



## BUFFALO FIELD CAMPAIGN

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### **Buffalo Field Campaign comments on Montana's Proposal to Allow for Bison to Occupy Suitable Habitat Year-Round in Montana On Lands Near the Border of Yellowstone National Park**

Dear Patrick Flowers and Christian Mackay,

Thank you for considering our scoping comments outlining how to best protect America's last wild buffalo and provide Montanans and the American people an opportunity to secure year-round habitat where migratory buffalo may freely roam.

Please consider all of our scoping comments in detail, and develop alternatives that best protect America's last wild buffalo and create opportunities for Montanans and others to experience migratory wild buffalo on year-round habitat in Montana.

Buffalo Field Campaign was founded in 1997 to stop the slaughter of Yellowstone's wild buffalo herd, protect the natural habitat of wild free-roaming buffalo and native wildlife, and to work with people of all Nations to honor the sacredness of the wild buffalo.

Buffalo Field Campaign is located in West Yellowstone, Gallatin County, Montana, and is supported by volunteers and 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 concerned and actively involved with protecting the last remaining descendants of indigenous bison in North America to occupy their original range. Buffalo Field Campaign actively publicizes the plight of the bison, works to end their slaughter by government agencies, and advocates for the long-term protection of viable populations of wild bison 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 landscape. Buffalo Field Campaign volunteers patrol habitat where bison migrate within the Yellowstone and Madison river drainages. 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.

Buffalo Field Campaign strongly supports Montana analyzing and adopting measures that support viable populations of migratory buffalo on year-round habitat in the state.

**The purpose and need of Montana's decision must also be guided by its public trust responsibility to indigenous buffalo who are vulnerable to extirpation in the state and recognized in greatest need of conservation.**

Montana can fulfill its public trust responsibilities for "each generation as trustee of the environment for succeeding generations" (MCA 75-1-103) by providing year-round habitat for viable and wild, migratory buffalo populations in the state.

The buffalo's status in Montana (Adams and Dood 2011) is 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."

This dire situation can be reversed by Montana evaluating and adapting the most protective measures that provide year-round habitat for America's last wild migratory buffalo population and ensuring the persistence of the wild species in the state.

**In designating year-round habitat for migratory bison populations, Montana must recognize its public trust responsibility to American Indian Tribes.**

Article VI of the United States Constitution, states that treaties made “under the Authority of the United States, shall be the supreme Law of the Land.” Online: <http://www.house.gov/house/Constitution/Constitution.html>

Where wild migratory bison populations are restored on year-round habitat on open and unclaimed lands, Montana must provide equitable access for American Indian Tribes to exercise their respective Treaty rights (Harris 2008; Confederated Salish and Kootenai Tribes 2012), cultural traditions (LaDuke 2000; Little Thunder 2010; Looking Horse 2008), and rights to self-determination (USA 1855).

Montana should take a hard look at the American Indian Laws and Treaties that are affected by its decision to proceed with year-round habitat designations on National Forest and public trust lands: <http://digital.library.okstate.edu/KAPPLER/index.htm>

**Montana can and should designate year-round habitat consistent with the US Forest Service’s goal of providing “habitat for viable populations of all indigenous wildlife species and for increasing populations of big game animals.”**

Montana must cooperate with the Forest Service in managing habitat in a manner consistent with the agency’s stated forest plan goal of providing “habitat for viable populations of all indigenous wildlife species...” (Gallatin National Forest PAGE II-1, 1987).

For viable populations of migratory buffalo to persist, at minimum, Montana must provide and manage habitat without government harassment that meets the wild population’s needs: winter range, calving grounds, summer range, and migration corridors.

**Montana must include all buffalo, not just bulls, in year-round habitat to allow the population to naturally reproduce and remain viable.**

The public does not have information to assess the claim made in Montana’s scoping notice that there is “agreement among the IBMP Partners that research

suggests little risk of brucellosis transmission from bull bison to domestic cattle.”

Specifically, we are not aware of any presentation of findings to the IBMP or publication related to APHIS’s Proposed Study of Shedding and Venereal Transmission of *Brucella abortus* by Bison Bulls in the Greater Yellowstone Area [http://ibmp.info/bb\\_updates.php](http://ibmp.info/bb_updates.php).

Years ago, APHIS adopted a ‘low-risk’ status for bison bulls. Does APHIS’ new research refine bull bison’s status as no-risk? If these findings are available Montana should evaluate and discuss them with the public.

The premise of this perceived risk from bulls appears to be a product of the forced confinement and attempted breeding by ranchers of bison and cattle that took place from the 1700’s to the 1900’s to exploit fitness traits in bison (Polziehn 1995; Ward 1999; Halbert 2003; Halbert and Derr 2007; Hedrick 2009-10-11). Hedrick (2010) found these confined cross breeding attempts were thwarted in part “bison cows would not mate with domestic bulls.” These forced cross breeding practices have compromised the genetic integrity of bison populations throughout North America (Boyd and Gates 2006) to the point where recent genetic testing of bison (Schnabel 2011) suggests that only bison descended from the Yellowstone population have no cattle ancestry.

There is some evidence of self-controlling mechanisms and or genes that influence recognition of kin and selection of mates with a species’ own kind (Penn and Potts 1999; Penn 2002; Milinski 2006). We are aware of no publication or scientific analysis documenting wild migratory buffalo mating with confined domestic cattle. The policy developed by Montana should be based on the best available evidence and not on belief, conjecture, or unfounded claim.

Based on our review of all available evidence, bison bulls pose no disease risk to livestock properly managed according to herd plans in Designated Surveillance Areas.

Indeed, the new brucellosis regulations have resulted in millions of dollars in savings for ranchers in Montana without a corresponding benefit in available habitat for migratory bison. The APHIS rules cost local cattle ranchers about \$430,000 annually with half the costs of vaccinating cattle paid for by Montana taxpayers. Montana calculated that the new regulations provide an annual net benefit to cattle ranchers statewide of \$5.5 million to \$11.5 million (Montana Dept. of Livestock 2011).

Additionally, APHIS provides funding to the Montana Department of Livestock to implement new federal brucellosis regulations in Designated Surveillance Areas in

portions of counties in southwestern Montana. The new rules remove the threat of whole herd cattle slaughter, loss of the state's brucellosis free status, and threat of state sanctions against Montana cattle that contract brucellosis (Montana Dept. of Livestock 2010).

Montana's participation in the bison plan is nearly all paid for by American taxpayers through funding agreements that have been in place since before 2000 with the U.S. Department of Agriculture Animal and Plant Health Inspection Service (USDA APHIS Cooperative Agreement Awards).

In 2010, APHIS granted \$525,000 to the Montana Department of Livestock to fund its role in the Interagency Bison Management Plan. From 2001 to 2010, nearly \$6,000,000 in American taxpayer funding was given to the livestock agency to enforce MCA 81-2-120 (online: <http://www.buffalofieldcampaign.org/legislative/taxpayerfunding.html>).

Finally, there has been no documented case of migratory bison infecting cattle with brucellosis in Montana, Idaho or Wyoming since brucellosis was first detected in bison in 1917.

Brucellosis was introduced to Yellowstone's migratory bison and elk populations by cattle (Meagher 1994). 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. Elk were likely infected with brucellosis by cattle on state and federal "feed grounds" that unnaturally congregate wildlife.

All of this evidence supports Montana providing year-round habitat to support the reproductive capacity and viability of migratory buffalo populations.

**Montana must allow migratory buffalo year-round access to private lands where the wild species is welcome.**

Montana should not limit its consideration to evaluating only habitat on the Gallatin National Forest. There are a substantial number of people who live in the buffalo's habitat and welcome the wild species on their lands.

As it stands, these landowners are subject to intrusive government 'hazing' operations led by the state of Montana that are an on-going source of contention and community strife (HOBNOB 2004).

The landowners wonder why they have no property rights related to the presence of migratory bison, 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.

Indeed, even cattle ranchers living in the bison's habitat suggest that local sentiment favors the migratory species on the landscape. Hank Rate, who has been running cattle along the Yellowstone river for 40 years, said in a newspaper article (Flandro 2011): "We can live with the animals. Buffalo are part of the overall picture. If you don't want them, go get a farm in Iowa."

Changes in landownership, legal orders, and local sentiment suggests the state of Montana has for too long dragged its feet in permitting bison on private lands where they are welcome. Local support for bison should assist Montana in adopting common sense proposals allowing for year-round habitat migratory buffalo can roam.



**Montana Dept. of Livestock helicopter harassing bison, and trespassing, Yellowstone Ranch Preserve, May 29, 2008. Darrell Geist, Buffalo Field Campaign photo**

### **Galanis family Yellowstone Ranch Preserve**

The state of Montana is well aware (Galanis 2007) that migratory bison are welcome year-round, at no cost to the taxpayer, and the government is not welcome to trespass on the approximate 800 acre Yellowstone Ranch Preserve to harass bison and newborn calves. The Preserve, as well as the neighboring property, have been subject to repeated trespass by Montana including the intrusion by low-flying helicopters deployed by the Department of Livestock to force bison to flee. This contentious, costly, and wasteful practice by Montana must come to an end.

### **Earthjustice Bison Management on Horse Butte Peninsula**

The state of Montana is also aware (Earthjustice 2008) of long-standing local support from residents in Hebgen basin begging Montana 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. This is just as true in the Gardiner basin where Montana often overlooks local residents (Affidavits of Fred Baker, Scott Hoeninghausen) who not only support wild free roaming buffalo but live and enjoy living in Montana for that reason.

### **Dome Mountain Ranch**

The state of Montana is well aware of the availability of the 5,000-acre Dome Mountain Ranch to migratory buffalo in the Gardiner basin. This local support, providing habitat for migrating buffalo at no cost to taxpayers, has been repeatedly expressed by Mr. JB Klyap to Montana before meetings of the Interagency Bison Management Plan. JB Klyap writes he would “love to see Bison migrate to the Dome Mountain Ranch” and “will NOT permit ANYONE from DOL to enter our property.” (Klyap 2008)

Perceived safety concerns can be effectively addressed by Montana tapping into the experiences of locals to share their observations on how to co-exist with buffalo. Local and traditional ecological knowledge recognizes wild species co-habiting the land and is based on careful observation of wildlife behavior by residents who are cognizant of the natural habitats wildlife needs to persist. Patient observation and a common sense outlook are helpful in taking steps to co-exist with buffalo and other wildlife.

Additionally, where there is a claim of private property damage and public nuisance, Montana’s own case law obligates private property owners to hold the state harmless for damage caused by wildlife. Furthermore, precedent established by Montana’s Supreme Court rightfully forbids the state from destroying wildlife where private claims of property or injury are made.

Earthjustice (Park County et al, v. Montana Dept. of Livestock, et al, 2011) has succinctly explained these precedents and Montana should consider them in its effects to landowners and ‘mitigation’ contemplated by the state for bison migrating beyond ‘proposed boundaries’:

In State ex rel. Sackman v. State Fish & Game Comm’n, 151 Mont. 45, 49, 438 P.2d 663, 663 (1968), the Montana Supreme Court rejected a claim by a private property owner who sought a court order requiring the state to, among other things, “destroy the game causing damage” to his property. The Court explained the “law on game damage” in this state:

“Montana is one of the few areas in the nation where wild game abounds. It is regarded as one of the greatest of the state’s natural resources, as well as the chief attraction for visitors. Wild game existed here long before the coming of man. One who acquires property in Montana does so with notice and knowledge of the presence of wild game and presumably is cognizant of its natural habits. Wild game does not possess the power to distinguish between *fructus naturales* and *fructus industriales*, and cannot like domestic animals be controlled through an owner. Accordingly a property owner in this state must recognize the fact that there may be some injury to property or inconvenience from wild game for which there is no recourse.” (quoting *State v. Rathbone*, 110 Mont. 225, 100 P.2d 86, 92-93 (1940)).

Finally, there is no statutory or mandatory duty or legal precedent for Montana to arbitrarily remove all migratory buffalo from the state and prevent their year-round occupation and use of habitat (Montana District Court 2010).

In 2010, Montana District Judge John Brown ruled against the Sitz Angus Ranch, Bill Myers, and the Montana Stockgrowers Association who filed suit to force Montana to remove or slaughter all wild buffalo that remain in the state after May 15 of each year. Judge Brown wrote that the Interagency Bison Management Plan and Montana law "creates no legal duty mandating" the Montana Dept. of Livestock forcefully remove or kill all wild buffalo in Montana (Montana District Court 2010).

**Montana must eliminate 'zone-management' boundaries and adapt 'free to roam' year-round habitat for migratory buffalo.**

Of all wildlife species found in the state, only migratory buffalo are managed by Montana in restrictive ‘zone-management’ boundaries. These ‘zone management’ boundaries deny habitats migratory buffalo need for the population to remain viable and wild.

Elk, who also harbor *Brucella abortus*, freely range Montana and, based on the best available science, have infected cattle in Montana, Idaho and Wyoming (Beja-Pereira 2009; Montana Dept. of Livestock 2008; USDA APHIS Brucella Genotyping Test Reports).

With the adoption of APHIS new brucellosis regulations, Montana is implementing and providing taxpayer funding for cattle herd management plans in portions of counties in southwest Montana (Montana Dept. of Livestock 2010). If the livestock and agricultural lobby had not pushed Congress to list *brucella abortus* as a bioterrorism agent, scientists would have been able to readily research and develop



an effective cattle vaccine (Billings Gazette 2012).

This two-faced policy adopted by Montana on brucellosis stands in contradiction to the best available science. For two decades Montana has severely restricted habitat and harmed the migration of buffalo claiming the old APHIS rules required these actions to prevent brucellosis transmission to cattle. Whatever risk is present can be effectively addressed by managing cattle. Doing so should provide assurance to cattle producers while permitting migratory elk and buffalo to roam and adapt as wild species in the state.

### **Montana must eliminate arbitrary ‘haze-back’ dates that preempt buffalo from occupying habitat year-round.**

Montana’s ‘haze-back’ dates lack scientific rationale or any sound basis. Such an unnecessary and costly provision to harass buffalo systematically denies habitat necessary for a wild population to emerge in Montana and persist as your public trust duty demands.

Please address the following findings in your analysis and decision to eliminate haze-back dates altogether:

“Brucellosis transmission risk from bison to cattle is extremely low after June 1 and negligible by June 15 because (1) parturition is essentially completed for the year, (2) parturition events rarely occur in areas that will later be occupied by cattle, (3) cattle are generally not released on summer ranges until after mid-June, (4) females meticulously consume birthing tissues, (5) ultraviolet light and heat degrade *Brucella* on tissues, vegetation, and soil, (6) scavengers remove fetuses and remaining birth tissues, and (7) management maintains separation between bison and cattle” (Yellowstone National Park 2009).

“Allowing bison to remain on essential winter ranges outside Yellowstone National Park until late-May or early June, when they typically begin migrating back into the park to high-elevation summer ranges, is unlikely to significantly increase the risk of brucellosis transmission from bison to cattle” (Yellowstone National Park 2009).

“Allowing bison to occupy public lands outside the Park through their calving season will help conserve bison migratory behavior and reduce stress on pregnant females and their newborn calves, while still minimizing the risk of brucellosis transmission to cattle” (Jones 2010).

“Evidence from these studies indicates that after May 15 (bison haze-back date in the IBMP), natural environmental conditions and scavenging conspire to rapidly kill or remove brucella from the environment” (Aune 2010).

Whatever quantifiable risk exists is localized, “predominantly low,” “zero under all scenarios,” and can be addressed by managing livestock at a significantly reduced cost to the American people while conserving wild buffalo (Kilpatrick 2009).

Furthermore, there is no demonstrable disease risk on habitat where there is no susceptible cattle host (Dr. Paul Nicoletti 2008). Simply put, where no cattle are grazed, at minimum, these habitats in Montana should be designated available for migratory buffalo to roam. If there is a perceived cattle-bison land use conflict on public lands, wild native bison must take precedence and Montana should work to resolve habitat availability conflicts in favor of native species.

Recently, the Montana-Wyoming Tribal Leaders Council (2012) urged 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.

Additionally, Montana’s arbitrary haze-back date stresses buffalo during calving season, is costly to American taxpayers, and has been implicated in illegal take of threatened grizzly bears from Yellowstone’s isolated population (Alliance for the Wild Rockies v. U.S. Department of Agriculture Animal and Plant Health Inspection Service, et al. 2011). In May 2012, U.S. District Court Judge Charles C. Lovell issued a Temporary Restraining Order precluding Montana from deploying helicopters to harass buffalo in habitat occupied by threatened grizzly bears (U.S. District Court 2012).

For all of these reasons, Montana should forego ‘permanent’ management proscriptions that are harmful to the buffalo and the ecosystem, costly to American taxpayers (GAO 2008), and disruptive to locals who want buffalo. Such management actions disregard the rights and Treaties of American Indian Tribes and do nothing at all to ostensibly protect cattle from disease.

### **Montana must designate buffalo migration corridors and develop wildlife safe passages.**

While Montana DOT’s marquee displays and “bison on road” signs on HWY 191, HWY 287, and HWY 89 are appreciated improvements, there is much Montana can still do for wildlife crossing roads constructed in migration corridors.

Montana should consult with the Confederated Salish and Kootenai Tribes and the Western Transportation Institute on the wildlife safe passage infrastructure the Tribe developed and implemented along HWY 93 and other such projects in North America.

Montana should also consider contracting with the people who developed HWY 93 safe passages to work with local communities in Gardiner and West Yellowstone on developing and implementing wildlife safe passages.

Review the ample materials and tools that are being designed and developed in Montana to help people and wildlife co-exist (American Wildlands 2009; Clevenger 2007; Hardy 2008).

In the absence of wildlife safe passages, speed limits must be lowered and enforced on the roads heavily used by migratory wildlife. Lowering speed limits at these critical corridors increases response times and prevents vehicle collisions with wildlife.

Additional road signage showing the image of a bison emphasized by cautionary blinking lights - such as those used in Yellowstone National Park - will also help alert motorists to wildlife crossing or on roads.

Montana should work with the Gallatin National Forest and Yellowstone National Park to educate the public, including frequent issuance of public service announcements on the presence of migratory bison and wildlife on roads. Canada Parks does an adequate job of education and outreach and could be consulted for more information on the most effective materials.

Montana could work with local police dispatchers in issuing radio announcements to freight hauling semi-trucks alerting drivers of wildlife crossing roads.

Plowing snow only along the roadside can trap buffalo on the road by creating high berms that are difficult to cross. When clearing roads of snow, consider plowing or snow blowing through the berms to allow buffalo escape routes off the highways. For Hebgen Basin, this would include escape routes on:

HWY 191 at Fir Ridge, Duck Creek, Cougar Creek, Rainbow Point Road, the Madison River, and Baker's Hole.

HWY 287 at the Bear Trap subdivision, Grayling Creek, Red Canyon.

HWY 20 Forest Roads along the north side of the highway.

If Montana foregoes costly management actions that prevent bison from establishing a year-round presence in the state, these savings could be re-channeled to carry out

measures providing for wildlife safe passages.

**Montana can and should work with land management agencies in adapting fire to open up migration corridors in dense forested areas and in restoring grasslands.**

Bison have not been observed occupying habitat in the Cabin Creek, Lee Metcalf, Upper Gallatin since the 1990's. We believe the incidence of bison in these areas is related, in part, to fires that cleared migration paths historically used by bison.

A Montana Fish, Wildlife & Parks assessment of the Upper Gallatin River Drainage in 2006 mapped potential bison wintering range in the Taylor Fork/Porcupine areas (Jourdonnais 2006).

When analyzing the Cache-Eldridge allotment management plan, the Gallatin National Forest also found suitable habitat for bison to occupy in the Taylor Fork:

“Response: The Gallatin National Forest (GNF) recognizes that the Taylor Fork is biologically suitable habitat for bison. Bison are known to have occupied the Taylor Fork historically and there are no natural barriers precluding bison from entering the Taylor Fork today.” (U.S. Forest Service 2006)

Consider and evaluate adapting fire in partnership with the Gallatin National Forest and Yellowstone National Park as a management component to open up migration corridors in dense forested areas, and in restoring grasslands.

Consider and evaluate the ecological benefits of utilizing fire and the buffalo's keystone ecological roles:

"... bison, in conjunction with other factors such as fire and drought, significantly limited the historical distribution of woody vegetation in the Great Plains." (Coppedge 1997)

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

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

"... 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)

**Montana must consider and evaluate connectivity to larger core habitats beyond the Gallatin National Forest for migratory buffalo to occupy year-round.**

There is suitable habitat bison historically occupied (Gates 2005) beyond the Gallatin National Forest, including critical winter range that should be considered and evaluated to support natural migrations of buffalo year-round.

“Prehistorically, YNP bison ranges were probably the “tips of the fingers” of seasonal migration from large source populations associated with expansive grasslands (Figure 4.1) lying to the north, west and southwest around the Yellowstone Plateau <sup>7</sup>.”

“The Lamar Valley and the Yellowstone River Valley north of the park (Figure 4.1) to Livingston and beyond was an important area for bison and Native peoples throughout the Holocene. This system can be considered the original Northern Range for Yellowstone bison <sup>2</sup>, functioning as an ecological continuum of grasslands that likely supported seasonal migrations by bison as far south as the high elevation ranges in the Upper Lamar Valley. Davis and Zeier (1978:224) described the lower Yellowstone Valley as an exceptional area for Native people to gather, drive and kill bison. Eight bison jumps and three kill sites have been documented south of Livingston. The closest jump site to YNP is 25 km north of the park boundary. It was used during the late prehistoric period between 1,700 and 200 b.p. (Cannon 1992). There is evidence of a human use corridor from the Gallatin and Madison River drainages into the interior Yellowstone National Park. Several major bison kill sites are located in the Gallatin Valley outside of Bozeman, Montana <sup>3</sup>. Archaeological sites in Fawn Pass provide evidence in support of the hypothesis that Native people moved between the Gallatin drainage and the interior of the park <sup>4</sup>. Chert and obsidian projectile points were found at the Fawn Pass site. The chert implements likely originated west of the park. The obsidian is being fingerprinted to determine its origin. Approximately half the projectile points were the Pelican Lake type, the most commonly represented prehistoric culture in YNP, dating from 1000 B.C. to A.D. 200. Other points were assigned to the McKean Complex, dating to around 3500 B.C. McKean Complex sites are also quite common in the park. There is an obsidian source

at Cougar meadows in west central Yellowstone Park. The material is inferior to the Obsidian Cliff source and was only used for making utility implements like knives and scrapers rather than projectile points. An obsidian artifact found at Yellowstone Lake was determined to be Cougar Creek Obsidian.”

“The Gallatin and Madison Valleys and the Snake River Plain contain extensive grasslands that served as habitat for large numbers of bison (Figure 4.1), source populations for bison entering the park from the west.”

Consider and evaluate year-round habitat in historic bison ranges as noted by Schullery and Whittlesey (2006) “... bison appear to have been living everywhere in Greater Yellowstone where habitats were suitable,” and Plumb (2009) “Yellowstone bison historically occupied approximately 20,000 km<sup>2</sup> in the headwaters of the Yellowstone and Madison rivers in what is now referred to as the northern Greater Yellowstone Area.”

Evaluate year-round habitat using known buffalo migration corridors: Madison River into Madison valley, and Yellowstone River into Paradise valley.

Evaluate designating migration corridors and habitat for migratory bison from the Madison River to the Gravelly, Red Rock and Centennials; to Henrys Lake, Henrys Fork, Island Park, and the Snake River.

Buffalo are known to migrate beyond Hebgen Basin crossing the Targhee into Idaho. These natural migrations may be uniquely influenced by the geothermal habitats created by the Yellowstone caldera and Henrys Lake caldera.

Open negotiations and coordinate with Idaho Fish & Game to consider and evaluate designated corridors to Henrys Lake, Henrys Fork, Island Park, and the Snake River. Work with APHIS and apply the best available evidence to ensure bison bulls migrating into Idaho are conserved and not destroyed based on old findings and regulatory schemes.

**Evaluate and disclose how Montana will gather, monitor, and use the best available science to protect bison genetic diversity and ensure population viability based on genetically distinct bison subpopulations, an isolated population, and populations that intermingle.**

Recent genetic analyses by Halbert (2012) support the finding of genetically distinct

bison subpopulations in the Yellowstone herd that “could lead to divergence of adaptively important genetic attributes given that their environments are significantly different (Christianson et al. 2005; Olexa and Gogan 2007).”

Furthermore, “the level of divergence is expected to continue to increase, and there is a potential for adaptive differentiation in the different environments inhabited by the Yellowstone subpopulations.”

Halbert (2012) also raised concern about the disproportionate killing of subpopulations under Montana’s participation in the IBMP, the unknown impacts of management practices on bison genetic integrity, and called for a population viability analysis to determine long-term sustainability.

In addition to different tooth wear patterns, parturition timing and synchrony, longitudinal differences in migration patterns, differences in diet and environment, fidelity to rutting and calving grounds, evidence of genetically distinct subpopulations begs Montana to consider developing wild, natural restoration options for the only migratory population of bison in the Yellowstone ecosystem.

**Evaluate and disclose how Montana can manage known buffalo corridors to help maintain genetically distinct bison subpopulations originating from the Central Interior and Northern Range of the Yellowstone ecosystem.**

**Evaluate and disclose how Montana will gather, monitor, and use the best available science to protect bison genetic diversity and ensure population viability.**

Gardipee (2007) field-tested bison DNA fecal analysis, a non-intrusive technique for gathering bison genetic data. Using DNA fecal analysis, Gardipee (2008) also found evidence of Yellowstone bison subpopulation structure.

**Consider evaluating bison genetic data using only non-intrusive methods that require no capturing, drugging, or other disrespectful livestock management techniques on an indigenous wildlife species.**

**Consider and evaluate ecosystem changes that climate change will have on grasslands and grassland species:**

“Forest Service Chief Tom Tidwell has recognized that ‘climate change is already altering our Nation’s forests in significant ways and those alterations are very likely to accelerate in the future, in some

cases dramatically . . . In the uncertain environment of climate change, risk management will become critical. This is managing ecosystems for resiliency to prepare uncertain future outcomes.<sup>1</sup> Leadership in mitigating climate change and adaptive management for unavoidable climate change are the modern challenges of proper land stewardship for our national forests and grasslands. This leadership needs to be demonstrated in our land management planning processes, especially at the time of plan revision.” (U.S. Forest Service 2010)

“Projected climate change impacts include air temperature increases; sea level rise; changes in the timing, location, and quantity of precipitation; and increased frequency of extreme weather events such as heat waves, droughts, and floods. These changes will vary regionally and affect renewable resources, aquatic and terrestrial ecosystems, and agriculture. While uncertainties will remain regarding the timing and extent magnitude of climate change impacts, the scientific evidence predicts that continued increases in GHG emissions will lead to increased climate change.” (U.S. Forest Service 2009)

**Consider and evaluate the adaptability of migratory bison to ecosystem changes that climate change forecasts for grasslands and watersheds.**

**Montana must evaluate and disclose the ecological contributions of greater migratory bison abundance and distribution in year-round habitat for recovering rare, sensitive, threatened and endangered species.**

Mattson and Merrill (2002) found that grizzly bear occupied grasslands only where migratory bison ranged and that the historic range of migratory bison was positively associated with grizzly bear occurrence:

“Grizzly bear range in 1850 was positively related to occurrence in mountainous ecoregions and the ranges of oaks (*Quercus spp.*), piñon pines (*Pinus edulis* and *P. monophylla*), whitebark pine (*P. albicaulis*), and bison (*Bos bison*) and negatively related to occurrence in prairie and hot desert ecoregions.

Of the foods, grizzly bear range was most strongly positively associated with ranges of oak dominated vegetation types and bison.



Grizzly bears apparently occupied the prairies and grasslands only where there were bison (Fig. 3) or humans not engaged in maize cultivation.”

**Montana must evaluate and disclose benefits for predators consuming wild migratory bison as a food source. Review the potential for reduced predator take of domestic livestock by permitting bison on year-round habitat in Montana.**

Montana should look at the role of wolves in hunting bison in a landscape where the migratory species is more abundant and widely distributed. If Montana provides for a greater abundance and distribution of migratory bison on the landscape, wolves may hunt bison and potentially reduce predation on livestock in the area.

“Less often seen, but now well documented by biologists working year round in Yellowstone is increasing predation by wolves on bison. Molly’s Pack in Pelican Valley has lived on bison in winter, and three years ago a second pack formed in Hayden Valley makes bison its exclusive winter diet. At least two other packs also make bison part of their diet. Hunting bison with fang and claw is especially dangerous because, unlike elk, bison stand their ground. There is an innate elegance in natural systems where predator and prey constantly test each other’s mettle, and each other’s fitness, as they vie for survival. One of the many positive aspects of wolf restoration to Yellowstone National Park is a strong, wild bison that can match any future vision we have for this species.” (Soukup 2006)

**Montana can and should remedy the loss of public trust resources caused by buffalo’s extirpation from the state by permitting the beneficial roles migratory buffalo provide for our environmental life support system.**

The buffalo provides for our environmental life support system by shaping and influencing grasslands through shared behaviors in large migratory herds, by enriching the abundance and diversity of species (Askins 2007; Fallon 2009; Gerlanc and Kaufman 2005; Hobbs 1996; Knapp 1999; Polley and Wallace 1986), by improving watershed health, by providing sustenance for predators and scavengers, and in fulfilling their adaptive potential through natural selection.

Where natural resources have been depleted and degraded for livestock production (Fleischner 1994) at a great cost to taxpayers (Moscowitz and Romaniello 2002) the reintroduction of migratory bison could remedy the loss of public trust resources

caused by their extirpation from Montana.

Montana must recognize its public trust responsibilities for ensuring that wild, migratory population of bison persist for present and future generations. Please honor our shared cultural heritage by allowing migratory buffalo to persist in Montana once again as a valued indigenous wildlife species.

Thank you for considering our comments on behalf of the last remaining descendants of migratory buffalo in North America to continuously occupy their native habitats.

Sincerely,

A handwritten signature in black ink that reads "Daniel Brister". The signature is written in a cursive, flowing style.

Daniel Brister, MS  
Executive Director  
Buffalo Field Campaign

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