory buffalo to quarantine over the next 50 years in combination with agency buffalo capture for slaughter operations is an impairment of Yellowstone National Park's natural resources and values.

Yellowstone National Park is promoting a long-term 50-year program that is a source of public conflict and controversy: by agreeing to use quarantine to drive the wild population down to 3,000 buffalo within Yellowstone National Park, the agency harms the strongly held, and widely shared public value of wild buffalo migrating within and beyond the park including adjoining National Forests.

This strongly held, widely shared public value is impaired by Yellowstone National Park limiting the abundance and restricting the distribution of buffalo in Yellowstone National Park, on adjacent National Forests, and public lands in the region.

Public lands cover two-thirds of the 19 million-acres of habitat in the Yellowstone ecosystem. Today, only two federal buffalo herds remain in the public trust, largely isolated from an expansive network of National Parks, National Forests, National Wildlife Refugees, Bureau of Land Management, state and wildlife management lands in the region. (EA at 80).

Unwisely, the state of Montana views migrating buffalo through the distorted scope of state law Mont. Code Ann. § 81-2-120 (2015) that puts the Department of Livestock in charge of the United States' most significant and unique population of wild buffalo remaining as a wildlife species.

It is no surprise then that under Livestock Department authority, wild buffalo are limited to less than 0.3% of their habitat in Montana, a significant, long-term, and adverse impact not alleviated or mitigated by Yellowstone National Park removing wild buffalo to quarantine elsewhere.

Yellowstone National Park must review the science on how cumulative management actions are artificially selecting, exerting domestication pressures, altering behavior, social structure, and traits that sustain buffalo as a wildlife species. The anecdotal evidence suggests quarantine requirements are conditioning buffalo and confinement has adverse impacts not contemplated in the agency's assessment.

The National Environmental Policy Act requires a hard look at impacts, not an evasive look that relies upon what is shown in a television broadcast to determine impacts. (EA at 56). For example, it was reported that wild buffalo removed to quarantine on Fort Peck did not move beyond an electrified fence to avoid a grass fire and 10 buffalo were killed. (McNeel, Indian Country Today Media Network 2012). If Montana's state veterinarian is to be believed, wild buffalo removed to quarantine on Fort Belknap did not move beyond an electrified fence to access water and 19 buffalo died from salt toxicosis. (MVDL 2015; Online: http://www.indianz.com/News/2015/018873.asp).

We agree with the agency that the adaptive processes of buffalo migration and dispersal have not been restored and that Yellowstone National Park management

actions connected with state management actions are hindering recovery of wild buffalo in the ecosystem. (EA at 82, 83).

The connected and cumulative risks of management actions to wild buffalo, necessitate Yellowstone National Park review whether cumulative management actions are impairing the wildlife species.

Yellowstone National Park's recent track record of permitting wild buffalo to be removed from Yellowstone for quarantine led to the wildlife species being commercially exploited and subject to domestication, artificial selection, and invasive livestock management practices.

The public must view Yellowstone National Park's 50-year quarantine program – including for the benefit of private, commercial, for profit business – in light of recently made agency decisions that permitted the removal of wild buffalo from Yellowstone National Park for quarantine to end up as private property of commercial producers in domestic herds.

Yellowstone National Park's prior actions to permit taking over 200 migratory buffalo for a quarantine feasibility study (Yellowstone National Park 2006) also had a similarly stated purpose "to establish or augment tribal and public populations of plains bison to assist the conservation of the species as wildlife."

However, an objective review finds that wild buffalo permitted to be taken from Yellowstone National Park has not conserved the species as wildlife. Instead, the agency has facilitated the exploitation of a wild species that once belonged to future generations for private, commercial benefit, and it is proposing to do so over the next 50 years.

Yellowstone National Park's assessment entirely ignored analyzing the harm levied against the public trust by permitting wild buffalo to be taken from Yellowstone for quarantine in 2006-2008 and now again.

In 2014, the majority of quarantined buffalo permitted by Yellowstone National Park to be removed from Yellowstone became the private property of Turner Enterprises Inc., part of the commercial domestic herds owned by the company (Montana Fish, Wildlife & Parks, et al., 2010).

The remainder of the quarantined buffalo transferred to the Fort Peck Reservation and Fort Belknap Reservation remain in a domesticated state per the quarantine and political requirements imposed upon the tribes (Montana Fish, Wildlife & Parks and the Assiniboine and Sioux Tribes of the Fort Peck Reservation 2012). The cohorts have limited range, are ear-tagged, and subject to confinement behind electrified fences. (EA at 97). A suspicious wildfire led to the fatality of 10 of the quarantined buffalo (McNeel, Indian Country Today Media Network, 2012). If

Montana's state veterinarian is to be believed, 19 buffalo died from salt toxicosis. (MVDL 2015; Online: http://www.indianz.com/News/2015/018873.asp).

Beyond analyzing the benefits of using wild buffalo from Yellowstone to prevent inbreeding and to foster disease resistance in private, commercial herds, Yellowstone National Park does not weigh the harm to the public trust of commercializing for private benefit and taking for personal property, a wild species that belongs to the public trust and future generations.

Your decision must reflect the widely held public value that wild buffalo in Yellowstone are a public trust as is Yellowstone National Park.

As a public trust, wild buffalo in Yellowstone belong to future generations and not our generation alone. Your decision must ensure that wild buffalo in Yellowstone remain as public wildlife held in common for generations to come and not disposed of as private, domestic livestock for commercial benefit.

Quarantining wild buffalo subjects the wildlife species to domestication, artificial selection, and livestock management practices. The U.S. Department of Agriculture's costly, restrictive, and burdensome quarantine requirements are a detriment to wild buffalo in Yellowstone, and are unlikely to lead to recovery of buffalo as a wildlife species elsewhere.

[W]ild bison can be characterized as untamed, free-roaming animals living in an environment not dominated by humans and whose behaviors, movements, survival, and reproductive success are primarily affected by their own daily decisions and natural selection (White 2015). (EA at 81).

Based on Yellowstone National Park's definition, taking wild buffalo from Yellowstone for quarantine does not meet the public's expectations of recovering buffalo as a wildlife species.

The vast majority of buffalo in existence are used for livestock production; where are all the wild buffalo today?

According to public statements made by a Yellowstone National Park official, buffalo removed from Yellowstone and confined to quarantine will be managed in "controlled" herds. (Zuckerman, Reuters 2014).

Given baseline conditions, public statements, and the track record of decisions made, it is far more likely than not that wild buffalo removed from Yellowstone National Park to quarantine will remain behind fences for the foreseeable future.

Quarantine subjects wild buffalo to significant, long-term and adverse pressures including domestication, artificial selection, and other commercial management practices intended to boost profits.

The adverse influence and effects of confinement can be found in a report from tribal managers on the Fort Peck Reservation who observed that quarantined buffalo calves were following bulls, a reversal of roles fulfilled by the eldest female or matriarch in the herd.

Tribes have observed uncharacteristic behaviors among the first QFS bison . . . and were again required to break up the family structure when bison were moved to Fort Belknap . . . Bison have a tendency to follow the biggest bull in the herd, despite the fact that they would

typically follow one of the lead females. (Fort Peck Assiniboine and Sioux Tribes 2014).

Being entirely comprised of orphaned calves, quarantine left the buffalo without a matriarch to bind them to the social family structure in the herd in a manner she was raised for. This unnatural change in behavior and social structure of buffalo confined in quarantine is far removed from that observed in wild buffalo.

The adverse influence of quarantine on natural buffalo behavior and the social structure of family groups that comprise the herd must not be ignored in your assessment or discounted in your decision.

While Yellowstone National Park may choose to look askance and not review the impacts in the agency's assessment, the conditioning of electrified fencing – one of U.S. Department of Agriculture's quarantine requirements - likely contributed to buffalo not evading a grass fire that burned on the Fort Peck Reservation, and buffalo not being able to move beyond enclosures to obtain water on the Fort Belknap Reservation.

Brucellosis infected wildlife carry the legacy of government decisions to expand the range of cattle into the habitat of native species, manage buffalo behind fences on ranches, and operate feedlots for wild elk.

While Yellowstone National Park is correct that reintroduced buffalo were confined at the Lamar Buffalo Ranch and are a part of the wild population today, the agency fails to mention that decisions made by the park to adopt livestock-agricultural practices were the likely source of brucellosis infection in buffalo. (Meagher and Meyer 1994 at 645; EA at 56). Bison calves captured from the wild were "mothered with domestic bovine cows" and pastured with cattle that were brought into Yellowstone to feed park workers and tourists. (Meagher and Meyer 1994 at 649).

More than any factor, changes in management practices within the National Park System led to buffalo being managed more like a wildlife species. (Meagher 1973). Without the expanse and diversity of habitats available in Yellowstone National Park and beyond on National Forests in the region, it is unlikely the confined buffalo at the Lamar Buffalo Ranch would have been released from captivity and escaped domestication. For Yellowstone National Park to argue this historical scenario is just like any other scenario today is not analysis. The point is buffalo contracted brucellosis when decision makers chose to manage them like livestock. The

opportunity for confined buffalo at the Lamar Buffalo Ranch to emerge as wildlife was enabled by an expanse of habitats across a two million acre nationally protected park and a natural management policy backed by the public.

The effects of quarantining wild buffalo and Yellowstone National Park's ongoing buffalo capture for slaughter program adversely impact tribes with cultural and traditional ties to buffalo roaming wild and free in Yellowstone.

Wild buffalo remain an enduring cultural and spiritual value to American Indian tribes. (Montana-Wyoming Tribal Leaders Council 2012, 2013; Shoshone-Bannock Tribes 2013; Intergovernmental-Intertribal Information Exchange Meeting for Yellowstone National Park 2008).

Yellowstone National Park's decision needs to take into account traditional buffalo cultures that continue to voice their interests in protecting the remaining stronghold in Yellowstone – the only place where wild buffalo persisted while being hunted to extinction elsewhere:

We seek to hold accountable those that are entrusted stewards of the land and the true and rightful inhabitants. Lack of stringent oversight can sometimes distort the necessary standards of accountability. I believe that we must bring about this scrutiny to protect the rights of a sacred species. And so, as tribal people, our challenge is to develop further strategies to preserve the core of our culture, that viable populations of wild buffalo are maintained. (Rosalie Little Thunder Sicangu Lakota Oyate, 2010 at ¶16).

For Native America, the bison is the elder brother and teacher. For the Great Plains, he may be the salvation. (LaDuke 2000 at 66).

Mi-ta-ku-ye (my relatives), Let it be known that Yellowstone territory; the habitat of the last wild Buffalo Nation – is sacred ground, it has been a SACRED SITE for the First Nation's people, and for all humanity who hold deep respect for all Creation. The Buffalo Nation has confirmed this fact; by where they have ended up, continuing to survive in their natural migration, struggling to live in a peaceful manner. Our ancestors also gave us this message by fasting in this area long ago, as they recognized this place of sacredness. This understanding is how we maintain the balance upon Un-ci Ma-ka, to protect these places, especially for the survival of our future generations to come. Can-te Mi-ta-wa l-ta-han (from my heart). (Chief Arvol Looking Horse 2008).

The Shoshone-Bannock Tribes (2013) have reiterated to Montana's Governor and Legislature their resolve and "desire to protect, preserve and enhance populations" of buffalo "to migrate freely across their historic range and to enhance the remaining Yellowstone herd."

For tribes who have returned to hunt buffalo on National Forest lands in Montana – under treaty rights fought for and secured by their ancestors in perpetuity – the effect of quarantining and capturing buffalo for slaughter is significant, adverse, and long-term in Yellowstone.

The cumulative effect of killing buffalo through Yellowstone National Park's capture for slaughter program and removing wild buffalo for quarantine to reach a desired condition of 3,000 buffalo is a significant loss and reduction from current conditions. These adverse effects will be felt in Yellowstone National Park and spill-out to habitat on National Forest lands where fewer wild buffalo will migrate.

The forced removal of American Indian tribes to create Yellowstone National Park should not be forgotten (Nabokov and Loendorf 2000).

When the U.S. Congress created Yellowstone National Park numerous federally recognized tribes suffered a severe loss of access to the lands, waters, minerals, plants and wildlife found therein (Greater Yellowstone Science Learning Center 2006 at 1).

It must be remembered that the U.S. Congress ratified treaties recognizing Yellowstone as the aboriginal territory of the Crow, Shoshones, and Bannocks (Greater Yellowstone Science Learning Center 2006 at 3). For thousands of years the Greater Yellowstone ecosystem was traditional territory, ancestral homelands, and shared buffalo hunting grounds for Crow, Eastern Shoshone, Salish and Kootenai, Shoshone-Bannock, Blackfeet, Nez Perce, Northern Arapaho, Northern Cheyenne, Gros Ventre, Flathead, and Upper Pend d'Oreille Tribes, among them. (YNP 2010 at 62-63).

Yellowstone National Park's decision must avoid adverse impacts to traditional cultural concerns raised by tribes including but not limited to the following ones the agency summarizes in reports:

- Respectful treatment of the bison, including allowing them to roam freely without fencing or disrespectful hazing.
- Vaccine contamination of meat for consumption and ceremonial

purposes.

• Preservation of wickiups, stone alignments, and other cultural features associated with bison. (YNP 2010 at 64).

Quarantining wild buffalo in combination with Yellowstone National Park's buffalo capture for slaughter program adversely impacts tribes with treaty rights to hunt buffalo on open and unclaimed public lands including National Forests in the region.

For tribes with cultural ties and treaty rights to wild buffalo remaining in Yellowstone, the cumulative effects of Yellowstone National Park removing wild buffalo to quarantine and continuing its capture for slaughter program are significant, adverse, and long-term.

Under Yellowstone National Park's quarantine program, tribes with cultural ties and treaty rights to the real buffalo are set against one another as evidenced in your assessment. (EA at 68–69, 97–98).

As proposed, Yellowstone National Park intends to use quarantine to reduce and diminish the wild buffalo population in Yellowstone, but potentially expand the number of buffalo in captivity, behind fences elsewhere under restrictive, costly, and long-term quarantine requirements imposed by the U.S. Department of Agriculture. (EA at 24–30).

While it promises captive buffalo for quarantine recipients, Yellowstone National Park will continue capturing buffalo for slaughter and relying upon both programs to meet its 'desired condition' of 3,000 buffalo. As long as Yellowstone National Park adheres to its desired condition, fewer wild buffalo in the population will exist to migrate to adjacent National Forest lands.

Furthermore, building evidence³ suggests that end of winter herd sizes of >2,500 northern and >1,500 central may be more appropriate for maintaining annual migrations where sufficient numbers of animals move beyond the northern park boundary to support state and tribal hunting outside of Yellowstone and removals that are large enough to offset growth. IBMP partners agreed to implement moderated culls in an attempt to avoid large annual fluctuations in the bison population, which occurred during the early IBMP period (Figure 2) and could threaten long-term preservation of Yellowstone bison⁴. These fluctuations resulted from large removals (e.g., >1,000 animals) which then caused a much smaller population to increase rapidly because population sizes were insufficient to cause enough bison to leave the park. (Geremia 2014 at 19).

In May 2012 and again in 2013, the Montana-Wyoming Tribal Leaders Council urged the governments involved to protect the buffalo in Yellowstone, to cease harassing the wild species on their calving grounds, and to recognize Treaty Obligations to American Indian Tribes to protect viable populations of migratory buffalo in their native habitat. (Montana-Wyoming Tribal Leaders Council 2012, 2013).

Both the state of Montana and the Confederated Salish and Kootenai Tribes have recognized the need to "adjust the conservation zones and increase state and treaty hunting opportunities." (Montana Fish, Wildlife & Parks 2010; Confederated Salish and Kootenai Tribes 2012).

In 2008, IBMP managers decided to implement moderated culls in an attempt to avoid large annual fluctuations in the bison population, which occurred during the early IBMP period and could threaten long-term preservation of Yellowstone bison, cause societal conflict, and reduce hunting opportunities outside the park. (Geremia 2014 at 1).

Yellowstone National Park's management actions and proposed action diminish American Indian treaties with the U.S. government and undermine traditional cultural ties to wild buffalo in Yellowstone. These significant, adverse, long-term impacts to buffalo cultures with treaty rights and cultural ties to the wild buffalo in Yellowstone cannot be mitigated without reconsidering your decision.

Quarantining wild buffalo adversely impacts herd social structure and modifies behavior in unnatural ways. In quarantine, wild buffalo are subject to conditioning, artificial selection, and continuing pressures of domestication. Quarantined buffalo are managed like livestock on electrified and fenced range units of limited acreage. Compare and contrast the free and wild migrations of buffalo as a wildlife species with the U.S. Department of Agriculture's costly, restrictive, and burdensome quarantine requirements.

Buffalo Field Campaign strenuously objects to Yellowstone National Park removing wild buffalo from Yellowstone for commercial purposes over the next half century. (EA at 32, 79).

The breadth of Yellowstone National Park's claimed authority to commercially exploit wild buffalo in the public trust is not acceptable and stands in conflict with National Park Service natural policies and the fundamental purposes for which the U.S. Congress created Yellowstone National Park.

Given that Yellowstone buffalo "are considered the only sustainable, wild population of plains bison due to their large numbers, high genetic diversity, and adaptive capabilities . . ." (EA at 81) Yellowstone National Park must take a hard look at the implications and adverse impacts of commercializing, domesticating, and privatizing wild buffalo belonging to the public trust and future generations.

Yellowstone National Park has simply not taken a hard look at what it is proposing to do: become a conduit for private, commercial operators to domesticate wild buffalo over the next 50 years. The National Environmental Policy Act requires your agency to take that look.

Under the voluntarily agreed to Interagency Bison Management Plan, Yellowstone National Park, along with your government counterparts, continues to operate under faulty assumptions and outdated information, in contravention of the agency's mandate to use the best available science to inform decision makers and the public.

The Interagency Bison Management Plan continues to operate on faulty assumptions and outdated information in contravention of the sound management practice of using the best available science in all decisions made.

The premise that wild buffalo are a brucellosis risk to managed livestock in the Yellowstone region – the entire basis for a long series of management actions – was never quantified by any agency involved in the Interagency Bison Management Plan. A belated quantitative risk assessment finally conducted in 2010 found the exposure risk from wild buffalo to cattle was miniscule 0.0-0.3% compared to wild elk to cattle 99.7-100% of the total risk. (Yellowstone Center for Resources 2010 at 40).

Time and again the agencies involved in the Interagency Bison Management Plan have ignored scientific briefings by biologists and failed to incorporate vital and important information necessary for excellent decision-making about wild buffalo and the ecosystem they are a part of. As evidenced throughout our comments, Yellowstone National Park's assessment is filled with defects and scientific uncertainties that do no permit informed or excellent decisions.

The U.S. Congress has provided the National Park Service a mandate to "continually improve the ability of the Service to provide state-of-the-art management, protection, and interpretation of, and research on, the resources" of the parks and enhance management decisions through the availability and use of "high quality science and information." 54 U.S.C. § 100701 *et. seq.*, (2014). Just as importantly, the U.S. Congress also mandated the National Park Service integrate scientific study results into management decisions.

"In each case in which an action undertaken by the Service may cause a significant adverse effect on a System unit resource, the administrative record shall reflect the manner in which System unit resource studies have been considered." 54 U.S.C. § 100706 (2014).

National Park Service Management Policies require Yellowstone National Park to "use scientifically valid resource information obtained through consultation with technical experts, literature review, inventory, monitoring, or research to evaluate the identified need for population management . . ." (NPS 2006 4.4.2.1 at 44).

As a lead principle behind this faulty and outdated plan, Yellowstone National Park must develop and present mitigation measures that provide habitat for wild buffalo in Yellowstone and move aggressively to adopt the best available science in all agency decisions.

In the programmatic decision to be made, Yellowstone National Park must rely upon the best available science to protect the wild buffalo in Yellowstone and the ecosystem upon which the migratory species depends.

Given that Yellowstone buffalo "are considered the only sustainable, wild population of plains bison due to their large numbers, high genetic diversity, and adaptive capabilities . . ." Yellowstone National Park's analysis and decision must use and integrate the best available science and include meaningful mitigation measures. (EA at 81). Mitigation also means avoiding the impact altogether by not taking a certain action. 40 C.F.R. 1508.02 (2015).

Yellowstone National Park must fund an independent population viability analysis to determine if cumulative impacts and cumulative management actions pose a threat to the long-term viability and diversity of wild buffalo in Yellowstone.

Studying buffalo population viability was identified as a high priority in the Interagency Bison Management Plan 16 years ago. (State of Montana and Yellowstone National Park 2000 FEIS Vol. 1 at 731). Yet 16 years later, this high priority study that provides a scientific baseline to ensure the wild buffalo population survives intact over the long-term remains unmet.

Given the scientific uncertainties in how management actions are cumulatively impacting wild buffalo, Buffalo Field Campaign requests Yellowstone National Park conduct a buffalo population viability analysis. Funding a buffalo population viability study by independent scientists will provide the public and decision makers an objective and rigorous look at a question Yellowstone National Park has avoided answering for far too long.

Traill (2010) and colleagues found that populations of endangered species are unlikely to persist in the face of global climate change and habitat loss unless they number around 5,000 mature individuals or more.

To ensure both long-term persistence and evolutionary potential, the required number of individuals in a population often greatly exceeds the targets proposed by conservation management.

The bottom line is that both the evolutionary and demographic constraints on populations require sizes to be at least 5,000 adult individuals. (Traill 2010 at 28, 29).

National Park Service Management Policies mandate that Yellowstone National Park "strive to protect the full range of genetic types (genotypes) of native plant and animal populations . . . by perpetuating natural evolutionary processes and minimizing human interference with evolving genetic diversity." (NPS 2006 4.4.1.2 at 43).

Yellowstone National Park's desired condition for wild buffalo is to limit the population to 3,000 individuals, not 3,000 adults. (EA at 50, 83).

The agency's assessment defines beneficial as a positive change in the condition or appearance of the resource or a change moving the resource toward a desired condition. (EA at 47). Thus, while removing wild buffalo to quarantine could be beneficial for recipients, benefits to recipients do not mitigate the significant, long-term, and adverse impacts Yellowstone buffalo experience under connected management actions in effect and proposed. (EA at 84).

While Yellowstone National Park touts the resiliency of buffalo to withstand its management actions in the last 16 years, resiliency does not translate into increasing genetic diversity or long-term viability. (EA at 49, 53).

The initial genetic modeling study by Pérez-Figueroa (2012 at 159-166) contained several limitations and qualifications identified by the authors including the lack of actual empirical data to determine retention of genetic diversity and thus ensure buffalo population viability over the long-term.

Pérez-Figueroa's assumptions, such as random culling, have been disproven by management actions and peer-reviewed science. Yet Yellowstone National Park continues to rely upon what is arguably not the best available science to give false assurances to the public that all is well. Below are some of the limitations, qualifications, and assumptions identified by Pérez-Figueroa (2012 at 159-166) that need to be updated for the public and decision makers in an Environmental Impact Statement:

- Base population of 2000 bison.
- Yellowstone bison is one deme (an interbreeding group within a larger population).
- "Little is known about male reproductive success in bison."
- DNA-based paternity analysis was not used.
- "Selection and mutation were not included in the model."
- "... actual levels of AD [allelic diversity] could be even higher than those obtained in our simulations..." (Mutation was not considered; selection could enhance genetic diversity in isolated ungulate populations).
- "Culling was random among all age classes or random within the age groups culled . . ."
- "Culling was conducted whenever population size exceeded a threshold value (4500 or 3500 depending on the scenario)."

- "Individuals were culled until the target population size (2500 or 3000) was reached."
- "We did not consider high variance in female reproductive success or heritability of fitness, both of which could increase the rate of loss of variation (heterozygosity) by perhaps 10-20% (Ryman et al., 1981)."

The best available science to inform excellent management decisions is lacking vital data and updated information about real world management actions that raise valid uncertainties about the rate of loss of buffalo genetic diversity and the threat to population viability over the long-term.

Based on these uncertainties, Yellowstone National Park's decision must not place the viability of the wild buffalo population at risk. The health, well-being, cultural traditions, and treaty rights of American Indian people can in part be restored through natural restoration of wild buffalo populations. Natural restoration must begin by protecting the wild buffalo population in Yellowstone. To do so, the states and public trust land management agencies must protect migration corridors for the wild species first and foremost in Yellowstone – public lands and corridors that buffalo continue to be denied under current management.

"By the standards of American culture, the tatanka is regarded as a mere commodity." Rosalie Little Thunder

Buffalo Field Campaign's late co-founder Rosalie Little Thunder, a member of the Sicangu Lakota Oyate, Burnt Thigh Band of the Little Thunder Tiospaye and the Rosebud Sioux Tribe, foresaw that some interests would seek wild buffalo in Yellowstone as a commercial commodity through the government's manipulative plans and proposals. She was among the cultural and traditional leaders who sought to reclaim an indigenous cultural connection to a sacred species, the wild buffalo in Yellowstone, and to have these ancestral relationships recognized and protected in the government's management plans:

The boogeyman of brucellosis raised by cattle ranchers to seize management authority over the public's wild buffalo no longer exists. Montana's cattle ranchers are being taken care of, but the public's one remaining population of wild buffalo is being massacred.

The deception that buffalo are a disease risk is not fair to the tribes or the American people. Since cattle infected buffalo in captivity on the Lamar Buffalo Ranch a century ago, there has been no case of wild buffalo transmitting brucellosis back to cattle. Our relative, the buffalo, has been found guilty while the evidence of their innocence has been buried.

Traditional people must guide our tribal leadership in a manner that reflects the integrity of our historical and cultural relationship with our relative, the buffalo. Montana politics has made a mockery of a keystone species. The capitalist culture has commodified the buffalo for shameless profit. The slaughter of the buffalo is not about a disease, really. It is about a commodity and profiting from that commodity. We,

as a species, must take into account how our beliefs and actions are affecting the future of all species. We must make every effort to acknowledge the need for a care-taking culture that respects and honors the role of a sacred species. (Little Thunder and Geist 2014).

Among buffalo people, including Little Thunder's band and tribe, a reciprocal responsibility is owed to the caretaker of the earth, the buffalo. She often said, "I only need to remind people of something they have not forgotten."

As advocates for the last wild buffalo to continuously occupy their habitat, the most significant and unique wild buffalo population in the United States, we call upon the President, U.S. Congress, American Indian tribes, the Governor of Montana, and the American people to remember our reciprocal responsibility to ensure buffalo remain wild and free for generations to come. Our first responsibility must begin with our will to lead a path toward the natural restoration of wild buffalo populations in Yellowstone.

Sincerely,

Daniel Brister, MS

Executive Director

Buffalo Field Campaign

Daniel Brute

Statutes

```
16 U.S.C. § 36 (2014).
```

42 U.S.C. § 4321 et seq., (2014).

54 U.S.C. § 100101 et seq., (2014).

54 U.S.C. § 100701 et seq., (2014).

Mont. Code Ann. § 81-2-120 (2015).

Rules

36 C.F.R. §§ 10.1–10.4 (2015).

40 C.F.R. §§ 1500–1508 (2015).

Sources

The Confederated Salish and Kootenai Tribes of the Flathead Nation. Comments concerning Treaty Rights and bison habitat on South Fork and Watkins Creek allotments, correspondence to the Hebgen Lake Ranger District, Gallatin National Forest. January 18, 2012.

Fort Peck Assiniboine and Sioux Tribes. Proposal for Disposition of Quarantine Facility Bison. May 9, 2014.

Geremia, Chris, Rick Wallen, and P.J. White, Yellowstone National Park, Population Dynamics and Adaptive Management of Yellowstone Bison August 5, 2014. Accessed at

http://www.ibmp.info/Library/OpsPlans/BisonPopulationDiseaseModel_Final_Winter2015.pdf.

Geremia, Chris, P.J. White, R.L. Wallen, F.G. Watson, J.J. Treanor, J. Borkowski, and R. L. Crabtree. 2011. Predicting bison migration out of Yellowstone National Park using Bayesian models. PloS one, 6(2), e16848.

Greater Yellowstone Science Learning Center. Yellowstone National Park Ethnography Overview, 2006.

Halbert, Natalie D., Peter J.P. Gogan, Philip W. Hedrick, Jacquelyn M. Wahl, James N. Derr. Genetic Population Substructure in Bison at Yellowstone National Park. Journal of Heredity Advance Access published February 8, 2012.

Indianz.com, Fort Belknap Tribes dispute reported cause for deaths of bison, September 10, 2015. Accessed at http://www.indianz.com/News/2015/018873.asp.

Intergovernmental-Intertribal Information Exchange Meeting for Yellowstone National Park. Transcript of the Proceedings, June 5, 2008.

Kubinak, J. L., D. H. Cornwall, K. J. Hasenkrug, F. R. Adler, and W. K. Potts. 2014. Serial infection of diverse host (*Mus*) genotypes rapidly impedes pathogen fitness and virulence. Proceedings of the Royal Society B 282: 20141568.

LaDuke, Winona. buffalo nation. Sierra May/June 2000.

Little Thunder, Rosalie. Rosalie Little Thunder Declaration of Standing and Exhibit, Western Watersheds Project v. Salazar, June 2010.

Little Thunder, Rosalie, and Darrell Geist. An Open Letter to Tribal Leaders and the American People, April 29, 2014. Accessed at http://www.buffalofieldcampaign.org/media/press1314/pressreleases1314/0429 14.html.

Looking Horse, Chief Arvol. Declaration: To Save the Buffalo Nation, April 2008.

Meagher, Margaret. M. The bison of Yellowstone National Park. Washington, D.C.: Government Printing Office, 1973. Scientific Monographs 1, National Park Service.

Meagher, M. and Margaret E. Meyer. 1994. On the Origin of Brucellosis in Bison of Yellowstone National Park: A Review. Conservation Biology 8(3): 645-653.

McNeel, Jack. Fort Peck Tragedy: Wildfire Claims 10 Bison. Indian Country Today Media Network, September 25, 2012. Accessed at http://indiancountrytodaymedianetwork.com/2012/09/25/fort-peck-tragedy-wildfire-claims-10-bison-135612.

State of Montana and Yellowstone National Park. Record of Decision, Final Environmental Impact Statement and Bison Management Plan for the State of Montana and Yellowstone National Park, December 20, 2000.

State of Montana and Yellowstone National Park. Interagency Bison Management Plan, Final Environmental Impact Statement, Vol. I-II, August 2000.

Montana Fish, Wildlife & Parks and the Assiniboine and Sioux Tribes of the Fort Peck Reservation. Memorandum of Understanding, Quarantine Feasibility Study Bison, March 16, 2012.

Montana Fish, Wildlife & Parks, Montana Dept. of Livestock, and Turner Enterprises Inc. Memorandum of Understanding, February 16, 2010.

Montana Fish, Wildlife & Parks. Watkins Creek and South Fork AM Plan Revision Scoping Period, Request for Comments, January 4, 2010.

Montana Veterinary Diagnostic Laboratory. Bison death Final Report, September 9, 2015.

Montana-Wyoming Tribal Leaders Council. A Resolution urging the protection of the wild buffalo currently in or near Yellowstone Park and to cease hazing, allow migratory buffalo to return to summer ranges, and recognize the trust and treaty obligations to American Indian Nations for viable populations of migratory buffalo in their native habitat. Transmittal letter to Governor Brian D. Schweitzer, May 1, 2012.

Montana-Wyoming Tribal Leaders Council. A Resolution Urging the Governor of Montana, the Montana Legislature, U.S. Department of the Interior, Yellowstone National Park, U.S. Department of Agriculture, U.S. Forest Service, to Recognize and Honor its' Trust Responsibility and Treaty Obligations to American Indian Nations in Providing for Viable Populations of Migratory Buffalo in the Wildlife Species' Native Habitat, March 23, 2013.

Nabokov, Peter and Lawrence Loendorf. American Indians and Yellowstone National Park, A Documentary Overview, 2000.

Pérez-Figueroa, Andrés, Rick L. Wallen, Tiago Antao, Jason A. Coombs, Michael K. Schwartz, P.J. White, Gordon 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.

Shoshone-Bannock Tribes, Fort Hall Business Council. RESOLUTION, March 14, 2013.

Tessaro, S. V. 1989. Review of the diseases, parasites and miscellaneous pathological conditions of North American bison. The Canadian Veterinary Journal 30.5: 416-422.

Traill, Lochran W., Barry W. Brook, Richard R. Frankham, Corey J.A. Bradshaw. 2010. Pragmatic population viability targets in a rapidly changing world. Biological Conservation 143: 28–34.

United States. Cong. Senate. Subcommittee of the Committee on Appropriations. Fourth Session on H.R. 13559 A bill making Appropriations for the Department of the Interior for the Fiscal Year ending June 30, 1924, and for other Purposes. 2 Jan. 1923. 67th Cong. 4th sess. Washington: Government Printing Office, 1923.

U.S. Department of the Interior, National Park Service, Management Policies 2006. U.S. Government Printing Office, Washington D.C., ISBN 0-16-076874-8.

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

Yellowstone Center for Resources. 2010. A Risk Analysis of *Brucella abortus* Transmission Among Bison, Elk, and Cattle in the Northern Greater Yellowstone Area. Technical Report for the National Park Service, October 2010. Mammoth Hot Springs, Wyoming, YCR-2012-02.

Yellowstone National Park. Scientific Research and Collecting Permit Bison Quarantine Feasibility Study, December 18, 2006.

Yellowstone National Park. Brucellosis Remote Vaccination Program for Bison in Yellowstone National Park, Draft Environmental Impact Statement, March 24, 2010.

Yellowstone National Park. The Use of Quarantine to Identify Brucellosis-free Yellowstone Bison for relocation Elsewhere, Environmental Assessment (EA), January 14, 2016.

Zuckerman, Laura. U.S. advances plan to reintroduce wild bison herds outside Yellowstone, Reuters, July 30, 2014. Accessed at http://www.reuters.com/article/2014/07/31/us-usa-bison-yellowstone-idUSKBN0G001E20140731.