BUFFALO FIELD CAMPAIGN

Western Watersheds Project

January 20, 2012

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SOUTH FORK AND WATKINS CREEK ALLOTMENT MANAGEMENT PLAN UPDATE. Hebgen Lake District Ranger Cavan Fitzsimmons is the responsible official for this decision.

Dear Cavan Fitzsimmons,

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 (BFC) 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 buffalo in North America to occupy their original range. Buffalo Field Campaign actively publicizes the plight of the buffalo, to end their slaughter by government agencies, and to secure long-term protection for viable populations of wild buffalo and year-round habitat in

their original range. Buffalo Field Campaign actively engages the American public to honor our cultural heritage by allowing wild buffalo to exist as an indigenous wildlife species and fulfill their inherent ecological role within their original range, and serve as the genetic wellspring for future wild, free ranging buffalo populations.

Western Watersheds Project (WWP) is a regional, membership, not-for-profit conservation organization, dedicated to protecting and conserving the public lands and natural resources of watersheds in the American West. WWP has its headquarters at the Greenfire Preserve in Custer County, Idaho; and is supported by more than 1,400 members located throughout the United States, including in Montana. WWP's Montana office and its two Montana staff, are located in Missoula, Montana. WWP also has offices and other staff in Boise, Hailey, and Salmon, Idaho, Wyoming, Utah, Arizona, and California. Through these staff, and with the assistance of numerous unpaid members and supporters, WWP is deeply involved in seeking to improve livestock grazing management on federal and state public lands, including on National Forest lands. WWP is also involved in seeking to protect native wildlife and their habitat across the west, including bison and sage grouse.

Western Watersheds Project, as an organization and on behalf of its members, is concerned with and active in seeking to protect native, wild bison, and to protect and improve bison habitat in the Greater Yellowstone Ecosystem (GYE). WWP is also active in reviewing and commenting upon agency decisions and actions and otherwise participating in efforts to eliminate conflicts between livestock and native wildlife such as bison; in publicizing accurate information about the minimal threat of brucellosis, promoting alternative management that would protect bison with minimal or no threat of brucellosis transmission; promoting and educating the public and government agencies about the ecological, economic, and other benefits of protecting wild, free-roaming bison and their habitat.

Western Watersheds Project, as an organization and on behalf of its members, is concerned with and active in seeking to protect sage grouse and their habitat across the west, including in the GYE. WWP is actively seeking Endangered Species Act (ESA) protection for the imperiled sage grouse, and has litigated to enforce federal agency protective obligations in land management decisions.

Thank you for making staff available to tour the allotment and taking time to meet with us to discuss this important habitat on the Forest.

For all of the reasons articulated herein, the **No Grazing Alternative** should be adopted by the Hebgen Lake Ranger District for the South Fork and Watkins Creek.

The Gallatin National Forest improperly dismissed and did not properly consider our request to include viability of indigenous plant, wildlife and fish species in the purpose, need and objective of the proposed action.

The Gallatin National Forest Hebgen Lake Ranger District is proposing to renew a 10-year permit to graze cattle cow calf pairs, steers or horses (hereinafter "livestock") within the wild American buffalo's habitat on the South Fork and Watkins Creek in Hebgen Basin. The South Fork of the Madison River is prime buffalo habitat and buffalo migrate through the Gallatin National Forest near Watkins Creek. In fact, buffalo migrating west of the South Fork have been shot by private landowners and Montana livestock officials, because the area is designated "Zone 3" under the Interagency Bison Management Plan (IBMP). Zone 3 is a zero tolerance zone for bison, where they are subject to immediate lethal removal.

Despite the facts that the area could provide bison habitat, and presence of livestock is the primary reason the area is designated zone 3 under the IBMP, the Forest Service has not meaningfully assessed and disclosed how renewed grazing on these allotments will affect diversity and viability of bison and other species in the area, or affect availability of suitable habitat for bison.

Instead, so far the Forest Service has disregarded these legal requirements and resource issues, deferring to management direction of the Interagency Bison Management Plan (IBMP). Examples of the Forest Service's deference to the IBMP and failure to assess necessary aspects of the allotment renewal decision include the following:

> "The Secretaries of Interior and Agriculture, along with the governor of Montana, made the decision on the areas in which bison would be allowed outside of Yellowstone National Park. That decision currently excludes the area west of South Fork Madison River as an area acceptable for native bison occupancy. Therefore, the South Fork and Watkins Creek Allotment are currently closed to bison regardless of whether there is domestic livestock or not." (EA at 2-10)
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> "The current IBMP would not allow for free roaming bison after May 15 in zone 3 (west side of South Fork Madison River),

> regardless of the presence or absence of cows on the Forest lands." (EA at 2-2)
>
> "The issue of where bison are allowed on lands outside of Yellowstone National Park (YNP) is a function of the Interagency Bison Management Plan (IBMP) and its adaptive management framework, and is largely driven by concern for the transmission of brucellosis from bison to domestic cattle." (EA at 3-70)

However, the IBMP is not part of the Forest Plan for the Gallatin National Forest, and the Forest has independent legal obligations under the National Forest Management Act (NFMA) to provide for species diversity on the forest, and provide habitat to ensure that the forest support's viable populations of native species such as bison distributed across the forest.

The IBMP has designated a majority of the Gallatin National Forest as "Zone 3" where bison are not tolerated, and thus in these areas the Forest Service has agreed – outside its Forest Plan – not to provide habitat for bison in those areas. The allotments under review here are within the current IBMP Zone 3. The primary justification for zoning the Forest and other lands in such a way as to exclude bison comes from the IBMP goal of maintaining spatial and temporal separation between bison and cattle; zones were drawn and management actions prescribed based upon presence of livestock operations on the Forest and surrounding areas. Thus, it is disingenuous of the Forest Service to disregard bison habitat and management concerns when evaluating whether to renew livestock grazing permits in areas of potential bison habitat. In order to satisfy its NEPA and NFMA obligations, the Forest Service must meaningfully assess the impacts of renewing grazing within bison habitat on its diversity and viability obligations, and on bison migration and habitat use.

Zone 3 contains thousands of acres of suitable habitat for migratory buffalo on the Gallatin National Forest. We question and challenge the decision and rationale by the Gallatin National Forest to designate Zone 3 on the Forest and why the agency is proposing to renew livestock grazing for another decade in buffalo habitat, when livestock presence is the basis for the Forest Service and other agencies' decision to maintain zone 3.

Renewing the South Fork Watkins Creek allotment reinforces the Gallatin National Forest's agreement designating Zone 3 lethal exclusion and shooting of buffalo on our National Forests. Renewing the livestock allotment will only serve to perpetuate decisions by the Gallatin National Forest, through the

IBMP or livestock permit renewals, to exclude buffalo from the Forest. By renewing the public livestock grazing permit on the South Fork and Watkins Creek, the Gallatin National Forest cuts migratory buffalo off from thousands of acres of suitable habitat and subjects them to shooting by livestock officials based on the presence of livestock. The Forest Service has not adequately examined these issues pursuant to NEPA, and such actions do not enable the Forest Service to fulfill its NFMA obligations to provide for species diversity and ensure a viable population of native bison is well-distributed across the Gallatin National Forest.

Harassment of buffalo forcing the wild species to flee the Forest has separate harmful effects on the population including separation of family groups, injuries (Koudele), and death (Buffalo Field Campaign online: http://www.buffalofieldcampaign.org/media/update1011/051211.html) and "additional stress on chronically undernourished females and vulnerable newborn calves" (Yellowstone National Park 2009). Renewal of the South Fork and Watkins Creek livestock grazing allotments has cumulative and direct impacts on buffalo health and survival not considered or evaluated in your environmental assessment. Nor has the Forest Service determined ways to mitigate temporal-spatial displacement of buffalo on the forest during calving season despite obvious benefits to the wild species:

> "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." (Yellowstone National Park 2010).

The Gallatin National Forest cannot in one decision agree to prohibit buffalo to roam our National Forest because of the presence of livestock, and on the other renew the public lands grazing allotment used to justify buffalo's exclusion from our National Forest based on the presence of livestock, yet ignore the connection between these decisions. The nature of the conflict is habitat based, a component under the authority and jurisdiction of the Forest and must be resolved on behalf of buffalo and the persistence of viable populations on our National Forests.

The Forest Service's treatment of IBMP Zone 3 as a de facto Forest Plan standard is untenable. The Forest Service is obligated to comply with NFMA and its Forest Plan, which require it to provide habitat to support a viable population of bison on the Forest. To meet such obligations, the Forest

Service must address conflicts between livestock grazing and bison habitat availability and tolerance for bison on the forest.

The purpose, need and objective of the Forest's proposed action must include consideration and evaluation of indigenous species viability, diversity, and expanding big game habitat. We note that the issue of bison viability on the Gallatin National Forest, and the lack of specific Forest Plan direction to guide decisions affecting bison (including domestic livestock grazing decisions) is currently under litigation. The Forest Service needs to address the issue here and ensure it is providing for bison viability (discussed in more detail in sections below) in its allotment renewal decision, lest further litigation become necessary.

Just as the Gallatin National Forest uses your authority to manage habitat for grazing livestock, the agency should and can use your authority to manage forest habitat for indigenous species viability and diversity.

There are several recent and informative examples by the Forest permanently closing grazing allotments to benefit wildlife habitat, sensitive plants, species of special concern, grizzly bears, and to resolve conflicts over cattle-buffalo use of the Forest:

> Gallatin National Forest DECISION MEMO CLOSURE OF LIVESTOCK GRAZING ALLOTMENTS, July 28, 2007:
> "This decision memo documents my decision to close five (5) vacant livestock grazing allotments on the Gardiner Ranger District of the Gallatin National Forest. In summary, I have determined that the national forest land included within these allotments are of greater value as wildlife habitat and that continued grazing would not be compatible with these values.
>
> This action will not result in any adverse (negative) effects to wildlife, including federally listed and Forest Service sensitive species. In fact, removing livestock from public lands usually enhances the quality of wildlife habitat. This occurs through eliminating the opportunity for predators to prey upon livestock, thus alleviating the need for humans to respond to depredation events. Moreover, livestock removal can reduce the risk of wildlife/human encounters because permittees and their associates are no longer active on the allotment. In addition, livestock removal reduces competition for resources with wildlife, which often creates a more favorable vegetative

condition, especially in key habitat components, such as riparian areas. Consequently, implementing this proposal can be viewed as enhancing habitat for wildlife species, inclusive of species of special concern." (U.S. Dept. of Agriculture 2007)

Gallatin National Forest, Hebgen Lake Ranger District, SUITABILITY ANALYSIS FOR FIVE VACANT LIVESTOCK GRAZING ALLOTMENTS, April 14, 2008:
"…I have decided to permanently close the allotments, described below, under the authority given me in FSM 2204.2 Number 6 and R1 Supplement 2204.3 Number 23.

I have decided to close the Lionhead, Two Top, and University sheep and goat allotments to comply with Forest Plan direction related to grizzly bear habitat management.

I have decided to close the Dry Gulch and Duck Creek allotments to bring final resolution to the future of these allotments which have been held vacant for approximately 20 years or longer. The Forest Plan Management Area (MA) allocation for these areas is MA 7, 13, and 15 which all provide for livestock grazing. However, as the analysis documents, neither of these allotments is viable given the limited amount of livestock forage as well as the inherently high wildlife and fish values in these areas.

In making my decision, I relied on your suitability analysis and recommendations." (U.S. Dept. of Agriculture 2008)

Gallatin National Forest Hebgen Lake Ranger District, SUITABILITY ANALYSIS FOR HORSE BUTTE VACANT LIVESTOCK GRAZING ALLOTMENT, November 17, 2009:
"In concurrence with your recommendations in the suitability analysis document for the Horse Butte vacant allotment on the Hebgen Lake Ranger District (11/16/09), I have decided to permanently close the allotment, described below, under the authority given me in FSM 2204.2 Number 6 and R1 Supplement 2204.3 Number 23.

The Forest Plan Management Area (MA) allocation for this area is MA 5, 7 and 15, which all allow for livestock grazing. However, as the analysis documents, this allotment is not viable given the inherently high wildlife values in this area and the costs

associated with rebuilding the allotment infrastructure.

This decision will help reduce potential conflicts with wildlife and sensitive plants on Horse Butte.

OTHER CONSIDERATIONS
Horse Butte peninsula is used by bison. Consequently, cattle grazing in this area may contribute to the controversy associated with bison management and could be perceived as a barrier to year-round bison use of Horse Butte peninsula. Some believe that if cattle are not on Horse Butte, then bison would be allowed to use the area all season long. Removing cattle from Horse Butte would allow the opportunity for this discussion to proceed and focus on resolving any safety, private property or other concerns that exist on the butte relative to bison." (U.S. Dept. of Agriculture Suitability Analysis 2009)

Given existing authority to close vacant allotments, we request the permittee to consider vacating the allotment so the Gallatin National Forest can conduct a suitability analysis that would lead to permanent closure of the South Fork and Watkins Creek allotments. Closure would open the forest to seasonal, year-round bison occupancy and have beneficial effects for wildlife including grizzly bears, riparian dependent species, water quality, fish habitat, and species diversity.

Permanent closure of the South Fork and Watkins Creek livestock grazing allotment would encourage and permit the Gallatin National Forest and the state of Montana to evaluate and implement additional available habitat expansion areas for buffalo to occupy.

Changes in land use evolve quickly (APHIS), and there are several examples, none implemented by the Forest to date, that beg an evaluation and designation of available habitat expansion areas for buffalo to occupy on the Forest.

A 2008 review by the Gallatin National Forest mapped capable bison habitat in Hebgen basin that encompassed the South Fork and Watkins Creek allotments (Gallatin National Forest, M. Daley).

In 2009, Montana Fish, Wildlife & Parks and Gallatin National Forest outlined several opportunities available to bison on the Forest:

> • As a continuation of the adaptive management process, a sub-group of the Technical Committee was asked to look at potential available habitat expansion areas.
> • The task assigned to this group was to assess the habitat areas adjacent to Yellowstone National Park that may be available, because of changed conditions, new information or adaptive changes, to bison both spatially and temporally.
> • These additional habitat areas could potentially lead to adjustments in the conservation zones originally mapped in the IBMP.
> • These additional habitat areas could lead to increased state and treaty hunting opportunities.
> • Both short and long terms habitat changes could be evaluated.
>
> Opportunities Available:
> • There is potential year-round habitat for bulls or mixed groups in the western bison management area on Horse Butte and the Flats east of the South Fork of the Madison.
> • A temporal expansion, to May 31 or beyond, of the bison tolerance date in the western bison management area, Zone 2, could provide additional late winter habitat.
> • Year-round bull habitat to the north of Duck Creek (south of Highway 287 and east of Highway 191) or (south of Grayling Creek) is potentially available. (Montana Fish, Wildlife & Parks and Gallatin National Forest 2009).

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. Dept. of Agriculture 2006)

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).

In response to the U.S. Government Accountability Offices report on Yellowstone bison (U.S. GAO), the IBMP agencies committed in 2008 to

provide conflict-free habitat in Hebgen basin:

> MANAGEMENT ACTIONS
> 1.3.a—Work with private land owners and livestock producers and operators to provide conflict-free habitat in the Hebgen and Gardiner basins.
> 1.3.b—Work with landowners who have human safety and property damage concerns, as well as those who favor increased tolerance for bison, to provide conflict-free habitat in the Hebgen and Gardiner basins. (Yellowstone National Park 2008)

In 2010, adaptive management recommendations considered by the Gallatin National Forest included completing "an assessment of suitable bison habitat in the Hebgen and Gardiner basin watersheds and explore appropriate new areas with increased tolerance for bison":

> Action 1.2a, Metric 1: Revise the adaptive management recommendations in the 2008-2009 IBMP Annual Report to read "Consider additional tolerance for bulls and mixed groups of bison moving north of Duck Creek to habitat in the Cabin Creek Recreation and Wildlife Management Area, the Monument Mountain Unit of the Lee Metcalf Wilderness, and other public lands (e.g., Taylor Fork) further north in the Gallatin mountain range." Note: NPS recommendation.
>
> Action 2.2b, Metric 1: Replace the adaptive management recommendation in the 2008-2009 IBMP Annual Report with the following: "Complete an assessment of suitable bison habitat in the Hebgen and Gardiner basin watersheds and explore appropriate new areas with increased tolerance for bison that could accommodate additional hunting opportunities. Adjust conservation zones and allow for increased tolerance in some areas to increase state and treaty hunting opportunities in habitat outside YELL. For example, the Eagle Creek area could be expanded to include Maiden Basin, located north of Little Trail Creek and adjacent to Bison Hunting District 385." Note: NPS recommendation. (IBMP 2010)

A summary report of a recent IBMP meeting points to the continued failure of the Gallatin National Forest to evaluate and designate suitable habitat for bison on the Forest, by itself and or in conjunction with the IBMP, which

threatens the viability of the population due to lack of management actions that provide for the population's habitat and persistence on the Forest:

West-side Migration

- Bison are migratory wildlife that need low-elevation winter range.
- Incursions into Zone 3 occurred, but were not a failure of the IBMP because management actions and the lack of cattle prevented the risk of brucellosis transmission from increasing.

Brucellosis Persistence/Bison Parturition

- Allowing bison to occupy public lands outside the Park where cattle are never present (e.g. Horse Butte peninsula, South of Madison Arm) until most bison calving is completed (late May or early June) is not expected to significantly increase the risk of brucellosis transmission from bison to cattle because:

1) bison parturition is essentially completed weeks before cattle occupy nearby ranges;
2) female bison meticulously consume birthing tissues;
3) ultraviolet light and heat degrade Brucella abortus on tissues, vegetation and soil;
4) scavengers remove fetuses and remaining birth tissues; and
5) management maintains separation between bison and cattle on nearby ranges.

- 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.

Habitat/Fencing

- Public lands on Horse Butte and South of the Madison Arm are likely not sufficient habitat to support the numbers of bison (>1,000) that may migrate there in some winters.
- IBMP partners agreed to develop a fencing strategy in collaboration with private landowners (2008 Adaptive Management Plan, Objective 3.2, Management Action 3.2.b) to minimize the risk of transmission of brucellosis from bison to cattle, without adversely affecting other wildlife. There has been little progress to date.
- IBMP partners agreed to identify and explore opportunities for bison use of available habitat in other public

and private land areas in the Hebgen basin (See 2008 Adaptive Management Plan, Objective 3.2, Management Action 1.3). There has been little progress to date.

- Excluding bison from the southern ½ of zone 2, which is almost entirely public land (USFS), would merely exacerbate bison density on Horse Butte and induce movements elsewhere such as to the north. (Yellowstone National Park 2010).

There is broad public support for conserving migratory buffalo and restoring the wild species in their original range in Montana and on our public lands.

Wildlife including bison is important to the vast majority of Montanans and Americans who desire to see the wildlife species restored in their original range (Moore Information; Science Daily).

America's wild lands, wildlife including wild bison, recreation and open spaces are cherished by Montanans and draw millions of people who annually sustain a multi-billion dollar economy (Geist).

While we have read and heard the refrain time and time again to "social tolerance" (EA at 3-71) limiting bison distribution and Forest Service actions to enhance bison habitat and distribution, those with limited tolerance for bison are the minority, and legitimate concerns can be addressed without excluding buffalo from the Gallatin National Forest.

It is important to note and acknowledge in your analysis that there is long standing local support for wild buffalo on our National Forests and private lands (Galanis) including groups like Horse Butte Neighbors of Buffalo and many residents who are still waiting for leadership from the Forest to represent their interests in seeing and enjoying buffalo on the Forest (Earthjustice).

The Gallatin National Forest improperly dismissed BFC and WWPs request for and failed to conduct a suitability analysis of its grazing allotment program on the forest to identify and manage habitat for bison currently occupied by cattle.

BFC's and WWP's scoping comment for a suitability analysis was made to the Forest to identify and manage habitat for bison currently occupied by cattle, not as the Forest did here (Section A.7) by considering only if the forest is "suitable for livestock grazing" (EA at A-20).

Without a suitability analysis the Gallatin National Forest does not know and cannot judge how the Hebgen Lake Ranger District's livestock grazing program is adversely impacting the ability of wild buffalo to inhabit the Gallatin National Forest in a manner that supports species viability. Hence, the Forest has not taken a hard look at environmental consequences, cumulative effects and Forest Plan and legal standards for buffalo population viability and diversity.

In addition to the guidance provided by the National Forest Management Act, we believe a suitability analysis is appropriate and warranted given the conservation status of American bison on the Gallatin National Forest, in Montana, and in North America.

Scientists have identified Greater Yellowstone ecosystem bison as important for the species' conservation, and have identified concerns for their long-term survival:

- To our knowledge only one wild population of free roaming buffalo inhabits National Forest lands in Montana: the migratory buffalo in Yellowstone (Adams; Freese; IUCN; Sanderson).
- To our knowledge only one wild population of free roaming buffalo retains their identity as the wildlife species *Bison bison*: the migratory buffalo in Yellowstone (Dratch; Schnabel).
- The International Union for the Conservation of Nature list American bison as Near Threatened in North America (IUCN).

The continuing failure of the Gallatin National Forest to manage and identify habitat for viable wild bison populations has contributed to the ecologically extinct status of this iconic wildlife species in Montana (The Wildlife Society). We request the Gallatin National Forest conduct a suitability analysis to identify and manage habitat for migratory buffalo. Such an analysis must encompass National Forest habitat contiguous to livestock grazing allotments on the Hebgen Lake Ranger District, including those under consideration here.

The Gallatin National Forest must permanently close the South Fork and Watkins Creek livestock grazing allotments to "provide habitat for viable

populations of all indigenous wildlife species and for increasing populations of big game animals" including wild buffalo.

For too long the Gallatin National Forest has ignored its Forest Plan requirement to "provide habitat for viable populations of all indigenous wildlife species and for increasing populations of big game animals" (and the viability regulation from the regulations under which the Forest Plan was developed, 36 C.F.R. § 219.19 (2000)) in its decisions impacting migratory buffalo and habitat designations on the Gallatin National Forest. The buffalo is an indigenous species on the Gallatin National Forest containing corridors and habitat essential to the wild species' viability and persistence. As Montana's permitted hunt makes clear, buffalo is also a big game animal being taken on the Forest.

Permanent closure of the South Fork and Watkins Creek allotments would eliminate the existing conflict between livestock use and bison presence on the Forest, and thus would protect thousands of acres of habitat on the Gallatin National Forest that buffalo could roam.

Gallatin's Forest Plan incorporates the regulatory requirement to ensure native species viability across the Forest. Instead of ensuring reproductive individuals are adequately dispersed throughout the Forest, the Forest Service precludes bison from using most of the Forest for most of the year – by agreeing to remove or permit removal of all buffalo by harassing the species off the Forest - without ever analyzing what habitat or population level would be necessary to maintain a viable population on the Forest.

The Forest Service has provided no analysis for bison viability, has not provided for well dispersed habitat across the Forest in its Forest Plan, or provided management direction or an amendment designed to ensure the presence of bison and their habitat. Because the livestock allotments under consideration serve as part of the IBMP's justification for precluding bison on the Forest, the Forest Service must conduct such analysis in making the present decision.

The Gallatin National Forest needs to acknowledge the migratory indigenous species and evaluate suitable habitat by amending the Forest Plan to support viable and increasing populations of wild buffalo on our National Forests.

The buffalo's migration and population will persist only if there is available habitat for the indigenous species on the Gallatin National Forest, which

comprises wildlife corridors and the vast majority of bison habitat in Hebgen Basin (Gates 2005; Jones 2010; Plumb; Swilling).

The Gallatin National Forest has never assessed effects of Forest-wide cattle grazing on buffalo in their 1987 Forest Plan because the agency says there were no buffalo on the Forest at that time. Buffalo have occupied habitat on the Gallatin National Forest for the last twenty-five years, and occurred throughout the Greater Yellowstone Area historically. The Forest Service must assess the impacts of cattle grazing on native bison on the Forest, in its Forest Plan and as part of the current decision whether to renew grazing allotments within bison habitat and migratory routes.

The Gallatin National Forest has a legal duty to follow Congressional mandates by providing habitat for viable and increasing populations of buffalo as required by the National Forest Management Act, and analyzing forest-wide direct, indirect, and cumulative effects of livestock grazing on buffalo as required by the National Environmental Policy Act.

The Forest Service is failing to manage buffalo habitat on the Gallatin National Forest for viable populations in violation of the National Forest Management Act, and a decision to renew grazing allotments in indigenous buffalo habitat would similarly violate the National Forest Management Act for failing to address viability and diversity or to adopt buffalo habitat management standards in the Gallatin Forest Plan.

The Forest Service is violating the National Forest Management Act by failing – in an on-going series of agency decisions impacting buffalo and their habitat - to manage buffalo habitat to provide for native species diversity and population viability on the Gallatin National Forest. The decision before you now will either continue or clearly break from this record. We urge you to break from it by adopting the **No Grazing Alternative**.

The Forest Service promulgated and published regulations to implement the National Forest Management Act in 1982 including direction to implement the law's diversity mandate: "fish and wildlife habitat shall be managed to maintain viable populations of existing native . . . vertebrate species in the planning area." 36 C.F.R. § 219.19 (2000). A "viable population" is "one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area." Id. To ensure viability is maintained the Gallatin National Forest must provide habitat "to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can

interact with others in the planning area." Id.; see also Rittenhouse, 305 F.3d at 961. The "planning area" is the entire Forest. Neighbors, 303 F.3d at 1069, 1071, n. 6.

Forest Plans must comply with the substantive mandates of NFMA, which requires such plans to contain management direction to protect native wildlife species on the applicable forest. While the Forest Service manages for multiple uses, wildlife resources must be treated as a *controlling, co-equal factor* in forest management." Seattle Audubon Society v. Moseley, 798 F. Supp. 1484, 1489 (W.D. Wash. 1992); aff'd 998 F.2d 699 (9th Cir. 1993)(emphasis added). Forest Plans must provide either standards applicable to specific native species, or provide and apply relevant standards via proxy species.

In the current EA, the Forest Service states:

> "… the Gallatin National Forest has no Forest Plan direction or policy precluding bison from using habitat on the National Forest. All alternatives outlined for the management of the South Fork and Watkins do not preclude bison from migrating into either the South Fork or Watkins allotments. However, Alternative 4 has some additional flexibility for reducing concern for brucellosis transmission and therefore the potential to increase social tolerance for bison outside of the current area of acceptance." (EA at 3-74).

However, the Gallatin National Forest has stated previously that its Forest Plan has "no specific direction relevant to management" of this indigenous migratory species (USDA Horse Butte Bison Capture Facility Decision Memo 2009). In fact, the Gallatin Forest Plan never mentions bison as an indigenous species on the Forest, and does not contain standards for bison or applicable Management Indicator Species. Elk are an inadequate proxy as while habitat overlaps, buffalo have distinct migration patterns, subpopulation structure, differing group behavior and selection of habitat needs on the Forest (Epp; Gardipee 2007, 2009; Gates 2005; Geremia 2009, 2011; Gogan; Jourdonnais; Olexa and Gogan). Moreover, elk are not subject to the same management actions and habitat restrictions as bison are (pursuant to the IBMP), and thus even if they could theoretically serve as a proxy for bison viability, under present circumstances they cannot.

Without Forest Plan guidance and actions designed to specifically ensure bison viability throughout the Forest, it is impossible for the Forest Service to

know what impact its grazing decisions will have on bison viability, and on species diversity on the Forest. Thus, the Forest Plan and all management decisions perpetuating conflicts with bison habitat use and leading to management actions that remove and prohibit bison from the Forest violate the National Forest Management Act, because the Forest Service cannot ensure it is managing bison habitat on the Forest in a manner that ensures native species diversity and viability.

Moreover, bison are essential to species diversity on the Gallatin National Forest, and must be addressed for their ability to contribute to increased diversity as opposed to that associated with domestic livestock grazing. The following quotations and citations represent some of the diversity associated with bison and their keystone role not considered or evaluated by the Forest:

> "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)
>
> "… grazers influence the distribution of soil N properties at every spatial scale from individual plants to landscapes." (Augustine)
>
> "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)
>
> "… loss of species diversity due to frequent burning was reversed by bison, a keystone herbivore in North American grasslands." (Collins)
>
> "… 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)
>
> "Bison social groups had different grazing patterns." (Coppedge 1998)
>
> "… bison urine deposition leads to patches of vegetation having much higher total aboveground plant biomass, root mass and N concentrations." (Day)

"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)

"… 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 1997)

"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 1992)

"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)

"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)

"… bison can de-stabilize the vegetated edges of dunes precipitating a geomorphological cascade impacting biodiversity." (Gates 2011)

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

"… 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)

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

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

"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)

"The heterogeneous species assemblages of wallows enhance grassland species diversity primarily because wallows increase habitat diversity." (Polley)

"… 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)

"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).

Eliminating livestock grazing and associated developments under the No Grazing Alternative, and designating Hebgen basin as bison habitat on the Gallatin National Forest could support, in part, the population's biological needs.

Based on Buffalo Field Campaign observations of buffalo migrations in Hebgen basin and beyond over the last decade, we believe that far more than six buffalo would occupy the allotment as the Forest projects (EA at 3-73). We also question your methodology that the buffalo would only occupy the allotments – an impossibility given the distance buffalo would have to migrate on the Forest from the South Fork to Watkins Creek.

According to a report by District Biologist William Swilling, the Forest could support up to 150 bison in Hebgen basin:

> "If bison were allowed to remain on the landscape in zone 3, with cattle present, interspecific competition would continue as there would be less forage available to bison in late winter. Without cattle present and allocating all forage to bison while precluding other wild ungulate use (elk and deer), this would provide an increase in carrying capacity of 6.3 bison. However there are 15,496 (16,130-634 allotment habitat) acres (62.21km^2) of available forage throughout the entire Hebgen Basin that potentially could support 0.405 bison/km^2 or 154.8 bison."

Left unharmed by the government, bachelor bull and female led groups would occupy the South Fork Watkins Creek area and on contiguous habitat on the Gallatin National Forest. Such migrations by buffalo have not harmed domestic livestock (Yellowstone National Park Keator 2010, 2011). Fire would likely attract buffalo in diverse and more numerous groups than projected by the Forest (Coppedge 1998) and contribute to the recovery of grasslands and grassland dependent species.

The Gallatin National Forest is in violation of its Forest Plan, National Forest Management Act, National Environmental Policy Act and Endangered Species Act requirements for failing to properly analyze forest-wide direct, indirect, and cumulative effects on threatened grizzly bears.

The Forest Service's cumulative decisions to exclude native species – the buffalo – from the Gallatin National Forest including the lethal Zone 3, the intensive human activities associated with Zone 2, the permitting of cattle grazing allotments in the buffalo's habitat, the permitting of bison capture pens on the Forest, is directly impacting the abundance and distribution of buffalo on the Forest.

The presence of buffalo on the Forest is an important and crucial food source for threatened grizzly bears inhabiting the Yellowstone ecosystem (Green; Gunther; Haroldson; Mattson).

Gallatin National Forest's decisions impacting the distribution and abundance of buffalo on the forest include the Interagency Bison Management Plan (2000), the interagency Adaptive Management Plan (2008), the interagency Operating Procedures (2009), annual recurring interagency decisions such as the Adequacy of National Environmental Policy Act Documentation (2011), Decision Memo for Horse Butte Bison Capture Facility Special Use Permit Renewal (2009), and Environmental Assessment, Decision Notice and FONSI for the Horse Butte Bison Capture Facility, (1998, 1999).

In this Environmental Assessment and its Decision, the Gallatin National Forest needs to take a hard look at how the agency's decisions impacting buffalo and their habitat impact threatened grizzly bears and their habitat, all of the standards that apply and the agency must follow:

> "To assure the viability of the Yellowstone grizzly bear population and its habitats, Forest activities must be at a level and conducted in a manner to assure that *bears are not adversely impacted* directly, indirectly, or cumulatively . . . and that *sufficient area is left undisturbed from detrimental human activities to meet the biological requirements of grizzly bears*." (emphasis added). (Gallatin National Forest Plan)
>
> "The Yellowstone Grizzly Bear Guidelines in Appendix G of the Plan are intended to be an extension of the Forest-wide Standards, and are intended to be applied in all management areas in occupied habitat, whether referred to or not in the management standards." In part, the Yellowstone Grizzly Bear Guidelines state "*design and implement project modifications which will provide compatibility (see Glossary) between grizzly bears and other resource management activities* without jeopardizing the grizzly population. If a project cannot be made

> compatible, and it will jeopardize the grizzly populations, it will be necessary to eliminate the project if in MS-l and/or modify the project if in MS-2, primarily to reduce the potential for bear/human conflict." The guidelines further state: "*Initiate formal consultation procedures with the Service, as necessary, if the biological review results in a 'May Effect' [sic] determination*." (emphases added). (Gallatin National Forest Plan)

Forest Plan goals include: "Provide habitat for viable populations of all indigenous wildlife species . . . . Provide sufficient habitat for recovered populations of threatened and endangered species (i.e. grizzly bear) . . . Strive to prevent any human-caused grizzly bear losses."

Forest Plan Desired Future Conditions include: "Management practices provided in the Forest Plan are designed to favor the recovery of the threatened grizzly bear and endangered bald eagle. It may be necessary to restrict human activity within occupied grizzly bear habitat to reduce human/grizzly bear confrontations."

Gallatin National Forest's agreements to prohibit migratory buffalo from occupying habitat in Zone 3 is directly, indirectly and cumulatively impacting distribution and abundance of buffalo, a key food source for threatened grizzly bears.

Gallatin National Forest's agreement to permit intensive and intrusive human management on the Forest to prevent and preclude migratory buffalo from occupying habitat in Zone 2 is directly, indirectly and cumulatively impacting distribution and abundance of buffalo, a key food source for threatened grizzly bears.

Gallatin National Forest decisions to renew and permit livestock grazing allotments on the Forest is preventing and precluding migratory buffalo from occupying habitat and directly, indirectly and cumulatively impacting distribution and abundance of buffalo, a key food source for threatened grizzly bears.

In violation of the Endangered Species Act, the Forest Service has failed to apply the best available science and new information and reinitiate Section 7 Endangered Species Act consultation for the Gallatin Forest Plan on the issue of cumulative effects on threatened grizzly bears on National Forest lands. The existing Biological Opinion and Incidental Take Statement for the Gallatin Forest Plan is itself inadequate and itself requires that "consultation should

be reinitiated" if there are new impacts to threatened grizzly bears that were not considered in the initial Biological Opinion and Incidental Take Statement.

Additionally, in violation of the Endangered Species Act, the Forest Service is not complying with the terms of the Incidental Take Statement for the Gallatin Forest Plan, which prohibits adverse effects on threatened grizzly bears.

The twin purposes of National Environmental Policy Act analysis are to make sure that the *public* is fully informed of the environmental effects of agency actions, and to make sure that the *agency* is fully apprised of the effects of its planned activity before it decides on a course of action. The agency must take a "hard look" at the effects of the activity on the environment, including the direct, indirect, and cumulative effects.

The Forest Plan prohibits activities that will adversely affect threatened grizzly bears and requires that "sufficient area is left undisturbed from detrimental human activities to meet the biological requirements of grizzly bears." The Forest Plan also forbids uses on MS-1 and MS-2 lands unless they are compatible with threatened grizzly bear needs. The Forest Plan requires that the Forest Service protect habitat in a manner that will maintain viable and recovered populations of grizzly bears.

As discussed above, the Forest Service has failed to assess the environmental effects on threatened grizzly bears and occupied grizzly bear habitat. Without such an analysis it is impossible to determine whether the Forest Service is meeting all of the agency's grizzly bear-related Forest Plan obligations. The Forest Service's failure to demonstrate compliance with these Forest Plan provisions violates the Forest Plan and therefore violates the National Forest Management Act.

In sum, the Forest's cumulative decisions impacting the abundance and distribution of buffalo is not compatible with threatened grizzly bear needs, does not prevent or minimize conflict with grizzly bears, violates the Endangered Species Act, threatens the viability and recovery of this distinct population, does not strive to avoid human-caused grizzly bear losses, and does not favor grizzly bear recovery, which all violate the Forest Plan, in violation of the National Forest Management Act.

The Gallatin National Forest fails to fully address water quality concerns voiced in the joint BFC-WWP Scoping Comments, meet the goals and

objectives of their Land and Resource Management Plan, and uphold the State of Montana's Surface Water Quality Standards, which apply to the streams, lakes, and other water bodies of the South Fork Madison River and Watkins Creek watersheds in the South Fork and Watkins Creek domestic grazing allotments.

There is a severe disconnect between water quality impairment and the aquatic ecosystems analyses presented by the Forest Service in the EA and Appendices. A Federal judge once pointed out in a native fishes case that "Fish Need Water Too". A corollary is that "Salmonids Need Cold, Clear, Clean, and Consistent Water".

Gallatin National Forest's EA and Appendices noted scoping comments concerning water quality effects by domestic livestock grazing, but then marginalized your own analyses as "insignificant" by placing them in an Appendix instead of fully discussing and analyzing within the aquatic and riparian ecosystem sections of the EA.

In the Appendix (A-32), the Forest Service makes the point in Table A-14 that the stricter sediment standards for loading and percent fine sediments apply to *all* (emphasis added) streams in the Watkins Creek and the South Fork of the Madison River because of salmonid spawning, and spawning habitat for salmonids from Hebgen Lake.

This is a method of piece-mealing or "pigeon-holing" analyses rather than an holistic, ecological, and comprehensive approach as required under NEPA. For aquatic and riparian adverse affects discussions and analyses, the Gallatin National Forest should be taking a watershed or hydrological unit approach and in this case should encompass Hebgen Lake and the Madison River Basin.

Appendix A.8 -- WATER QUALITY (A-27-A-33):
In response to BFC-WWP Joint Scoping Comments concerning adverse water quality effects by domestic grazing, the Gallatin National Forest EA only looked at sediment loading in these two grazing allotments. The agency also failed to connect the dots and analyze how water quality affects fish, amphibians, birds, invertebrates, and plants that are dependent on healthy aquatic and riparian ecosystems.

Apparently, the Forest Service's Appendix to the EA only reviewed the data of other agencies and groups, with no real monitoring or Forest Service-produced site-specific water quality data. The exception is the described sediment modeling from the Lonesome Wood Vegetation Management

Project, which the Forest Service fails to relate anticipated adverse effects from livestock grazing, and whether Lonesome Wood is typical or not of the riparian and aquatic habitats for the two public grazing allotments under review.

The Forest Service does not mention other, normally examined numerical water quality standards that also relate to aquatic ecosystem health and functioning and to fisheries including: dissolved oxygen concentrations, water temperatures, turbidity, nitrates-nitrites-ammonia-phosphate pollution, Biological Oxygen Demand ("BOD"), fine sediment embeddedness of spawning and food production gravels, conductivity, coliform bacteria counts, presence of antibiotics, pesticides, nor the narrative water quality standards (e.g., nuisance algal growth, stench, color, taste). The treatment of our joint water quality concerns is far from complete or adequate and needs to be fully reviewed and evaluated.

By limiting the Appendix analysis labeled "Water Quality" to sediment modeling results from another project, the Forest Service avoids the examination of designated beneficial water uses and if they are being met. Examples of such uses include: Safe swimming and angling for fish for consumption, contact and non-contact recreation, aquatic biota, coldwater fish production, salmonid spawning, wildlife benefit, and instream flows. In fact, the Forest Service hides behind an empty argument that any impairments to fisheries and water quality are not related to domestic livestock grazing and related livestock industry activities (e.g., transportation, trailing, watering, salting, pest control, weed spreading, predator control, irrigation diversions, and farming with non-native plants), but rather places the "blame" on water diversions, which the agency claims they have no influence over (see our Water Quantity comments).

At A-31 in the Appendices of the EA the Forest Service states that Montana DEQ classifies streams in Watkins Creek and South Fork Allotments as "B1". Under the Montana State Water Quality Act B1 streams must be suitable for swimming, drinking water, bathing, contact and non-contact water-based recreation, growth and propagation of salmonid fishes and associated aquatic life, waterfowl, and furbearers.

The Montana State Water Quality Act also requires the use of effective Best Management Practices ("BMPs") so that water quality changes, if any, would be considered "naturally occurring".

In the EA (at A-28) on the South Fork Allotment, the Gallatin National Forest describes riverine wetlands along Basin Cabin Spring Creek and along the shoreline of Hebgen Lake. Watkins Creek Allotment is described to include freshwater forested and shrub wetlands extending from Watkins Creek south to near Spring Creek Campground. Watkins Pasture includes shoreline wetlands around Hebgen Lake.

Watkins Creek is listed as impaired on 2010 Montana DEQ's 303(d) list – 7.1 miles from the headwaters to Hebgen Lake because of sediment related to logging – but is no longer considered pollutant-impaired from logging so doesn't need TMDL for sediment. Just because the Montana DEQ does not consider TMDL's for flow-impaired streams, does not excuse the Forest Service for ensuring that beneficial uses including salmonid spawning are met. Anything else violates the agency's Federal Land Policy and Management Act (FLPMA) multiple resource management mandates and the Gallatin National Forest Land and Resource Management Plan (LRMP).

Even with the restriction to just sediment and its isolation of the "analysis" into the nether regions of the Appendices (separate from or outside of the NEPA analysis), the Forest Service still ignores direct sediment problems associated with livestock plus indirect effects like road encroachment, undersized culverts, irrigation withdrawals, trailing, riparian vegetation removal, and bank trampling. Watkins Creek, according to the EA Appendices, only seems to support agricultural, drinking water, and industrial beneficial uses. This means it fails to support the biotic and recreational beneficial uses that are inherent to the area's streams and the Forest Service is in denial of the degraded Environmental Baseline and rationalizes it does not have to eliminate Federal Actions that keep water quality standards depressed and beneficial uses unmet. Not only does this ignore the Forest Plan, it runs counter to FLPMA and mandates, policies, and guidelines for the entire National Forest System.

According to the Forest Service, the "blame" for water quality deficiencies and unsupported beneficial uses is placed on impaired water flows; not pollution, but then the Gallatin National Forest fails to connect the dots that irrigation withdrawals are largely for cattle watering, forage production, and pasture irrigation and "but for" highly subsidized public grazing (Moscowitz), much of these water uses impairing beneficial uses like supporting cold water biota and fishery, salmonid spawning, primary contact recreation (e.g., swimming, snorkeling), or even aquatic life, would not occur. As Interrelated and Interdependent Effects this should be analyzed in a NEPA document as part of

the Cumulative Impacts, and if ESA consultation is warranted, in the Cumulative Effects and Interrelated/Interdependent Effects analyses.

The Forest Service is not meeting the agency's conservation mandate and Sensitive Species policies and regulations by not trying to recover native populations of Montana fluvial grayling, Westslope cutthroat trout, and Western toads and actively restoring their critical riparian and stream habitats, which they are highly dependent on. Rather, by proposing to renew public domestic livestock grazing on the Watkins Creek and South Fork grazing allotments, the Forest Service is actually retarding the natural rates of recovery of TES species and increasing the likelihood of their eventual extinctions.

The Forest Service left Water Quality analyses in the Appendices since the agency believes there is no water quality difference in Alternatives 1-4 claiming that water quality impacts from livestock grazing are minor (see chapter 3 of EA). The agency fails to back that empty claim with site-specific empirical data fully evaluated in your Environmental Assessment.

The Gallatin National Forest makes the unsubstantiated claim that the only gain in Water Quality for the two allotments by choosing the **No Grazing Alternative** would be from mitigating cattle crossing through Watkins Creek – about 0.02 tons/year – by hardening the crossing with gravel. This weak analysis for water quality for the two allotments flies in the face of the Best Available Science on the adverse effects of livestock grazing on water quality, including peer-reviewed research funded and/or conducted by the Forest Services' own Rocky Mountain Station.

Even within the realm of "sediment analyses" the Gallatin National Forest totally ignores the scientifically accepted mobilization of upland sediments by grazing, trailing, watering, and loafing domestic livestock including: increased erosion – with noxious weeds, native vegetation removal and loss of stabilizing roots, soil compaction increasing stream runoff with loss of riparian vegetative buffer strip for filtering. Also the bank alteration by the direct action of cattle hooves for crossing, watering, trailing, grazing, and loafing increase erosion rates and sediment loads to streams and other water bodies. Also, the Forest Service ignores stream channel simplification resulting in increased sediment loading related to cattle grazing and trailing as well as undersized culverts used by ranchers and cattle.

The Forest Service claims grazing along Basin Cabin Spring Creek has little sediment impacts, but does not present hard scientific monitoring data that

would refute the Best Available Science on the effects of cattle grazing in riparian and upland ecosystems.

The Appendix mentions algal blooms (EA at A-30) and the Forest Service claims nutrient inputs to Watkins Creek and Basin Cabin Spring Creek, and cumulatively to Hegben Lake, are minor and immeasurable, but again offers no hard scientific data to back these unsupportable claims.

Rather the Forest Service offers a simplistic explanation of re-occurring toxic algal blooms in Hegben Lake by claiming spring turnover of sediments are the problem while the agency ignores the known and accepted science of limnology of how cumulative cattle waste from grazing, watering, loafing, and trailing on the two allotments and nitrate-phosphate related loading associated with cattle related activities like winter feedlots, forage production, irrigated pastures, and irrigation return water has a cumulative adverse effect to water quality in the watershed which can load the system for toxic algal blooms. Over time, removing livestock and allowing the riparian vegetative buffer strips to naturally recover should improve general water quality, reduce inputs to Hegben Lake sediments, and reduce the risk, frequency, and duration of toxic algal blooms, with a more ecologically balanced microorganism community in the Lake and its tributary streams.

While cattle on the two allotments may possibly not account for the main problem for the toxic algal blooms, they certainly add to it, violating Clean Water Act non-impairment standards and the Gallatin National Forest LRMP. The Forest Service should be making the water quality better, not worse. Removing the cattle from these two and other area allotments in the Hebgen Lake basin would be a start for recovery from more than a century of water quality degradation and accelerated sedimentation. The affirmative actions of stream, riparian, and watershed protections and active restoration work including other Forest Service activities like road encroachment into riparian areas, uncontrolled ORV traffic and its associated habitat destruction and poorly sited recreation areas and other agency facilities would certainly move the basin towards its natural rate of recovery without retardation. The Forest Services' conclusion that water quality is not an allotment-related problem is based on an outside opinion, not scientific data or the best available science.

The Gallatin National Forest needs to fully discuss and analyze in the EA the downstream effects in the aquatic and riparian ecosystems, regardless of ownership or management, not just to the boundary of allotments or Forest Service managed lands.

Even though, the Forest Service seems to shirk their responsibilities for ecological impacts downstream of the two allotments relating to domestic livestock grazing on the Gallatin National Forest as well as the interrelated and interdependent adverse effects to biota, critical habitats, and their natural rates of recovery, which are retarded by legacy, current, and proposed future grazing and the region's livestock industry, they must look beyond their own allotment boundaries to fully assess ecological, economic, and social impacts of proposed Federal Actions. If the agency conducted a full, comprehensive, ecologically sound NEPA analysis, the **No Grazing Alternative**, the one BFC and WWP supports vigorously, would also have been the choice of the Forest Service to support their multiple resource management edicts, to conform with FLPMA and their Sensitive Species Policies and regulations (e.g., Westslope cutthroat trout, Western toad), to meet the Gallatin National Forest LRMP, and to adhere to their affirmative conservation responsibilities as a Federal land-management agency under the ESA, particularly for listed grizzly bear, Canada lynx, but also for Federal Candidate Species including Montana fluvial grayling (Arctic grayling) and greater sage-grouse, among others.

In addition to selecting the **No Grazing Alternative**, we suggest that the Forest Service examine and remedy restrictive, undersized culverts, encroaching roads and trails, and so-called range improvements that have hampered water quality on the two allotments and downstream throughout the entire hydrologic basin.

The Gallatin National Forest fails to fully address Fisheries, Stream and Riparian Ecosystem, and Sensitive Species concerns voiced in the joint BFC-WWP Scoping Comments, meet the goals and objectives of their Land and Resource Management Plan, uphold their multiple resource management responsibilities under FLPMA, and their affirmative conservation responsibilities under ESA, which apply to native fishes (also amphibians and other wildlife species, and plants) and to the streams, lakes, and other water bodies of the South Fork Madison River and Watkins Creek watersheds in the South Fork and Watkins Creek domestic grazing allotments which they depend on for prey production, cover habitat, spawning, nursery, and juvenile rearing habitats through the life stages of their life history cycle.

There is a severe disconnect between water quality impairment and the aquatic ecosystems analyses presented by the Forest Service in the EA and Appendices. A Federal judge once pointed out in a native fishes case that

"Fish Need Water Too". A corollary is that "Salmonids Need Cold, Clear, Clean, and Consistent Water".

Gallatin National Forest in their EA and Appendices noted scoping comments concerning water quality effects by domestic livestock grazing (see Buffalo Field Campaign photo of cattle trampled Hebgen Lake shore vegetation), but then marginalized their analyses as "insignificant" by placing them in an Appendix instead of fully discussing and analyzing within the aquatic and riparian ecosystem sections of the EA. The fisheries and aquatic and riparian ecosystem functioning is totally dependent on the quality and quantity of water, including instream flows.

In the Appendix (A-32), the Forest Service makes the point in Table A-14 that the stricter sediment standards for loading and percent fine sediments apply to *all* (emphasis added) streams in the Watkins Creek and the South Fork of the Madison River because of salmonid spawning, and spawning habitat for salmonids from Hebgen Lake.

This is a method of piece-mealing or "pigeon-holing" analyses rather than an holistic, ecological, and comprehensive approach as required under NEPA. For aquatic and riparian habitat adverse affects discussions for fishes and other dependent biota and thorough science-based analyses, the Gallatin National Forest should be taking a watershed or hydrological unit approach and in this case should encompass Hebgen Lake and the Madison River Basin.

Again, the Gallatin National Forest also failed to connect the dots and analyze how water quality affects fish, amphibians, birds, invertebrates, and plants that are dependent on healthy aquatic and riparian ecosystems and instead relegated the "analysis" of water quality outside of the fisheries and water-dependent recreation analyses and left it out to dry in an Appendix.

There is no mention of other, normally examined numerical water quality standards that also relate to aquatic ecosystem health and functioning and to fisheries including: dissolved oxygen concentrations, water temperatures, turbidity, nitrates-nitrites-ammonia-phosphate pollution, Biological Oxygen Demand ("BOD"), fine sediment embeddedness of spawning and food production gravels, conductivity, coliform bacteria counts, presence of antibiotics, pesticides, nor the narrative water quality standards (e.g., nuisance algal growth, stench, color, taste). The treatment of our joint water quality concerns is far from complete or adequate and needs to be fully revisited.

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At A-31 in the Appendices of the EA the Forest Service states that Montana DEQ classifies streams in Watkins Creek and South Fork Allotments as "B1". Under the Montana State Water Quality Act B1 streams must be suitable for swimming, drinking water, bathing, contact and non-contact water-based recreation, growth and propagation of salmonid fishes and associated aquatic life, waterfowl, and furbearers.

The Forest Service is not meeting its conservation mandate and Sensitive Species policies and regulations by not trying to recover native populations of Montana fluvial grayling, Westslope cutthroat trout, and Western toads and actively restoring their critical riparian and stream habitats, which they are highly dependent on. By proposing to renew public domestic livestock grazing on the Watkins Creek and South Fork grazing allotments, the Forest Service is retarding the natural rates of recovery of TES species and increasing the likelihood of their eventual extinctions. The Forest Service is also not meeting its FLPMA responsibilities and properly balancing the Public Interest of the economic benefits of a few area ranchers against the public's interest in trout and grayling angling and the enjoyment of natural aesthetics, wildlife watching, and nature photography, which are marred by domestic cattle grazing and associated adverse effects for the livestock industry.

The Gallatin National Forest needs to fully discuss and analyze in the Environmental Assessment the downstream effects in the aquatic and riparian ecosystems to native fishes, no matter what the ownership or management, not just to the boundary of allotments or Forest Service lands.

Even though the Forest Service seems to shirk their responsibilities for ecological impacts downstream of the two allotments relating to domestic livestock grazing on the Gallatin National Forest as well as the interrelated and interdependent adverse effects to biota, critical habitats, and their natural rates of recovery, which are retarded by legacy, current, and proposed future grazing and the region's livestock industry, the agency must look beyond their own allotment boundaries to fully assess ecological, economic, and social impacts of proposed Federal Actions. If the Forest Service conducted a full, comprehensive, ecologically sound NEPA analysis, the **No Grazing Alternative**, the one BFC and WWP supports vigorously, would also have been the choice of the Forest Service to support their multiple resource management edicts, to conform with FLPMA and their Sensitive Species Policies and regulations (e.g., Westslope cutthroat trout, Western toad), to meet the Gallatin National Forest LRMP, and to adhere to their affirmative conservation responsibilities as a federal land management agency under the ESA, particularly for listed grizzly bear, Canada lynx, but also for Federal Candidate Species including Montana fluvial grayling (Arctic grayling) and greater sage-grouse, among others.

In addition to selecting the **No Grazing Alternative**, we suggest that the Forest Service examine and remedy restrictive, undersized culverts, encroaching roads and trails, and so-called range improvements that have hampered the sustainability populations of native fishes on the two allotments and downstream throughout the entire hydrologic basin.

The Gallatin National Forest should adopt PACFISH/INFISH Standards for Riparian Management Objectives and utilize the PIBO Aquatic Monitoring Protocol developed for the Columbia River Basin by the Forest Services' PIBO Aquatic Monitoring Project.

The Forest Service should adopt the standards and methodology employed by the Forest Services' PIBO (PACFISH/INFISH Biological Opinion) Aquatic Monitoring team in Logan, Utah for monitoring and evaluating the watersheds on the South Fork and Watkins Creek Allotments and throughout the Madison River Basin. Unlike some measures of riparian and stream health, these techniques were developed to better evaluate stream and riparian habitat metrics that correspond to fishes' habitats.

Instead, the Gallatin National Forest chose to employ the BLM's PFC evaluation system, which is not science-based, but rather subjective and as such, is not repeatable and presents no estimates of error (EA at 2-3). The second system used by the National Forest in the EA evaluation of stream and

riparian ecosystems is the Stream Channel Stability system, which may track trends in changes in stream channel systems, but does not approach natural conditions that have been severely altered after more than a century of legacy grazing and logging coupled with the impoundment of the Madison River and the natural earthquake, which compound or degrade the Environmental Baseline. With a degraded Environmental Baseline, there is less "free board" or room for adverse effects to native fishes and their habitats by domestic grazing and related livestock industry activities.

While the Gallatin National Forest describes some fish habitat improvement projects (EA at 3-3), your analysis describes little to no mitigation of habitat and fish production loses directly and indirectly attributable to more than a century of cumulative livestock grazing in the basin. Proposing to continue livestock grazing, instead of choosing the **No Grazing Alternative**, does little for recovering native fisheries and other riparian and stream-dependent biota, but rather retards the natural rate of recovery.

Missing from the discussion on stream sediments and their negative effects on native fishes (EA at 3-5) is a thorough discussion of the loss of natural flushing flows and the alteration of the natural hydrograph by livestock grazing and watering (e.g., soil compaction, weeds, dewatering of springs and seeps, down cutting with disconnection of alluvial aquifer from the floodplain) and related livestock industry actions on and off Forest Service managed lands in the basin. With more than a century of abuse, what is natural would be hard to deduce.

The discussion (EA at 3-5 to 3-6) about Wally McClure Creek on the Watkins Creek Allotment, which contains populations of pure Westslope cutthroat trout, a regionally sensitive native species, lack any biological understanding on how salmonids move up and downstream in stream systems, depending on the seasons, water temperatures and their life stage. Discounting cattle impacts in lower Wally McClure Creek only emphasizes the shortcomings of this NEPA document. While the Forest Service describes cattle-induced bank sloughing, your analysis does not detail accompanied effects that will certainly follow including channel simplification, down cutting and head cutting, loss of valuable shade and undercut bank cover, and smothering of spawning and prey production gravels.

This highly disturbed and degraded stream reach does not "require additional monitoring" (EA at 3-6), but rather would benefit from the **No Grazing Alternative**, that is, no cattle and no livestock!

Also the discounting of the adverse effects of the Ruof Ditch dewatering of Wally McClure Creek because of an alluvial fan at the lower end of the stream system is disingenuous and demonstrates a poor understanding of the natural hydrograph and the historic response by native Westslope cutthroat trout and Montana fluvial grayling.

The Gallatin National Forest goes further in their description of cattle access in the South Fork Madison River on the South Fork Allotment (EA at 3-6). Somehow the agency rationalizes stream and riparian destruction with accompanying adverse effects to native salmonids and other dependent biota, even though the Forest Service admits the North Pasture and Middle Pasture do not "enjoy" the protections of riparian fencing. Choosing the **No Grazing Alternative**, solves this ecological and recreation cattle-related problem, since livestock will no longer have access to the sensitive riparian and stream habitats and grazing will no longer be retarding the natural rate of recovery of the aquatic and riparian ecosystems and native fisheries.

Basin Cabin Spring Creek as described by the Gallatin National Forest (EA at 3-6) is described as a very sensitive aquatic/riparian ecosystem with numerous springs and seeps. Livestock gravitate, unlike bison, to these wet areas to feed, cool off and loaf, and to water, being Savannah-derived animals, and they end up scarring the fragile landscape with hummocks that take decades, if ever, to naturally heal, assuming cattle are no longer adversely modifying it. Fishless, the hummocked areas are more likely to grow mosquitoes which may carry deadly West Nile Virus and West Nile Encephalitis, which create health risks for anglers and other outdoor recreationists as well as real threats to migratory birds and sage-grouse, a Federal Candidate Species warranting ESA protection.

Siltation of streams and removal of shade-producing riparian vegetation by feeding and trampling cattle also creates better habitat for tubificid worms that are an integral part of the life cycle of fish parasites that causes deadly whirling disease, which disproportionately attacks native cutthroat trout in the West, to the advantage of non-native salmonids like brook trout and brown trout. The Forest Services' facile explanation on the ecological functioning of spring creeks and their reported lack of flushing flows fails to take into account the accelerated sediment loading attributable to legacy logging and grazing as well as road and trail encroachment (used by ranchers and cattle) and ongoing grazing on the two allotments. The agency's explanation for hydrologic – sediment transport "problems" on the South Fork Allotment in Basin Cabin Spring Creek is not acceptable. Rather,

Montana's spring creeks, when not impeded by cattle grazing, are famous as the most productive trout streams remaining on the Forest.

The Forest Service fails to manage the aquatic and riparian ecosystems of the two allotments for the keystone species, the American beaver. The Forest Services' description (EA at 3-7) of the slow recovery of cattle damaged banks in spring creeks like Basin Cabin Spring Creek, totally ignores the important ecological role beavers play in habitat restoration and maintenance of ecological functions. American beaver could increase the rate of habitat recovery from legacy and current cattle damage, but livestock ranchers and beavers are usually at odds, with ranchers claiming that beavers reduce the amount of forage available and create hazards for cattle that can result in broken legs and other losses. For more than a century in the Madison River, including on the Gallatin National Forest, beavers have been on the losing end of livestock grazing and the area's livestock industry. Forest Service failure to manage the keystone beaver runs contrary to the multiple resource management mandates of FLPMA and ecosystem emphasis urged in the LRMP.

The description (EA at 3-9) of the Lake on land upstream of the South Fork Allotment with diverted waters from Denny Creek and Basin Cabin Spring Creek fails to adequately describe the alterations in flows, the natural hydrograph, sediment transport, and channel morphology on the allotment and how cattle that forage and water upstream and on the allotment accentuate the ecological damage to the detriment of native fisheries.

The Forest Service actually did a good job (EA at 3-9) describing how down cutting and head cuts can alter floodplain hydrology and result in wet meadow desiccation to the detriment of dependent biota including Western toads. However, once again, the agency failed to connect the dots while describing the adverse effects of the Lake and ditch operation and omitted adverse effects from livestock here and elsewhere on the two allotments and cumulatively within the basin. Instead of passively monitoring, the Forest Service should be actively encouraging beavers to create natural, grade-stabilization "structures" or dams that will rapidly restore the channel integrity and natural hydrograph and reverse the ecological damage, which apparently has not reached an equilibrium after decades of destruction.

Instead of identifying four streams for future monitoring on the two allotments (EA at 3-10), the Gallatin National Forest should choose the **No Grazing Alternative**, and permanently get the cows and livestock out of the

streams and riparian areas, and actively promote the restoration of American beaver.

In Section 3.3.4 (EA at 3-10 and 3-11), the Forest Service actually admits that cattle harm fish habitat, streams, and riparian areas but then falls flat in their conclusions that grazing has no impacts on water quality and fisheries. This is hard to believe, a disconnect in proper NEPA review and analysis and shows how defective the EA is and how the Forest Service is making pre-decisional determinations to continue grazing on the two allotments, despite damage to Public Trust natural resources.

We disagree from many years and many miles of stream and riparian monitoring and observations of cattle-impacted ecosystems in Montana and throughout the West when the Forest Service falsely claims (EA at 3-11) that cattle damage is "indirect" since it takes decades to occur. We have observed one cow altering a bank and resulting in significant ecological changes that will not stabilize or recover as long as they remain disturbed by cattle grazing and trampling.

The Gallatin National Forest plays the game of not being sure if Arctic grayling are native Montana fluvial grayling or translocated adfluvial (aka lacustrine) Arctic grayling from the Red Rock Lakes region of Montana (EA at 3-18). This ignores the history including the name of the "Grayling Arm of Hegben Lake" and how Montana fluvial grayling used to occur throughout the upper Missouri River Basin of Montana including the Madison River when Lewis and Clark described them. The Forest Service should be working to restore this native fish and its habitat and to avoid its need for ESA listing under its conservation and recovery responsibilities under ESA, instead of questioning its status as a native fish. The "No Effects" determination seems highly inappropriate in this EA and needs to be reconsidered and fully evaluated by an independent expert.

The Forest Service's grazing allotment EA fails to assess the damage by livestock grazing to anglers and to the viability of native fish populations in the Madison River Basin. Livestock grazing, by their own admission leads to embedded spawning gravels and food production reductions from impacted instream gravels; siltation of pools and losses of undercut banks and large woody debris; which translate into fewer, smaller fish that have higher risks of predation by piscivorous birds and mammals; increased disease and parasite risks; shorter lifespans with higher rates of mortality; reduced growth and survival; and reduced fecundity. There is also a reduced benefit to the angling public with non-native fishes gaining an advantage in livestock-

tainted aquatic ecosystems, especially to those willing-to-pay much more for the opportunity to catch and release a native Westslope cutthroat trout or Montana fluvial grayling on the Gallatin National Forest and downstream reaches.

The Gallatin National Forest fails to fully address water quality and water quantity concerns voiced in the joint BFC-WWP Scoping Comments, meet the goals and objectives of their Land and Resource Management Plan, and uphold the multiple resource management requirements under FLPMA, which apply to the streams, lakes, and other water bodies of the South Fork Madison River and Watkins Creek watersheds in the South Fork and Watkins Creek livestock grazing allotments. Your NEPA analysis, as expressed in this EA, are deficient and defective and are not holistic, looking at ecological processes in their entirety and fully evaluating the adverse effects on water and its dependent biota by legacy, existing, and proposed domestic livestock grazing.

The Forest Service uses water diversions as a bureaucratic excuse for not protecting water quality and dependent biota and their critical habitats rather than using its directives to conserve and recover native fauna and flora, including Threatened, Endangered and Sensitive Species (TES) species like Montana fluvial grayling, Westslope cutthroat trout, and Western toad. The same deficiency is true in your assessment's lack of analysis and incorporation of conclusions in the modified preferred action – the failure to evaluate domestic livestock grazing's significant adverse effects on outdoor recreation including angling. Grazing makes things worse; it is not neutral or an improvement to water quality, quantity, or enhances invaluable Public Trust natural resources, as implied by the Gallatin National Forest in this massive, but ecologically weak Environmental Assessment.

There is a disconnect between water quality impairment and the aquatic ecosystems analyses presented by the Forest Service in the Environmental Assessment and Appendices. A Federal judge once pointed out in a native fishes case that "Fish Need Water Too". A corollary is that "Salmonids Need Cold, Clear, Clean, and Consistent Water". The Forest Service is not complying, and needs to make a decision that brings the agency into compliance with E.O 11988.

Gallatin National Forest's Environmental Assessment and Appendices noted scoping comments concerning water quality effects by domestic livestock grazing, but then marginalized their analyses as "insignificant" by placing them in an Appendix instead of fully discussing and analyzing within the

aquatic and riparian ecosystem sections of your Environmental Assessment. (See Buffalo Field Campaign photo cattle trampled crossing Watkins Creek). Water quantity is even further marginalized and moved outside of this NEPA analysis by removing it even from the Appendices' discussions.

This is a method of piece-mealing or "pigeon-holing" analyses rather than an holistic, ecological, and comprehensive approach as required under NEPA.

Further, on page A-33, the Forest Service makes the unsubstantiated claim that the two grazing allotments do not modify the floodplains, which also flies in the face of generally accepted hydrologic science - including the Forest Service' own research and data - that domestic livestock in riparian areas and streams do modify floodplains by leading to increases in bank alterations which leads to increased bank instability, heightened erosion rates, channel simplification, disconnect of streams from their natural floodplains, down cutting and head cutting, riparian soil compaction and rooted native vegetation removal, increased areas covered by noxious weeds and bare ground, overloading of natural channels with high water flows, overloading of culverts with high water flows while decreasing their capacities with mobilized and deposited sediments and woody debris.

With the channel morphology changes and disconnects from riparian wetlands and the natural floodplain, the stream velocity increases, bank storage decreases, as do access to natural overflow channels and riparian wetlands as the stream shortens, simplifies, and steepens in gradient. Floods became more frequent, longer in duration, and much worse in terms of severity (height of flood or area flooded) as domestic livestock grazing continues to destroy stream and riparian habitats. This contradicts the Forest Services' empty claim of not violating Executive Order 11988 (at A-33). Rather than reducing the risks and damages of floods through sound land management as per the Executive Order, the Forest Service continues with the proposed actions on the two allotments to actually increase the risks and potential damage to public natural resources, private property, and downstream public infrastructure.

Western Watersheds Project v. Matejko (No. 01-cv-259 (D. Idaho, 7/311/2001) Settlement Agreement –Water diversions and conveyances covered under Forest Service Special Use Permits ("SUPs") are subject to conditioning to protect all Public Trust natural resources, including aquatic biota, streams, riparian areas, springs, seeps, and wetlands. This discussion also applies to our Fisheries and TES comments.

Salmon-Challis National Forest reached an out of court settlement with Western Watersheds Project, Federal Court in the 9th Circuit Court of Appeals (http://www.advocateswest.org/sites/default/files/type/title/files/9th_Matejko_decision.pdf) and the Settlement Agreement, which was accepted by the 9th Circuit Court of Appeals and not appealed, is still in force. The Forest Service has admitted that the agency could condition water diversions and conveyances, even though water rights per se were States' rights, including:

- Require Lockable Head gates.
- Require Measuring Devices.
- Require Fish Screens (with approved designs).
- Require Fish-Passage Friendly Water Diversions.
- Condition how much water was diverted from streams and springs to protect other natural resources such as streams, wetlands, springs, riparian areas, Regionally Sensitive Species, T&E fishes and other listed biota, angling and other water-dependent outdoor recreation, water for wildlife, watershed protection, water source protection, minimum desirable stream flows.
- Require ramps and floats in stock water structures (e.g., tanks, troughs, ponds).
- How and When to Maintain Irrigation Diversion Structures and Conveyances (e.g., ditches, flumes, pipes) while permitting Rights-Of-Way ("ROWs") including restrictions, prohibitions, conservation measures, and BMPs.
- Benefit all Public Trust natural resources including aquatic biota, streams, riparian areas, springs, seeps, wetlands, riparian dependent wildlife, soils, water quality, and watersheds – not just to the private benefit or profit of water users.

In other words, the Forest Service in this extant legal Settlement Agreement acknowledged, that although prevailing Western Water Law places water rights and therefore, water diversions under the purview of States, they have administrative powers, a conservation affirmative responsibility (under ESA), and multiple resource responsibilities (under FLPMA) for water diversions and conveyances that cross lands that the Forest is responsible for managing.

The Gallatin National Forest erred when they ignored this 9th Circuit Court of Appeals settlement agreement between WWP and the Forest Service and should not be hiding behind State's water rights when avoiding water quality problems including not meeting designated uses like supporting Aquatic Biota, Coldwater Biota, and Salmonid Spawning as well as contact and non-

contact recreation, but rather should be acting accordingly to the accepted Settlement Agreement. Much of the Water Quantity and resulting Water Quality problems mentioned on the two allotments and the encompassing watersheds should be addressed and treated as Interrelated/Interdependent Effects and Cumulative Effects (under ESA) and as Cumulative Impacts (under NEPA) to the proposed domestic livestock grazing permit Federal Actions. "But for" the highly subsidized public grazing permits (Moscowitz), much of the water diversions for domestic livestock watering and forage production would not occur. In a more holistic NEPA analysis, these connections would be fully considered, not dismissed, and the conclusions would point to the **No Grazing Alternative**, which BFC and WWP fully supports.

Additionally, we strongly request that the Gallatin National Forest review and modify their SUPs and Rights-Of-Way for water diversions and conveyances that cross lands managed by the agency for the entire public, not just the livestock industry.

The Gallatin National Forest fails to fully address "Greenhouse Gases and Climate Change" concerns voiced in the Scoping Comments, meet the goals and objectives of their Land and Resource Management Plan, and uphold the U.S. Department of Agriculture's and National Forest's Climate Change Policies and Guidelines, which apply to the South Fork and Watkins Creek domestic grazing allotments, as well as other public lands managed by the Gallatin National Forest.

According to Forest Service Chief Tom Tidwell (April 20, 2010 – http://www.fs.fed.us/climatechange/):

> *"The nation's forests and grasslands are at risk due to the effects of climate change and other major drivers of landscape change. But the Forest Service is already doing much to help ecosystems adapt. We can and will do more, but we cannot succeed alone."*

U.S. Forest Service planning documents, "Climate Change Considerations in Project Level NEPA Analysis" and "Climate Change Considerations in Land Management Plan Revisions" instruct the National Forests, including the Gallatin National Forest, on how to substantially deal with climate change in NEPA analyses like this livestock grazing EA.

Again, the Forest Service has relegated responses to serious, ecological concerns expressed in Public Scoping Comments concerning Greenhouse Gas Production and Climate Change to the Appendices of the EA (Appendix A.3.) where they remain marginalized and outside of the scope of the analyses and conclusions reached by the Gallatin National Forest for evaluating adverse

effects of domestic livestock grazing on the two allotments and in choosing their modified proposed action. BFC and WWP contend if properly discussed and analyzed, the Forest Service would reach the same conclusion BFC and WWP does; that is, selecting the **No Grazing Alternative** is the environmentally preferred decision.

Traill and colleagues found that populations of endangered species are unlikely to persist in the face of global climate change and habitat loss unless they number around 5,000 mature individuals or more. The buffalo population currently number 3,700. As noted in Swilling's analysis, if the Gallatin National Forest cooperated in providing habitat for this indigenous species up to 150 buffalo could occupy the Forest, thereby offering some measure of support to the population's persistence in a changing climate.

The comments below also apply to our "Water Quality" comments in the Forest's analysis and review.

(EA at pages A1-A3) In this rather simplistic discussion referred to by the Forest Service as an "analysis" the Gallatin National Forest seems to believe that the agency has dealt with previous Public Scoping Comments concerning greenhouse gases and climate change by simply just waving their "hands" and claiming no problems. However, the agency misses the point that is emphasized by the Obama Administration, USDA, and the Forest Service with their Climate Change policies and guidelines as well as the prevailing science, some of it conducted and or funded by the Forest Service.

Air and water temperatures, particularly in the Northern Rockies at relatively higher elevations, are already rising and breaking records in the West. Competing climate change models and scenarios including those of the USGS, NOAA, and the Forest Service Research Centers (e.g., Rocky Mountain Station, Boise Aquatics Lab) all agree that Montana's stream temperatures will be higher in the summer and less suitable for native stream salmonids that require cool, clean, flowing waters with high levels of dissolved oxygen.

Aquatic and riparian habitats crucial for Western toad survival and viability will become less suitable and more ephemeral under the climate change scenarios that predict less snowpack, more runoff, and warmer and less precipitation for this region of Montana in the Greater Yellowstone ecosystem.

What the Forest Service should have been analyzing but fails entirely to accomplish in this deficient NEPA document is to project the Environmental Baseline of the stream habitats and other ecosystems of the two allotments into the future with projected water temperatures, with and without further

grazing and riparian habitat destruction as well as with restored riparian and stream ecosystems which may partially mitigate climate change-induced increases in water temperatures. The refined modeling tools are available from the Great Northern Landscape Conservation Consortium (in which the Forest Service is a vital partner http://greatnorthernlcc.org/partners) USGS and the Forest Service Rocky Mountain Station to project temperature changes for the Hebgen Lake watersheds as well as the streams of the Watkins Creek and South Fork Allotments (http://greatnorthernlcc.org/supported-science-projects). The Forest Service should employ them and then make analytical conclusions of the true effects of the domestic grazing allotments in light of ongoing climate change adverse effects; which would lead them to the **No Grazing Alternative**.

The Forest's greenhouse gas discussion and arguments are specious since your agency admits that domestic cattle create greenhouse gases and worldwide are considered a significant source of methane. The Forest Services' NEPA analysis is defective since they ignore cumulative effects and how, the domestic cattle on the two allotments add to the regions, nations and worlds climate change problems, not help solve or mitigate them.

The Gallatin National Forest fails to fully address migratory birds and the Migratory Bird Treaty Act concerns voiced in the Scoping Comments, meet the goals and objectives of their Land and Resource Management Plan, and uphold the Federal Migratory Bird Treaty Act, which applies to the U.S. Department of Agriculture, the National Forest Service, the Gallatin National Forest and the public lands your District manages including the South Fork and Watkins Creek domestic grazing allotments.

Analysis of migratory birds (see Appendix A.5) in this defective NEPA document prepared by the Forest Service largely ignores Public Scoping Comments and concerns for migratory birds. Consider the example of adverse effects of domestic livestock grazing, which includes the construction, maintenance, and use of watering systems for cattle including stock tanks, ponds, and troughs. Unless they are outfitted with USFWS approved designs for ladders and rafts, migratory birds when trying to water will become trapped and drown. Instead of properly addressing these ecological and legal concerns in the Environmental Assessment for the two allotments, the Gallatin National Forest only gives them a cursory look in a feeble attempt to circumvent their NEPA and FLPMA multiple resource responsibilities by relegating their weak discussion to an Appendix to your analysis, which is clearly outside of proper NEPA analysis and the Forest Services' conclusions. The Gallatin National Forest should be taking a more holistic, ecological view of the impacts of the two allotments and before deciding to renew domestic

livestock grazing. The **No Grazing Alternative** should be fully assessed for its positive effects on migratory birds and their habitats.

Many of the stock-watering devices on the Gallatin National Forest were observed by BFC and WWP as not being outfitted with the proper bird (also for amphibians and small mammals) escape devices (e.g., floats, rafts, ladders, ramps) in violation of the Migratory Bird Treaty Act. As natural springs, seeps, wetlands, and streams are dewatered for livestock watering and forage production in water diversions and so-called "range improvement" systems, natural water sources and habitats for migratory birds and other wildlife are adversely modified. Particularly in arid upland conditions or during prolonged periods of little precipitation or extended droughts, these stock water devices become attractive nuisances for many types of migratory birds, often leading to fatalities that would have been prevented with the proper devices or if they are removed from the landscape, as BFC and WWP urges under the **No Grazing Alternative**.

The Gallatin National Forest also largely ignored the substance of our joint scoping comments concerning livestock fencing and adverse wildlife effects. Lacking in the discussions, analyses, and conclusions in the Environmental Assessment and its appendices are also how livestock fencing creates artificial perches for raptors and other bird/wildlife predators, giving them an advantage in preying on migratory birds and other wildlife that would not occur without these so-called "range improvements". The discussion on fences and wildlife like elk, moose, antelope, deer and others also ignores how barbed wire fences kill wildlife every year. Some bodies are not located because of salvage by scavengers and predators.

This is particularly a recognized problem for sage-grouse, a Federal Candidate Species that is warranted for ESA listings and protections. Fences were not observed with the Best Management Practices for improving visibility that the Forest Service has signed onto with its sage-grouse initiatives. Removing livestock and their fencing under the **No Grazing Alternative** would eliminate these unnecessary risks and lessen the need for ESA protections for sage-grouse, thereby allowing the Gallatin National Forest and the USDA to help meet their affirmative conservation responsibilities under the Endangered Species Act and the objectives of its LRMP and Sensitive Species policies.

The Forest Services' argument that fencing would still occur if public livestock grazing was eliminated from the Gallatin National Forest on nearby private lands is specious, and totally ignores the regional livestock industry's

dependence on highly subsidized public livestock grazing allotments (Fleischner; Moscowitz). Fencing is a Cumulative Effect that is also an Interrelated/Interdependent Effect under ESA, and a Cumulative Impact under NEPA that the Gallatin National Forest should be fully considering: that much of the adverse effects like barbed wire fencing killing wildlife and fragmenting habitats or water diversions and dewatering of streams and springs for domestic livestock watering and forage production would not occur "but for" highly subsidized Federal grazing permits on public lands.

Proposed provisions for non-use of the South Fork and Watkins Creek livestock allotment will not provide habitat for buffalo on the Forest as the Gallatin National Forest has agreed to cooperate in the removal of all buffalo from the Forest annually; the Forest Service must ensure its decision allows for bison habitat access and use.

In relevant part, the 2008 management plan (IBMP 2008) states the following:

> Management Action 3.2.c-----Haze bison from the Hebgen basin into [Yellowstone National Park] with a target date of May 15.
> *Monitoring Metric:*
> • Consistent with management action 1.1.a, assess the prevailing environmental conditions and reach consensus by May 13 on a step-wise, integrated plan for the end-of-winter return of bison into [Yellowstone National Park] from Zone 2 (Lead =MDOL/NPS).
> • Annually document the timing of the end-of-winter return of bison into [Yellowstone National Park], the number of bison returned, prevailing environmental conditions, and success or lack thereof of hazing bison and getting them to remain in the park (Lead = MDOL/NPS)

Thus, the Forest Service's non-use provisions in Alternative 4 (EA at 2-9) are insufficient to address bison-livestock conflicts and concerns. The Forest Service must ensure its decision regarding these allotments enables it to provide habitat for bison and ensure a viable population exists across the forest.

The Gallatin National Forest should choose the No Grazing Alternative, the least costly alternative to American taxpayers. Supporting the No Grazing Alternative permits the Forest to free up scarce resources and people in these times of fiscal austerity.

The Gallatin National Forest should choose the **No Grazing Alternative,** as it is "the least expensive alternative for the Forest Service." (EA at 3-78) The one-time costs of removing allotment infrastructure have multiple benefits for Forest resources. While we dispute the allocation of weed control costs to the **No Grazing Alternative** – a consequence of legacy livestock grazing, and not removal of livestock from the allotments – closure of the South Fork and Watkins Creek would permanently eliminate costly monitoring requirements and allocation of scarce people and resources on the Gallatin National Forest.

In a time of Congressional austerity, cutbacks and fiscal constraints, the Gallatin National Forest should choose an alternative that saves resources and is the least costly to taxpayers. On this basis, the **No Grazing Alternative** is the preferred fiscally responsible choice.

Permanent closure of the South Fork and Watkins Creek cattle grazing allotments will connect thousands of acres of habitat on the Gallatin National Forest that is critical for wildlife, water quality, diversity and long-term viability of buffalo inhabiting Hebgen Basin.

The South Fork and Watkins Creek is one of the last public cattle grazing allotments on the Gallatin National Forest in the entire Hebgen Basin. The trend - in Gardiner basin, Hebgen Basin, and the Taylor Fork on the Gallatin National Forest - is closure of cattle grazing allotments to protect habitat, water quality, native fish and plants, and wildlife diversity. We encourage the Forest to adopt a long-term view of your decision and permanently close the South Fork Watkins Creek to benefit all the resources on the Forest.

Thank you for taking action to protect this critical habitat for migratory buffalo on the Gallatin National Forest by adopting the **No Grazing Alternative**.

Daniel Brister, MS
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Buffalo Field Campaign

Jon Marvel
Executive Director
Western Watersheds Project

Attachments incorporated by reference for review and evaluation by the Gallatin National Forest on the South Fork Watkins Creek livestock grazing allotment.

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