

Date submitted (Mountain Standard Time): 6/5/2019 12:00:00 AM

First name: Darrell

Last name: Giest

Organization: Buffalo Field Campaign

Title:

Official Representative/Member Indicator:

Address1: P.O. Box 957

Address2:

City: West Yellowstone

State: MT

Province/Region:

Zip/Postal Code: 59758

Country: United States

Email:

Phone:

Comments:

See Buffalo Field Campaign Official Comments attachment,

Refer to CD for each source cited, CD in office.

Re: Please select Alternative D and list American bison as a species of conservation concern Dear Mary C. Erickson, Leanne M. Marten, and the Forest Plan Revision Team,

I have enclosed Buffalo Field Campaign's comments in support of strengthening and adopting standards for Alternative D, the environmentally preferred decision in the Custer Gallatin National Forest plan, and listing American bison as a species of conservation concern in Region 1.

An electronic copy of source material is provided as part of our comments. Please contact me if you cannot access any of the documents on the enclosed CD-R.

Buffalo Field Campaign comments in support of strengthening and adopting standards for Alternative D, the environmentally preferred decision in the Custer Gallatin National Forest plan, and listing American bison as a species of conservation concern in Region 1.

List American Bison as a Species of Conservation Concern.

The best available scientific information supports the Regional Forester listing American bison as a species of conservation concern in Region 1.

Region 1's Regional Forester must provide a reasoned response to the evidence presented in public comment in support of listing American bison as a species of conservation concern.

Strengthen and adopt enforceable standards for Alternative D.

The best available scientific information supports strengthening and adopting alternative D with enforceable standards for American bison, bighorn sheep, and threatened grizzly bears.

Conserving American bison viability and diversity should be a forest-wide standard.

Freedom for American bison to roam National Forest habitat should be a forest-wide standard. Restoring habitat connectivity for American bison should be a forest-wide standard.

To restore connectivity, and conserve the viability and diversity of American bison's genetically distinct subpopulations, the Custer Gallatin needs to adopt a standard to close and not permit cattle grazing allotments in American bison range.

To restore connectivity, and conserve the viability and diversity of native bighorn sheep populations, the Custer Gallatin needs to adopt a standard to not permit domestic sheep grazing in bighorn sheep range.

The best available scientific information supports including enforceable forest-wide standards to protect key linkage areas, habitat connectivity, and food security for threatened grizzly bears.

The Custer Gallatin must adopt a forest-wide standard for all grazing permits requiring "let-down" fencing and remove barriers that impede migration of native species.

Adopt a desired condition for the Custer Gallatin to be a leader in the development of wildlife safe passages and measures on highways constructed in migration corridors on the National Forest.

Restore more wetlands, creek banks, pond edges, and riparian habitat through strong standards and more yearly projects to benefit American bison and native species diversity.

The Custer Gallatin has a duty to fulfill its responsibilities and trust obligations safeguarding treaty rights, sacred species, sacred sites, and traditional cultural places of significance to aboriginal people.

In its direction for American bison, the Custer Gallatin must rely upon the best available scientific information.

Despite being the trustee for 145 million acres of habitat in the Western Region, "no self-sustaining herds of wild plains bison exist on National Forest System lands." U.S. Forest Service Warren 2011;

U.S. Forest Service 2015 Table 1.

National Forest habitat should first and foremost be managed to sustain indigenous species that inhabited the ecosystem long before the State of Montana became a State or the Custer Gallatin became a National Forest.

The State of Montana's arbitrarily defined "tolerance zones" for American bison on the National Forest are not based on the best available scientific information.

The Interagency Bison Management Plan is not based on the best available scientific information.

For example, studying population viability was identified as a high priority in the Interagency Bison Management Plan in 2000. U.S. Dept. of the Interior & U.S. Dept. of Agriculture 2000 Vol. 1 at 731.

Two decades later, this high priority scientific study to ensure the American bison population persists in the wild remains unfulfilled.

The Interagency Bison Management Plan is a flawed plan operating on an outdated Environmental Impact Statement: the 15-year life of the plan analysis expired in 2015.

The 15-year life of the plan analysis could not and did not foresee impacts to the bison population and the ecosystem beyond this timeframe. See e.g., U.S. Dept. of the Interior & U.S. Dept. of Agriculture 2000 Vol. 1 (enter "life of the plan" into Adobe Reader's find feature).

Indeed, after providing notice of its intent to prepare a new Environmental Impact Statement in 2015, the State of Montana and Yellowstone National Park have failed to produce an updated scientific analysis on the impacts of its actions. National Park Service 80 Fed. Reg. 13603 (Mar. 16, 2015).

In theory, the Interagency Bison Management Plan is an adaptive one based on science. In practice, it is not.

Manager's decisions lack "accountability and transparency" and more often resemble "trial and error or crisis management, rather than adaptive management." In a three tiered-step plan, managers lack "linkages" to get to the next steps, and have "lost opportunities to collect data" to resolve "important uncertainties" in the absence of a scientific monitoring plan. "Park Service, APHIS, and Montana Department of Livestock officials also told us that they are not testing any hypotheses or the assumptions on which the plan is based." These flaws have impaired decisions by managers who do not share defined and measurable objectives. "Meanwhile, the federal government continues to spend millions of dollars on uncoordinated management and research efforts, with no means to ensure that these efforts are focused on a common outcome that could help resolve the controversies." Government Accountability Office 2008 at 24, 28, 33.

The flaws in "adaptive management" continue a decade after the Government Accountability Office issued its report to the U.S. Congress, as managers "no longer build their meetings, interactions,

and decisions around their AM [Annual Management] Plan; no longer measure their performance against the metrics put forth in their AM Plan (including no longer building their Annual Report on measuring their performance against metrics set forth in the AM Plan); no longer rigorously follow the Partner responsibility matrix declared under each Management Action described in the AM Plan (and also in the Partner Protocols); and no longer use adaptive changes to their AM Plan to drive changes in their Winter Ops Plan.[rdquo] Bischke 2017 entire.

In spite of significant changes in federal brucellosis rules benefitting cattle ranchers in the States of Montana, Idaho, and Wyoming, managers have failed to account for the changed circumstances favoring natural regulation of bison in the wild. See e.g., Montana Dept. of Livestock 2013 (approving maintaining an [lsquo]actionable[rsquo] zone to haze bison pre-emptively from [ldquo]breaching the tolerance zone[rdquo]); Yellowstone National Park 2011 (permitting the taking of 104 bison for USDA APHIS[rsquo]s population control study of GonaCon, a chemical sterilant); National Park Service 2015 at 13603[ndash]13604 (5 of 6 proposed alternatives would severely curtail bison range and or abundance in the ecosystem, intensively manage bison rather than cattle, and continue the practice of selecting against disease [ndash] and disease resistance [ndash] in the bison genome through culling, vaccination, and sterilization).

It is improper for the Custer Gallatin to adopt the State of Montana[rsquo]s [ldquo]management[rdquo] and [ldquo]tolerance zones[rdquo] as a policy standard on the National Forest.

Mont. Code Ann. [sect] 81-2-120 and the governor-approved plan it calls for, is a stressor and risk to American bison and their habitat through the life of the next forest plan.

[ldquo]Management actions[rdquo] to restrict or impede natural migrations are in conflict with National Forest planning rule requirements to use the best available scientific information, restore habitat connectivity, and provide for diversity and viable subpopulations of American bison on the National Forest.

Do not make the erroneous assumption that the State of Montana will initiate [ndash] or even consider over the life of the next forest plan [ndash] an adaptive change that would benefit American bison on National Forest habitat.

It is just as plausible that with a change in the Governor[rsquo]s office or the Montana legislature, the State[rsquo]s arbitrarily defined [ldquo]tolerance zones[rdquo] would result in habitat loss for American bison on the National Forest.

The Custer Gallatin must recognize and rely upon the best available scientific information of genetically distinct subpopulations of American bison in the Northern and Central Interior herds. Halbert et al. 2012 entire.

The Central herd or subpopulation is at risk and being driven down under the stressors of the Interagency Bison Management Plan, the governor-approved plan Mont Code Ann. [sect] 81-2-120 calls for.

According to National Park Service biologists, the number of Central herd buffalo counted declined from 3,531 in 2006 to 847 in 2017. White et al. 2011 at 1329; Geremia et al. 2017 at 1.

The unexplained loss of a significant portion of the Central herd buffalo in a period of time when more habitat was available on the National Forest in State [ldquo]tolerance zones[rdquo] is a grave cause of concern.

Through its[rsquo] voluntary participation in the Interagency Bison Management Plan, the Custer Gallatin has adopted arbitrarily defined State [ldquo]tolerance zones[rdquo] that destroy American bison naturally migrating into the dead zone (Zone 3) on the National Forest.

How much National Forest habitat are American bison excluded from in Zone 3?

What is the environmental impact of Zone 3 on migration corridors and habitat connectivity?

How does the Custer Gallatin reconcile adopting Zone 3 as a standard with the National Forest planning rule requirement to maintain or restore connectivity?

These questions need to be squarely addressed for public analysis by the Custer Gallatin.

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

Reducing migrants through over-killing or removing range contributes to habitat loss, population declines, shortens the distances migrants can travel, and can destroy mass migration and drive the migratory species to extinction. Harris et al. 2009 at 68.

Conserving mass migrants means preserving animals[rsquo] freedom of movement in response to the temporal aspects of forage across seasonal extremes. This requires understanding basic parameters of the migration (e.g. location, numbers, routes, distances traveled), ecological drivers, habitat needs and threats. When migrants are excluded from forage and water resources , their numbers plummet and migrations disappear. Harris et al. 2009 at 72.

Unexplained subpopulation loss, excluding American bison from a significant portion of National Forest habitat, disrupting migration in wildlife corridors, and degrading habitat connectivity are factors indicating a substantial concern about the capability of a truly unique population of migratory American bison to persist in the wild.

The National Forest planning rule is clear: the Custer Gallatin must rely upon and use the best available scientific information in its[rsquo] direction for American bison.

List bighorn sheep as a Species of Conservation Concern.

The best available scientific information supports the Regional Forester listing bighorn sheep as a species of conservation concern in Region 1.

Domestic sheep are a source of fatal disease infection for native bighorn sheep populations. Tessaro 1989 entire.

To restore connectivity, and conserve the viability and diversity of native bighorn sheep populations, the Custer Gallatin needs to adopt a standard to not permit domestic sheep grazing within bighorn sheep range.

Adopt forest-wide standards enforcing the protection of key linkage areas, habitat connectivity, and food security for threatened grizzly bears.

The best available scientific information supports including enforceable forest-wide standards to protect key linkage areas, habitat connectivity, and food security for threatened grizzly bears.

Genetic isolation was one factor in the listing of the grizzly bear in the conterminous 48 States as threatened in 1975. U.S. Fish & Wildlife Service 40 Fed. Reg. 31734 (July 28, 1975).

In 1995, a U.S. District Court found the U.S. Fish & Wildlife Service failed to incorporate [ldquo]objective, measurable criteria addressing genetic isolation[rdquo] in its[rsquo] plan to recover the grizzly bear. Fund for Animals v. Babbitt, 903 F. Supp. 96, 113 (D.D.C. 1995).

In 2018, a U.S. District Court found the U.S. Fish & Wildlife Service [ldquo]failed to logically support its conclusion that the current Greater Yellowstone population is not threatened by its isolation.[rdquo] Crow Indian Tribe v. U.S.A., 343 F. Supp. 3d 999, 1019 (D. Mont. 2018).

Habitat continuity and linkage between populations in the grizzly[rsquo]s range is key to the bear[rsquo]s recovery. Craighead et al. 1995 at 486[ndash]488.

High rates of mortality, isolation, and lack of connectivity is a factor that continues to threaten grizzly bears in the conterminous 48 States. [ldquo]Excessive mortality and isolation played a primary role in the extirpation of approximately 31 small isolated grizzly bear populations between 1922 and 1970 within the conterminous USA.[rdquo] Proctor et al. 2005 at 2415 citing Mattson & Merrill 2002.

There is no regulatory mechanism in place to address the threat of [ldquo]continued isolation[rdquo] and habitat connectivity between grizzly bear populations in the conterminous 48 States. Crow Indian Tribe at 1021.

The grizzly bear population in Yellowstone has lived in isolation for more than a century. Miller & Waits 2003 at 4334.

Substantial barriers remain to securing connectivity between grizzly bear populations in the conterminous 48 States.

The Endangered Species Act empowers the Custer Gallatin with a national mandate to recover threatened and endangered species [ldquo]whatever the cost.[rdquo] Tennessee Valley Authority v. Hill, 437 U.S. 153, 184 (1978). The national mandate must be translated into enforceable forest-wide standards protecting key linkage areas, habitat connectivity, and food security for threatened grizzly bears.

Reintroduce fire to restore American bison habitat and habitat connectivity.

In its[rsquo] direction for American bison and habitat connectivity, the Custer Gallatin should develop and fund a program to reintroduce fire.

According to a U.S. Forest Service Fire Effects Information System study, [ldquo][f]ire is important in creating and maintaining American bison habitat. Fire regenerates grasslands and enhances production, availability and palatability of many American bison forage species.[rdquo] Tesky 1995.

Tesky[rsquo]s fire study found:

*

- * Forest fires may also play a role in maintaining sedge-grasslands, important winter habitat for bison.
- * Intense bison grazing of recently burned habitat may reduce fuel loads and function as firebreaks.
- * The slaughter and near extinction of bison [ldquo]may have shortened fire return intervals and increased fire severity during the early settlement period.[rdquo]
- * Bison grazing and fire patterns could provide a valuable tool for naturally managing northern mixed-grass prairie.

Euro-American extirpation of bison, a keystone species, [ldquo]may have had cascading effects on grassland ecosystem function and the diversity of native plant and animal species.[rdquo] U.S. Forest Service Warren 2011.

Given the ecological role of American bison and fire, and bison[rsquo]s keystone contributions to plant and animal community diversity, the Custer Gallatin should initiate a habitat restoration program and provide funding to recruit scientists and biologists with aboriginal knowledge of American bison and fire.

American bison habitat restoration projects should be agency-funded and done in collaboration with scientists and biologists from American Indian Tribes with ancestral ties and or treaty rights to the National Forest.

Fire and fuels management funding should be included and designated for the recruitment of scientists and biologists from American Indian Tribes with ancestral ties and or treaty rights to the National Forest.

Given the range of American Indian Nation ties to and knowledge of the aboriginal territories on the Custer Gallatin, and each Treaty and public trust responsibility the National Forest is legally mandated to fulfill, the Custer Gallatin has the authority to build relationships to support such an endeavor.

Given the National Forest is governed by separate Treaties reserving rights for American Indian Tribes, aboriginal leaders are in the best position to provide direction and guidance to conserve American bison diversity, restore the migratory species habitat, and connectivity to habitat on the National Forest.

Buffalo Field Campaign encourages the involvement and leadership of American Indian Tribes in cooperatively developing a National Forest funded program to expand the science of American bison ecology and fire, restore habitat for plant and animal communities and the keystone ecological role of a native species.

Exclude logging trees as a habitat restoration or [ldquo]improvement[rdquo] project for American bison.

Exclude spraying toxic compounds as a habitat restoration or [ldquo]improvement[rdquo] project for American bison.

The standard for habitat restoration projects on the Custer Gallatin is best measured based on the acres of habitat and connectivity to habitat American bison use.

The number of [ldquo]enhancement or habitat improvement projects[rdquo] is not in itself a reliable indicator of measuring benefits to American bison. Undertaking 3 projects every 3 years should not be treated as a cap.

Acres of habitat used and the area of expanded habitat used is a better indicator to measure and monitor progress for a year-round, self-sustaining population of American bison with a genetically distinct subpopulation structure.

If the Custer Gallatin is correct that 292,000 acres of American bison habitat is available (on one landscape, excluding bison from four other landscapes), the direction must be on fire ecology projects that enhance natural migration, access and connectivity to habitat across the National Forest.

Reintroducing fire would help restore the ecological integrity of fire dependent ecosystems disrupted by fire suppression. Restoring fire in American bison range will aid restoration of grassland function, and recover the diversity of animal and plant communities lost due to suppressing fires and Euro-American extirpation of an ecosystem engineer. Auttelet et al. 2015 at 108.

The desired condition needs to move away from the reactionary mode of fire suppression and the resultant loss of movement corridors, and the loss in quality and quantity of forage that influences migration and the diversity of plant and animal communities.

The Custer Gallatin must close grazing allotments to benefit American bison, bighorn sheep, and threatened grizzly bears.

Permitting cattle grazing allotments in native bison range is in conflict with the desired condition of a year-round, self-sustaining population of American bison on the National Forest.

The presence of cattle is also a barrier for American bison to year-round access and connectivity to National Forest habitat.

To restore connectivity, and conserve the viability and diversity of American bison's genetically distinct subpopulations, the Custer Gallatin needs to adopt a standard to close and not permit cattle grazing allotments in American bison range.

[L]ivestock grazing on public lands continues to be a leading source of conflicts between bears and humans." Yellowstone Grizzly Coordinating Committee Habitat Modeling Team 2010 at 72 (citation omitted).

In a six-year period, 62 of 260 human-caused Yellowstone grizzly bears deaths involved management removals due to livestock depredation. Haroldson & Frey 2011-2017. Three additional cubs were also lost due to grizzly bear-livestock conflicts. On National Forests, 30 of 62 human-caused grizzly bear deaths were due to conflicts with livestock. Id.

Displacing native bison with domestic livestock limits the [biological suitable] habitat of grizzly bears and the [potential for a self-sustaining population of grizzly bears] in the Yellowstone ecosystem. U.S. Fish & Wildlife Service 82 Fed. Reg. 30502, 30510 (June 30, 2017).

Traditional food sources such as bison and elk have been reduced and replaced with domestic livestock such as cattle, sheep, chickens, goats, pigs, and bee hives, which can become anthropogenic sources of prey for grizzly bears.

American bison are an important grizzly bear food. Mattson 2017 at 17. Both native species would benefit from removing cattle to prevent depredations resulting in dead bears and conflicts with the State of Montana resulting in dead bison.

To prevent the introduction of deadly and contagious diseases, do not permit the grazing of domestic sheep in American bison and bighorn sheep range. Tessaro 1989 entire.

Introducing livestock diseases into American bison range was a likely factor in the demise of the wild species (Flores 1991 at 18), and a direct cause of intense, invasive management actions taken against bison today. (Brucellosis was introduced to Yellowstone's bison population by cattle. 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 & Meyer 1994 at 645, 649).

The Custer Gallatin must adopt a forest-wide standard for all grazing permits requiring "let-down" fencing and remove barriers that impede migration of native species.

The Custer Gallatin must withdraw its permits, and remove barriers to habitat and habitat connectivity including government traps, fencing schemes in migration corridors designed to impede natural migrations, cattle allotments, and arbitrarily defined State "tolerance zones" which the Custer Gallatin has adopted as a standard through its voluntary participation in the Interagency Bison Management Plan a long time ago.

Vacated grazing allotments must be prioritized for closure and fencing removed to enhance wildlife habitat, habitat connectivity, and water quality.

Closing cattle grazing allotments within American bison range should be counted as an ecological enhancement or habitat restoration project for the native species.

Closure includes removing the fencing and the domesticated animals which avoid and reduce conflicts with the State of Montana and restores habitat connectivity for American bison across the National Forest.

Adopt a desired condition for the Custer Gallatin to be a leader in the development of wildlife safe passages and measures on highways constructed in migration corridors on the National Forest.

It's not enough for the Custer Gallatin to have the goal of encouraging the creation of crossings for wildlife on high-speed highways running through the National Forest.

The desired condition should be developing safe passages for wildlife on highways constructed in migration corridors and key linkage areas.

High-speed highways in wildlife migration corridors take a heavy toll. Even with the aid of additional signage placed by Buffalo Field Campaign volunteers on highways 191, 287, 89, and 20, highways continue to be a risk for wildlife species attempting to cross.

Expand the use of blinking signs at critical junctures to reduce vehicle collisions with wildlife on highways 89, 191, 287, and 20.

Deploying mobile, solar powered signs with cautionary blinking lights and images of wildlife species can alert motorists to wildlife crossing or on the highways.

Taking the lead in developing wildlife safe passages and deploying cautionary blinking signs at critical junctures on highways is a forest-wide need.

Watersheds, wetlands, and riparian habitat must be managed with stronger standards.

Restore more wetlands, creek banks, pond edges, and riparian habitat through strong standards and more yearly projects to benefit American bison and native species diversity.

We strongly favor stronger, more rigorous protections and projects year-round to restore the ecological integrity of watersheds across the Custer Gallatin.

Treaty rights, sacred species, sacred sites, and traditional cultural places must be given the utmost care and strongest protection.

Buffalo Field Campaign's late co-founder Rosalie Little Thunder was a leader in protecting the buffalo, a sacred species. Testa, *The Buffalo War*, 2001.

Ludlow Cave in the North Cave Hills is revered as a sacred place from which the buffalo first emerged. Traditional cultural places and sacred sites must be given the utmost care, respect, and protection.

The Custer Gallatin National Forest is within the aboriginal territories of the: Great Sioux Nation

Fort Peck Assiniboiné & Sioux Tribes Northern Cheyenne Tribe

Crow Tribe of Indians Blackfeet Nation Piikani Nation

Eastern Shoshoni Tribe Northern Arapaho Tribe Shoshone—Bannock Tribes Nez Perce Tribe

Confederated Salish & Kootenai Tribes

Confederated Tribes of the Umatilla Indian Reservation Confederated Tribes & Bands of the Yakama Nation
MHA Nation Mandan, Hidatsa, & Arikara [ndash] Three Affiliated Tribes Standing Rock Sioux Tribe
Cheyenne River Sioux Tribe Lower Brule Sioux Tribe Rosebud Sioux Tribe
Oglala Sioux Tribe of the Pine Ridge Indian Reservation Crow Creek Sioux Tribe

We concur with the respective Nations who have let it be known the Custer Gallatin must fulfill its[rsquo] responsibilities to safeguard treaty rights, sacred species, sacred sites, and traditional cultural places of significance to aboriginal people.

Sources

An electronic copy of source material is submitted as part of Buffalo Field Campaign[rsquo]s comments to the Custer Gallatin National Forest Supervisor Mary C. Erickson, Region 1[rsquo]s Regional Forester Leanne M. Marten, and the Forest Plan Revision Team.

Citation is by author, title, volume (number), publication, initial page number, publisher, and (date).

Katrina L. Auttelet et al., *Yellowstone Bison: Conserving an American Icon in Modern Society*, (P.J. White, Rick L. Wallen, & David E. Hallac, eds. Yellowstone Association, Yellowstone National Park, 2015).

Scott Bischke, *Concepts for Increasing IBMP Effectiveness*, (Aug. 14, 2017).

Delaney P. Boyd & C. Cormack Gates, *A Brief Review of the Status of Plains Bison in North America*, 45(2) JOW 15 (Spring 2006).

John J. Craighead et al., *The Grizzly Bears of Yellowstone Their Ecology in the Yellowstone Ecosystem, 1959-1992* (ISLAND PRESS 1995).

Crow Indian Tribe v. United States of America, 343 F. Supp. 3d 999 (D. Mont. 2018).

Dan Flores, *Bison Ecology and Bison Diplomacy: The Southern Plains from 1800 to 1850*, 78(2) *The Journal of American History* 465 (Sept. 1991).

Fund for Animals v. Babbitt, 903 F. Supp. 96 (D.D.C. 1995).

Chris Geremia et al., Status Report on the Yellowstone Bison Population, (Sept. 2017).

Natalie D. Halbert et al., Genetic Population Substructure in Bison at Yellowstone National Park, *Journal of Heredity* 1 (Advance Access published Feb. 8, 2012).

Mark A. Haroldson & Kevin L. Frey, Documented Grizzly Bear Mortalities in the GYE and Estimated Percent Mortality for the Demographic Monitoring Area, at 30-36, (Frank T. van Manen, M. A. Haroldson & B. E. Karabensh eds., *Yellowstone Grizzly Bear Investigations 2016: Annual Report of the Interagency Grizzly Bear Study Team*, U.S. Geological Survey 2017).

Mark A. Haroldson & Kevin L. Frey, Documented Grizzly Bear Mortalities in the GYE and Estimated Percent Mortality for the Demographic Monitoring Area, at 29-37, (F. T. van Manen, M. A. Haroldson & B. E. Karabensh eds., *Yellowstone Grizzly Bear Investigations 2015: Annual Report of the Interagency Grizzly Bear Study Team*, U.S. Geological Survey 2016).

Mark A. Haroldson & Kevin Frey, Estimating Sustainability of Annual Grizzly Bear Mortalities, at 26- 30, (F. T. van Manen, M. A. Haroldson & S.C. Soileau eds., *Yellowstone Grizzly Bear Investigations 2014: Annual Report of the Interagency Grizzly Bear Study Team*, U.S. Geological Survey 2015).

Mark A. Haroldson & Kevin Frey, Estimating Sustainability of Annual Grizzly Bear Mortalities, at 27- 31, (F. T. van Manen, M. A. Haroldson, K. West & S.C. Soileau eds., *Yellowstone Grizzly Bear Investigations 2013: Annual Report of the Interagency Grizzly Bear Study Team*, U.S. Geological Survey 2014).

Mark A. Haroldson & Kevin Frey, Estimating Sustainability of Annual Grizzly Bear Mortalities, at 24- 30, (F. T. van Manen, M. A. Haroldson & K. West eds., *Yellowstone Grizzly Bear Investigations 2012: Annual Report of the Interagency Grizzly Bear Study Team*, U.S. Geological Survey 2013).

Mark A. Haroldson & Kevin Frey, Estimating Sustainability of Annual Grizzly Bear Mortalities, at 23- 28, (F. T. van Manen, M. A. Haroldson & K. West eds., *Yellowstone Grizzly Bear Investigations 2011: Annual Report of the Interagency Grizzly Bear Study Team*, U.S. Geological Survey 2012).

Mark A. Haroldson & Kevin Frey, Estimating Sustainability of Annual Grizzly Bear Mortalities, at 21- 26, (C.C. Schwartz, M. A. Haroldson & K. West eds., *Yellowstone Grizzly Bear Investigations 2010: Annual Report of the Interagency Grizzly Bear Study Team*, U.S. Geological Survey 2011).

Grant Harris et al., Global decline in aggregated migrations of large terrestrial mammals, *7 Endangered Species Research* 55 (May 2009).

David J. Mattson, Grizzly Bears & Ungulates in the Yellowstone Ecosystem, 5 Natural History of Grizzly Bears 1 (2017).

Mary Meagher & Margaret E. Meyer, On the Origin of Brucellosis in Bison of Yellowstone National Park: A Review, 8(3) Conservation Biology 645 (Sept. 1994).

Craig R. Miller & Lisette P. Waits, The History of Effective Population Size and Genetic Diversity in the Yellowstone Grizzly (*Ursus arctos*): Implications for Conservation, 100(7) PNAS 4334 (Apr. 1, 2003).

Mont. Code Ann. [sect] 81-2-120 (2017).

Montana Dept. of Livestock, Recommended Adjustment to the Adaptive Management Plan for the Interagency Bison Management Plan (IBMP), (June 3, 2013).

Michael F. Proctor et al., Genetic Analysis Reveals Demographic Fragmentation of Grizzly Bears Yielding Vulnerably Small Populations, 272(1579) Proceedings of the Royal Society B 2409 (Nov. 22, 2005).

Public Broadcasting Service, The Buffalo War (Matthew Testa, bullfrog films 2001)
<http://www.pbs.org/buffalowar/war.html>.

Tennessee Valley Authority v. Hill, 437 U.S. 153 (1978).

Julie L. Tesky, *Bos bison*. In: Fire Effects Information System, (U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory, 1995)
<http://www.fs.fed.us/database/feis/animals/mammal/bobi/all.html>.

Stacy V. Tessaro, Review of the diseases, parasites and miscellaneous pathological conditions of North American bison, 30 The Canadian Veterinary Journal 416 (May 1989).

U.S. Department of the Interior & U.S. Department of Agriculture, Final Environmental Impact Statement for the Interagency Bison Management Plan for the State of Montana and Yellowstone National Park, Vol. 1[ndash]3 (Aug. 2000) http://ibmp.info/Library/FEIS_finalEIS/FEIS_volume1_132Mb.PDF

http://ibmp.info/Library/FEIS_finalEIS/FEIS_volume2_18Mb.PDFhttp://ibmp.info/Library/FEIS_finalEIS/FEIS_volume3_61Mb.PDF

U.S. Fish & Wildlife Service, Amendment Listing the Grizzly Bear of the 48 Conterminous States as a Threatened Species, 40 Fed. Reg. 31734 (July 28, 1975).

U.S. Fish & Wildlife Service, Removing the Greater Yellowstone Ecosystem Population of Grizzly Bears from the Federal List of Endangered and Threatened Wildlife, 82 Fed. Reg. 30502 (June 30, 2017).

U.S. Forest Service, Region 2, Regional TES Species Program Leader Nancy Warren, American Bison R2 Individual Species Recommendations, (Apr. 1, 2011).

U.S. Forest Service, Region 2, Regional TES Species Program Leader Nancy Warren, American Bison R2 Individual Species Recommendations, (Apr. 29, 2011).

U.S. Forest Service, National and Regional Areas Summary (Table 1) (Oct. 17, 2015).

U.S. Government Accountability Office, YELLOWSTONE BISON Interagency Plan and Agencies' Management Need Improvement to Better Address Bison-Cattle Brucellosis Controversy, (Report to Congressional Requesters GAO[ndash]08[ndash]291) (Mar. 2008).

U.S. National Park Service, Environmental Impact Statement for a Management Plan for Yellowstone- Area Bison, 80 Fed. Reg. 13603 (Mar. 16, 2015).

P.J. White et al., Management of Yellowstone bison and brucellosis transmission risk [ndash] Implications for conservation and restoration, 144 Biological Conservation 1322 (2011).

Yellowstone Grizzly Coordinating Committee Habitat Modeling Team, Grizzly Bear Habitat Monitoring Report, Greater Yellowstone Area National Forests and National Parks, at 72-92 Appendix E, (S. Podrutzny, K. Gunther & T. Wyman eds., Yellowstone Grizzly Bear Investigations 2009: Annual Report of the Interagency Grizzly Bear Study Team, U.S. Geological Survey 2010).

Yellowstone National Park, USDA APHIS Bison Research and Collection Permit GonaCon study, (May 12, 2011).