May 28, 2016

Mary Erickson, Forest Supervisor
Custer Gallatin National Forest
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Dear Supervisor Mary Erickson,

Thank you for the opportunity to join with the public in the Custer Gallatin's evaluation of relevant information including existing ecological, economic, and social conditions and trends that will help inform the need to change the 1987 Forest Plan to recognize and provide habitat for migratory buffalo on America's National Forests.

The Custer Gallatin's assessment must take into account the best available science, "local information, national perspectives, and native knowledge" to fulfill the U.S. Congress' goal of protecting watersheds, wildlife, and plant and animal diversity. 16 U.S.C. § 1604 (g)(3)(A)(B).

The National Forest Management Act requires the Custer Gallatin National Forest to "provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives." 16 U.S.C. § 1604(g)(3)(B). Yet, migratory buffalo are not even recognized in the 1987 Forest Plan. Consistent with the National Forest Management Act's diversity mandate, the best available information on local knowledge of migratory buffalo provided to the Custer Gallatin for assessment should lead to guidelines and standards protecting this unique indigenous species on America's National Forests.

Buffalo Field Campaign requests the Custer Gallatin develop and specify guidelines and standards in the agency's revised forest plan to reflect the importance and contributions of this keystone species on America's National Forests. Accordingly, Buffalo Field Campaign submits the following science and best available information to the Custer Gallatin for assessment in the agency's forest plan revision.

Pinpoint citations of findings and excerpts of the information are provided along with a bibliography of sources. An electronic version of each source is submitted for the agency's review. A web address is provided for online sources.

As a native species that evolved with fire adapted ecosystems, and is recognized by scientists as a driver of biological diversity, grassland and watershed health, migratory buffalo are well suited to indicate whether desired conditions on the Custer Gallatin are declining or improving based on the natural distribution and migrations of this keystone species.

Buffalo Field Campaign requests the Custer Gallatin assess using migratory buffalo to inform the agency's monitoring program for ecological integrity, animal and plant diversity, watershed restoration, and fire adapted ecosystems. We urge the Custer Gallatin to use the best available science and information to provide an enduring place for migratory buffalo on America's National Forests.

Thank you for your time and consideration in assessing the best available information, local knowledge, and science submitted in support of recognizing and providing habitat for migratory buffalo to persist on America's National Forests.

Sincerely,

Darrell Geist

Darrell Geist, habitat coordinator
Buffalo Field Campaign

Contributions of Migratory Buffalo to Ecological Sustainability and Integrity on America's National Forests

Montana Fish, Wildlife & Parks biologists have found the status of wild buffalo in Montana in "greatest conservation need" and "at risk because of very limited and/or potentially declining population numbers, range and/or habitat, making it vulnerable to global extinction or extirpation in the state" (Adams and Dood 2011 at 32).

Scientists estimate buffalo as a wildlife species occupy less than 1% of their original range (Sanderson 2008 at 252-253).

In Montana, migratory buffalo are permitted to occupy no more than 0.4% of the land in the state (Montana FWP and DOL 2013 Draft EA at 107; see also Montana Governor Bullock's 2015 Decision Notice).

"Today, the plains bison is for all practical purposes ecologically extinct within its original range." (Freese (2007 at 175).

In 2008, the International Union for Conservation of Nature (2008) Red Listed the American bison as near threatened.

Buffalo as a wildlife species have already experienced severe bottlenecks and near extinction and the species' genetic integrity has been permanently compromised by hybridization with cattle promoted by ranchers in the late 1800s and early 1900s (Hedrick 2009 at 411).

The Wildlife Society (2000) warns that current management of buffalo is leading towards domestication "that threatens their wild character and limits important natural selection processes."

Buffalo Field Campaign and Western Watersheds Project (2014) petitioned to list Yellowstone bison under the Endangered Species Act based in part on the lack of regulatory mechanisms to provide for the natural recovery of the wild species (incorporated by reference).

" . . . bison appear to have been living everywhere in Greater Yellowstone where habitats were suitable," Schullery and Whittlesey (2006 at 136).

"Yellowstone bison historically occupied approximately 20,000 km^2 in the headwaters of the Yellowstone and Madison rivers in what is now referred to as the northern

Greater Yellowstone Area." Plumb (2009 at 2377). Buffalo historically occupied roughly 12,800,000 acres in the Greater Yellowstone ecosystem.

Boyd (2003 at iii) found that greater than 95% of the 500,000 buffalo in North America today reside in private ownership as domestic livestock.

In the late 1800's and early 1900's, forced cattle-buffalo breeding experiments by ranchers to commercially exploit fitness traits of wild buffalo led to widespread introgression of cattle genes in private, public and tribal herds (Polziehn 1995; Ward 1999; Halbert 2003; Halbert and Derr 2007; Hedrick 2009, 2010, 2011; Schnabel 2011).

A study by Douglas (2011 at 172) suggests that cattle genes in buffalo will adversely affect mitochondrial health and function, and the overall fitness of buffalo. Buffalo genetics researcher James Derr (2009) has issued similar warnings.

The extensive prevalence of cattle genes in buffalo populations (Polziehn 1995; Ward 1999; Halbert 2003; Halbert and Derr 2007; Hedrick 2009, 2010, 2011), habitat fragmentation, loss of natural habitats and isolated populations, limited range and population sizes (Boyd 2003; Boyd and Gates 2006), artificial selection, intensive management, unnatural confinement to fenced ranges, absence of predators, introduction of non-native disease (Freese 2007) are some of the risk factors of ecological extinction that threaten the survival of American bison as a wildlife species.

Genetic testing of buffalo suggests that only buffalo descended from Yellowstone have no cattle ancestry (Polziehn 1995; Ward 1999; Halbert 2003; Halbert and Derr 2007; Schnabel 2011).

The Henry Mountains buffalo was founded with buffalo solely descended from Yellowstone (Boyd 2003 at 149).

Cattles genes have been found in American bison previously thought to have no cattle ancestry based on prior genetic testing including Wind Cave National Park, Grand Teton National Park, and Sullys Hill National Game Preserve (Dratch 2011).

A report by scientists Dratch and Gogan (2010) suggests that only Yellowstone buffalo retain their wildlife identity. (The report did not survey buffalo in the Henry Mountains).

"The Bison of Yellowstone National Park are unique among bison herds in the United States, being descendants, in part, of the only continuously wild herd in this country." (Meagher 1973 at 1).

"Yellowstone National Park is the only area in the lower 48 States where bison have existed in a wild state since prehistoric times." (Gates 2005 at vi).

"No other plains bison population is as important to survival of the species as the Yellowstone bison. Yellowstone bison are the only surviving natural occurrence of wild bison that was never completely extirpated from its historic and ecological range. The Yellowstone bison are the only major conservation herd in the United States that shows no evidence of cattle-gene introgression. The Yellowstone bison are the only remnant population that has remained in a wild state since prehistoric times and, therefore, is important to the management of bison genetic diversity. The extirpation of the Yellowstone bison would represent the complete loss of genetically-intact, wild bison from the last stronghold of their historic and ecological range, loss of unique ecological adaptations to the local environment, and the loss of other valuable and unique genetic qualities" (Buffalo Field Campaign and Western Watersheds Project 2014).

The Custer Gallatin needs to assess and consider that the habitats available on the National Forests play an important role in meeting the nutritional needs of migratory buffalo and the wild species' ability to adapt and persist in an ecosystem experiencing climate disruption (77 Fed. Reg. 21162, 21194 (April 9, 2012)).

At the same time, it is long past due for the Custer Gallatin to reconsider its role in agreeing to Interagency Bison Management Plan provisions that have resulted in numerous government hazing and capture operations on the National Forest, including permitting the Montana Dept. of Livestock to capture buffalo on Horse Butte. These management actions disrupt the natural occurrence of migratory buffalo on the National Forest, displace herd members and induce stress, injuries and inflict other harms often overlooked by managers and decision makers.

Evaluate and assess the negative impacts from repeated government-led capture and slaughter operations that have "differentially affected breeding herds," altered sex and age structures, and disproportionately removed female and calf cohorts" (White 2011 at 1322). All of these negative consequences were evidenced in a report to the IBMP agencies:

> "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).

Too often the government ignores the best available science that is reported to it by its own scientists. The Custer Gallatin's assessment must include this indigenous species and not overlook its importance to the ecological diversity and integrity of the National Forest, and the many values placed on having wild buffalo on the land. (77 Fed. Reg. 21162, 21174–21175 (April 9, 2012)).

The American bison is a land-intensive, nomadic species that once roamed over great distances (Boyd and Gates 2006 at 16).

Migration is an indispensable survival behavior for wild buffalo in the Yellowstone ecosystem.

The Forest Service needs to assess and monitor the habitats selected by each distinct breeding group or subpopulation of migratory buffalo on the National Forest. Periodic buffalo migrations continue to occur, in particular, in the Gardiner and Hebgen Lake basins, but also into the Targhee in Idaho and Shoshone in Wyoming (Buffalo Field Campaign wildlife sightings database; Buffalo Field Campaign and Western Watersheds Project 2014).

Michael J. O'Connor, Ph.D. has summarized several unique and distinct ecological adaptations of migration in the buffalo population (Buffalo Field Campaign and Western Watersheds Project 2014 at 16-19, 24, 26):

> "The Yellowstone bison are the only free-roaming, wild population known to have continuously ranged across high altitudinal gradients, which represents the conservation of a unique ecological adaptation for American bison."
>
> "Yellowstone National Park and contiguous lands to the north is the only area within the Greater Yellowstone Ecosystem where natural patterns of population structure and gene flow in plains bison can be observed (Sanderson et al., 2008)."

“The central range bison utilize a significant proportion of geothermal area within their winter ranges (from 5% in Pelican Valley to 14% in Mary Mountain), and movement corridors (5.2% to 9.2%) (Gates et al., 2005). The inclusion of geothermal areas as a significant portion of habitat use represents an unusual ecological adaptation unique to Yellowstone bison.”

“The Yellowstone bison uniquely includes two genetically distinct subpopulations that show longitudinal differences in migration patterns (Halbert et al., 2012 p. 9).”

“Bison typically follow the path of least resistance to access seasonal home ranges. Five primary winter range movement corridors for Yellowstone bison have been identified. The Gardiner Basin to Lamar Valley is located along the Yellowstone River and the road to Cooke City within the northern range. The Mirror Plateau corridor occurs over a network of historic bison travel routes that extend from the southeastern Lamar Valley to northeastern Pelican Valley. Bison from the central range access the northern range via the corridor that extends from the Firehole to Mammoth. Two interior central ranges are connected by the Pelican Valley to [the] Hayden Valley corridor. Historic evidence suggests that bison accessed winter ranges west of Yellowstone National Park along the Madison River (Meagher, 1973 p. 23). Central range bison also access the winter ranges located west of park boundaries via the corridor that extends from the Firehole to the town of West Yellowstone and Hebgen Lake. Interestingly, the central range bison utilize a significant proportion of geothermal area within their winter ranges (from 5% in Pelican Valley to 14% in Mary Mountain), and movement corridors (5.2% to 9.2%) (Gates et al., 2005). The inclusion of geothermal areas as a significant portion of habitat use represents an unusual ecological adaptation unique to Yellowstone bison.

Approximately, one-third (3,175 km^2) of the Yellowstone National Park interior currently serves as primary bison habitat (Plumb et al., 2009). A significant portion of crucial winter range for the Yellowstone bison is located west and north outside park boundaries (Gates et al., 2005; Plumb et al., 2009). Yellowstone bison frequently migrate to these ranges when snowpack within the park’s interior increases the energetic costs of foraging, often before either breeding herd has exceeded its food-limited carrying capacity (Plumb et al., 2009). Archeological evidence and historic accounts identify areas immediately adjacent to Yellowstone National Park as essential winter ranges for the Yellowstone bison population (Schullery et al., 1998; Schullery and Whittlesey, 2006; Cannon, 2008; Plumb et al., 2009). Dispersal of Yellowstone bison to seasonal ranges outside the park represents an attempt to naturally re-colonize former ranges (Schullery et al., 1998; Schullery and Whittlesey, 2006; Cannon, 2008; Plumb et al., 2009). However, access to these ranges is now precluded by brucellosis risk management operations which involve hazing, shooting, capture, and slaughter of Yellowstone bison, which results in a loss of critical range and creates a dispersal sink (Plumb et al., 2009). These ranges are threatened by habitat destruction, disturbance and degradation.

Meagher (1989) considered the unusually severe winter of 1975-1976 to have provided the initial impetus that led to the westward movements or stress dispersal of bison on the northern winter range and subsequent regular movement of larger numbers of bison out of the Park in the mid 1970's. This brought the Yellowstone bison back to an important portion of their natural, historic range. However, it also initiated an unprecedented period of excessive management that continues to today. As Lancaster (2005 p. 451) states, "This is the classic example of the boundaries of an ecosystem not matching artificially human created borders. The bison's ecosystem overlaps and crosses the artificially created jurisdictional boundaries between government entities."

Yellowstone bison have been observed to assemble in matrilineal groups or family units that may include several generations of related individuals. Halbert (2003 p. 150) found several cases of dams with multiple offspring of different ages, including a multigenerational matriarchal group which spanned 4 generations ranging from a 7 year-old female to a male calf.

Yellowstone bison have historically used winter ranges outside park boundaries even when population estimates were much lower than those currently observed. In the winter of 1893-94, poachers slaughtered about 116 bison that had shifted across the west boundary of Yellowstone National Park (McHugh, 1975 p. 385). In 1943, the Yellowstone bison population had been reduced to around 747 individuals following the removal of several hundred animals within the previous year (USDI/USDA, 2000; Gates et al., 2005). Harsh winter conditions resulted in at least 160 migrating to winter ranges north of the park boundary (Gates et al., 2005 pp. 84-85; Franke, 2005 p. 83). Several bison travelled as far as 50-80 km from the park that winter (Franke, 2005 p. 84). Despite two years of drastic culls to reduce bison numbers on the northern range, 68 of the 313 bison in the Lamar herd moved north of the park boundary in 1948 (Franke, 2005 p. 84). In 1953, when the Yellowstone bison population had rebounded to about 1,477 animals, a group of bison wandered across the north boundary (Franke, 2005 p. 90). Over 130 bison were removed from the population that year (USDI/USDA, 2000; Franke, 2005 pp. 90-91). These frequent and sometimes long-range emigrations north of park boundaries were seen as evidence that the Yellowstone bison's range probably extended at least to Livingston (Franke, 2005 p. 84). Results of modeling of bison migration to low elevation areas out of Yellowstone National Park using a hierarchal Bayesian framework found that migration differed at the herd scale (Geremia et al., 2011). Migration beyond the northern park boundary was affected by herd size, accumulated snow, and aboveground dried biomass. Migration beyond the western park boundary was less influenced by these predictors. Their simulation results suggest that future large-scale, recurrent migrations and numbers exiting the park boundaries will be much greater than the predictions underlying the Interagency Bison Management Plan (Geremia et al., 2011 page 7).

Bison movements and spatial distribution of travel corridors are influenced by topographic and habitat characteristics such as slope, landscape roughness, access to forage, distance to streams, and forest cover (Clow, 1995; Bruggeman et al., 2007). Streams and river bottoms are the most influential features affecting bison winter travel routes, particularly in response to variable climactic conditions (Clow, 1995; Bruggeman et al., 2007). In fact, many plains tribes who subsisted on bison intimately understood the influence of streams and river bottoms on bison travel routes, and used this insight for efficiently hunting them (Clow, 1995; Barsh and Marlor, 2003). For example, the Blackfeet tribe practiced selective harvest of beaver to maintain adequate water supply along traditional bison travel corridors and insure availability of bison for subsistence hunting (Barsh and Marlor, 2003). A significant proportion of travel corridors used by Yellowstone bison to access winter ranges west and north of park boundaries follow river bottoms and streambeds (Gates et al., 2005; Plumb et al., 2009). These observations provide evidence that innate ecological behavior is the primary motivation which drives the

Yellowstone bison to emigrate to winter range outside park boundaries and attempt to re-colonize historic ranges.

In addition to regular use of winter range in Montana north and west of Yellowstone National Park, substantial herds (50-100 bison) frequently move into the Silver Gate - Cooke City area of Montana northeast of the Park boundary.[4] Yellowstone bison also move into historic range near Henry's Lake in Idaho where they are usually shot by the Idaho Department of Agriculture Division of Animal Industries which is responsible for managing bison in the state.[5] According to Division of Animal Industries records some 10 bison bulls were killed between 2004 and 2012. Yellowstone bison also move out east and southeast of the Park boundaries into the Absaroka Bison Management Area (Hunt Area 1) of Wyoming (WGFD, 2008). The WGFD estimates some 5-20 bison used the area each year for the years 1988-2007 (WGFD, 2008 p. 12)."

"On rare occasions, bison from Yellowstone National Park have been known to move south and join the Jackson bison herd in the Grand Teton National Park (Gates et al. 2005, p. 93). In a footnote, they report, "In winter 1995/96, 3 bulls from the Hayden Valley and wintered in the vicinity of Polecat Creek; they were captured and radio collared. For several years after that they returned each year to Hayden Valley during the rut then back to the Jackson Lake area to spend the winter. During the harsh winter of 1996-97 a mixed group of 3 cows and 3 juveniles followed the road from YNP through the south gate and spent winter in the same area as the 3 bulls. Then they moved south and joined the Jackson herd; this mixed group did not return to YNP. Source: Interview with Steven Cain, 11 August 2004." There have been other reports of isolated bulls moving south from Yellowstone.[6]"

While the Interagency Bison Management Plan, which the National Forest is a signatory to, has focused much of its taxpayer-financed actions on "disease risk management" it has neglected studying and educating visitors about the keystone ecological roles migratory buffalo provide the Yellowstone ecosystem.

A brief review of scientific research identified in the Interagency Bison Management Plan analysis (State of Montana and Yellowstone National Park 2000 FEIS Vol. 1 Appendix D) finds over fifty disease-related study needs and not one study on the keystone contributions of buffalo in sustaining the Yellowstone ecosystem. The government's one-sided and singular focus on disease has neglected important ecological work on how buffalo beneficially influence biodiversity and watershed health where the wild species is permitted to freely roam. Nonetheless, the Custer Gallatin needs to assess the ecological contributions wild buffalo provide the ecosystem.

Buffalo shape and influence the diversity of grassland ecosystems through shared behaviors (e.g. rubbing, horning, wallowing) in large migratory herds (Butler 2006 at 451-452).

Buffalo grazing can reverse the loss of native grassland species and the disruption of grassland ecosystem structure and function caused by their extirpation (Collins 1998 at 745).

Buffalo enrich the abundance and diversity of species through keystone ecological roles (Askins 2007 at 1; Fallon 2009 at 1-4; Gerlanc and Kaufman 2005 at 254-255, 258-260; Hobbs 1996 at 695; Knapp 1999 at 39-50; Polley and Wallace 1986 at 493) and provide sustenance for predators, scavengers and endangered species (Green 1997 at 1051-1053; Mattson and Merrill 2002 at 1123).

Assess and consider the scientific studies that have found substantial evidence of buffalo's positive contributions to biological diversity and the ecosystem:

> "Heavy grazing by prairie-dogs or bison created a low 'grazing lawn' that is the preferred habitat for many grassland bird species that are restricted to the shortgrass prairie and desert grasslands" (Askins 2007 at 1).
>
> " . . . grazers influence the distribution of soil N properties at every spatial scale from individual plants to landscapes" (Augustine and Frank 2001 at 3149).
>
> "The influence that over 100 million bison wallows in the tallgrass prairie, and perhaps an equal combined number in the mid- and shortgrass prairies, had on surface hydrology and runoff can only be considered to have been regionally substantial and locally enormous" (Butler 2006 at 452).
>
> " . . . loss of species diversity due to frequent burning was reversed by bison, a keystone herbivore in North American grasslands" (Collins 1998 at 745).
>
> " . . . bison, in conjunction with other factors such as fire and drought,

significantly limited the historical distribution of woody vegetation in the Great Plains" (Coppedge and Shaw 1997 at 195).

"Bison social groups had different grazing patterns" (Coppedge and Shaw 1998 at 263).

" . . . bison urine deposition leads to patches of vegetation having much higher total aboveground plant biomass, root mass and N concentrations" (Day and Detling 1990 at 171).

"Bison have a unique ecology that has profound effects on mixed-prairie ecosystems. Their grazing style provides spatial and temporal heterogeneity which benefits plant and animal species diversity. Bison also increase overall plant productivity by enhancing nutrient cycling and nitrogen availability. Their distinctive behavioral trait of wallowing further creates spatial patchiness of resource availability and boosts plant species composition. Finally, predators and scavengers benefit from consuming bison while the remains confer rich nutrients to prairie soils and plant communities" (Fallon 2009 at 1-4).

" . . . grazers probably increased NO^3 availability to plants . . . ungulates additionally may promote N availability to plants . . . Both would have positive effects on the primary productivity of this ecosystem" (Frank and Evans 1997 at 2245-2246).

"The decline in grazers probably had indirect cascading effects on trophic processes that should be expected to reverberate in this grazing-dominated ecosystem until herbivore populations recover" (Frank and McNaughton 1992 at 2056).

"Grazers were a particularly important component of the N budget of this grassland. Estimated rates of N flow from ungulates to the soil ranged … approximately 4.5 times the amount of N in senescent plants" (Frank 1994 at 163).

"Ungulates increase aboveground production of grasslands in Yellowstone by stimulating grazed plants to allocate resources aboveground and by facilitating the rate of net nitrogen (N) mineralization and the availability of N to plants. Moreover, the migration of ungulates from winter to summer range in Yellowstone is associated with animals following the spatio-temporal pattern of nutrient-rich forage across the ecosystem. This is likely critical in the positive feedback of herbivores on their forage by providing grazed plants extended periods to recover while soil conditions are suitable for plant growth" (Frank 1998 at 410).

" . . . a second hypothesis proposes that bison can de-stabilize the vegetated edges of dunes precipitating a geomorphological cascade impacting biodiversity" (Gates 2011 at 11).

"Western Chorus Frogs, Pseudacris triseriata, in tallgrass prairie breed in ephemeral aquatic habitats including intermittent streams and bison wallows" (Gerlanc and Kaufmann 2005 at 254).

" . . . ungulates are important agents of change in ecosystems, acting to create spatial heterogeneity, modulate successional processes, and control the switching of ecosystems between alternative states" (Hobbs 1996 at 695).

" . . . I found ~45% more grasshopper species and significantly increased values of Shannon H' diversity at sites with bison grazing" (Joern 2005 at 861).

" . . . unique spatial and temporal complexities of bison grazing activities . . . are critical to the successful maintenance of biotic diversity in this grassland" (Knapp 1999 at 48).

"The isolation of several viable AMF [arbuscular mycorrhizal fungi] taxa from bison feces indicates that wide-ranging bison could be a vector for at least some RFLP types among grasslands within YNP" (Lekberg 2011 at 1292).

"The heterogeneous species assemblages of wallows enhance grassland species diversity primarily because wallows increase habitat diversity" (Polley and Wallace 1986 at 493).

" . . . bison are potentially important dispersers of forbs as well as graminoids. A high abundance and wide diversity of seeds were found in both bison hair and dung. The great majority of seeds found undamaged in bison dung were small seeds, which agrees with the 'foliage is the fruit' hypothesis. Dispersal by both epizoochory and endozoochory may play an important role in life history of many species in tallgrass prairie landscapes" (Rosas 2008 at 769).

"In combination, urine patches plus grazing produced unique large-scale patch structure compared to urine patches in ungrazed prairie. The most important impact of urine patches on community structure resulted from preferential grazing of urine patches by bison, which increases both the size and severity of the grazed area" (Steinauer and Collins 2001 at 1319).

Contributions of Migratory Buffalo to Social and Economic Sustainability in Communities Surrounding America's National Forests

We note the Montana Office of Tourism's continuing use of buffalo as an icon to lure people into visiting Montana by placing statues of a bear, a moose, and a buffalo in the Chicago metropolitan area (Dudek, Chicago Sun Times 2015). "We want people to be able to see and feel what Montana might be like and encourage them to come out and visit and see these animals for real," Montana Office of Tourism spokeswoman Donnie Sexton said. "People see them and they're like, 'Whoa! Hey, what the heck!'"

Americans and people worldwide are entitled to see and experience the wild buffalo on the National Forest the state of Montana touts in its Office of Tourism advertisements. The opportunity to experience seeing buffalo in their original habitat should not be restricted to Yellowstone National Park in the state of Wyoming, it must include buffalo on the National Forest System in Montana, Idaho, and Wyoming.

The transition to a forest plan that recognizes and manages for migratory buffalo on the National Forest aligns with the economic and social values of Yellowstone's gateway communities.

Montanans strongly support restoring wild buffalo in a state that is blessed with an abundance of public lands.

More than three in four Montanans support restoring wild buffalo on public lands (Moore Information 2011).

More than seven in ten want to see wild buffalo managed like wildlife not livestock (Tulchin Research 2014). Just as many Montanans want management decisions to be made by biologists and scientists rather than politicians (Tulchin Research 2014).

The pro-wild buffalo sentiments of Montanans are also found locally in the very communities that live and make their livelihoods here (HOBNOB 2004; Galanis Yellowstone Ranch Preserve 2007; Klyap Dome Mountain Ranch 2008; Earthjustice 2008; Fred Baker 2011; Scott Hoeninghausen 2011).

Despite Montana Governor Steve Bullock's directive (2014), private landowners living in gateway communities who support the presence of wild buffalo continue to be placed in conflict with livestock inspectors who trespass on their properties to remove buffalo, a native, migratory species (Buffalo Field Campaign video).

There are a substantial number of people who live in the buffalo's habitat and welcome the wild species on their private lands (HOBNOB 2004; Galanis Yellowstone Ranch Preserve 2007; Klyap Dome Mountain Ranch 2008; Earthjustice 2008; Fred Baker 2011; Scott Hoeninghausen 2011). As it stands, these landowners are subject to intrusive government "hazing" operations led by the state of Montana that are an ongoing source of contention and community strife (HOBNOB 2004; Buffalo Field Campaign 2007 video).

Landowners who welcome buffalo on their private land and enjoy buffalo being there have asked the state of Montana to stop trespassing upon their property to remove the migratory species (HOBNOB 2004). Landowners wonder why they have no property rights related to the presence of migratory buffalo, and why their land is trespassed upon by government agents including livestock inspectors to harm the species when no livestock are present, or ever will be (Galanis Yellowstone Ranch Preserve 2007).

The Custer Gallatin is well aware of long-standing local support from residents petitioning the government to adapt to changed circumstances and local sentiment that permits migratory buffalo to be on private lands where they are welcome and no cattle will be grazed (Earthjustice 2008; HOBNOB 2004). The revision of the forest plan provides an opportunity for the Custer Gallatin to take these local concerns and attitudes into account and to include them in the plan.

Several large landowners situated in critical wildlife habitat have repeatedly asked the government to respect the buffalo upon their private property and to not trespass as the landowners have expressly forbidden the government and its' agents from harming the buffalo by forcibly removing the migratory species from their land:

> "Under this new Ownership cattle will no longer be allowed to graze on the ranch and we are declaring our private property a 'Bison Free Zone' and a wildlife preserve. Please be advised any attempt by any government agency, (local, state, or federal) to enter upon our lands without the expressed written consent of the Owner will be construed as TRESPASSING, and be subject to prosecution to the full extent of the law.
>
> The current policy of hazing is inhumane, senseless, a waste of taxpayer dollars, and an embarrassment to the state of Montana. We trust you will respect our private property rights" (Galanis Yellowstone Ranch Preserve 2007).
>
> "I wanted to let you all know that we would love to see the Bison migrate

> to Dome Mountain Ranch and will NOT permit ANYONE from DOL to enter our property.
>
> Last year, as you may recall, several bulls nearly made it to freedom had it not been for a small parcel of public land owned by the Dewart family and managed by Benny Cunningham who consistently assists with hazing efforts. We would love to see free roaming bison on the ranch. Count me in on your side" (Klyap Dome Mountain Ranch 2008).

The Custer Gallatin should not overlook local residents (Fred Baker 2011; Scott Hoeninghausen 2011) who not only support wild migratory buffalo but also live and enjoy living in Montana for this reason, including cattle ranchers (Flandro, Bozeman Chronicle 2011).

Assess "adapting" the best available science as reflected in the environmentally preferred alternative identified in the state of Montana's and Yellowstone National Park's Bison Management Plan in 2000:

> "As a summary, the public was overwhelmingly in favor of more natural management of the bison herd, with minimal use of actions they felt more appropriate for livestock such as capture, test, slaughter, vaccinating, shooting, corralling, hazing, etc. They also indicated extremely strong support for the management and/or restriction of cattle rather than bison given a choice between the two. The public also supported the acquisition of additional land for bison winter range and/or the use of all public lands in the analysis area for a wild and free-roaming herd of bison. A large number of commenters also expressed opposition to lethal controls, and in particular the slaughter of bison" (State of Montana and Yellowstone National Park 2000 ROD at 21).

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." This deeply rooted treaty right and indigenous cultural value placed on migratory buffalo cannot be met without the habitats available on the National Forest.

The Montana-Wyoming Tribal Leaders Council (2013) has stated the state of Montana's assertion of jurisdiction over migratory buffalo (MCA 81-2-120) creates a "reciprocal responsibility to legally consult and cooperate with American Indian Nations to preserve the wild species for future generations in perpetuity."

The Montana-Wyoming Tribal Leaders Council (2013) has also stated that "Montana's assertion of jurisdiction and federal financial agreements to manage migratory buffalo convey a legal obligation upon the state of Montana and the United States to initiate and convene legally binding consultation with American Indian Nations so affected."

In May 2012, the Montana-Wyoming Tribal Leaders Council urged the state of Montana 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.

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). These hunting opportunities cannot be exercised without the habitats available on the National Forest.

Nationwide, hunters have indicated an overwhelming interest in hunting migratory buffalo on the National Forest. In a ten-year period, 82,832 people applied for wild buffalo tags, and 426 hunters drew tags. (Montana Fish, Wildlife & Parks, N. Whitney 2014). Combined, the treaty and state hunter value placed on hunting migratory buffalo cannot be realized without the habitats available on the National Forest.

The Custer Gallatin Forest Plan should assess the transition underway to a sustainable and respectful wildlife management plan that aligns with the economic and social values of Yellowstone's gateway communities. The facts to be assessed demonstrate local and national public support and economic value in having wild buffalo on the National Forest:

- Seventy percent of Montanan's favor restoration of wild buffalo in Montana (Moore Information 2011).

- Nearly eight in ten Montanan's favor restoring wild buffalo on public lands, over seven in ten want wild buffalo managed as wildlife not livestock, and even more Montanan's think decisions about wild buffalo should be made by biologists and wildlife officials rather than politicians (Tulchin Research 2014).

• Science Daily reported three in four Americans polled in 2008 believe that the wild American bison is an "extremely important living symbol of the American West."

• Acquiring buffalo habitat outside Yellowstone National Park will "conservatively" net "measurable benefits" of over $4 million dollars (State of Montana and Yellowstone National Park 2000 FEIS Vol. 1 at xxxix-xl).

• A peer-reviewed visitor spending analysis found 3.5 million visitors to Yellowstone National Park in 2014 spent $421 million dollars that supported 6,662 local jobs and injected $543.7 million dollars into local economies (National Park Service 2015).

• Tourism and outdoor recreation accounts for over 64,000 direct jobs and $5.8 billion in consumer spending in Montana (Outdoor Industry Association 2015).

• Over 755,000 people engaged in Wildlife-Watching in Montana in 2006 generating $375 million dollars in retail sales, creating 9,772 jobs, and bringing in nearly $100 million dollars in revenues (Leonard 2008).

Clearly, revision of the Custer Gallatin Forest Plan should align with the social values of people visiting and living in park gateway communities in the Yellowstone region who know how to co-exist with wildlife species. If the Custer Gallatin looks, the agency will find local allies and good partners in managing habitat for migratory buffalo on the National Forest and adjacent private lands where the wild species is welcome.

Now that the U.S. Congress has recognized the North American bison as the National Mammal of the United States, the Custer Gallatin should follow suit by recognizing and managing habitat for this indigenous species to persist for future generations on the National Forest (H.R. 2908, Jan. 4, 2016).

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