Data Submitted (UTC 11): 6/5/2019 6:00:00 AM
First name: Marshall
Last name: Swearingen
Organization:
Title:
Comments: Dear Mary Erickson and Plan Revision Team,

Please accept my comments in the attached PDF.

Thank you for the opportunity to comment on the draft plan at this critical juncture for the Custer- Gallatin National Forest. I wish you the best in making your final decision.

When I went up Buffalo Horn Pass last July, it was the kind of clear morning that asks you to breath a little deeper. The meadows were still green from recent rain, and I was surprised to see a bit of late-blooming balsamroot among the larkspur as we shouldered our packs at the Tom Miner trailhead. My wife, Sarah, and I were hoping to find a few bolete mushrooms under the spruce, to flavor the venison come winter. We try and visit Buffalo Horn Pass about once a summer. It's something we look forward to, an annual tradition.

Less than a quarter mile from the truck, around the time we crossed the invisible line marking the wilderness study area, we came on grizzly bear tracks pressed into the mud where the trail threads into aspens. We were on their turf now, and our senses perked up. Not long after, as we started the climb to the ridge, we caught up to a couple other hikers, probably in their 60s, taking a break in the shade. We all talked for a couple minutes about how nice the day was, about the bear tracks. Then Sarah and I headed for the crest.

There are many areas of the Custer Gallatin National Forest where I enjoy cutting firewood with a chainsaw, camping out of my truck, riding a bike and occasionally a snowmobile. In the roughly 30 years I've lived here, I've hiked plenty of trails, fished the creeks and rivers and lakes, hunted a few ridges and skied a handful of peaks. Going up Buffalo Horn Pass, and sometimes on to Ramshorn Peak, I like to wander among the remnants of the 50 million-year-old sequoias that once blanketed Mount Fuji-like volcanos here. Like many facets of our big, wild landscape, these old trees help me put my life in perspective. Sometimes I find myself saying simply, Thank you.

I also like being on Buffalo Horn Pass because it reminds me how close we are to Yellowstone, the great core of our wild backyard, and how that wildness radiates outward, occasionally revealing itself to human visitors in the form of grizzly tracks, among other things. From Buffalo Horn Pass last July, we could see south along the crest to the snow-speckled peaks along Yellowstone's northern edge. We dozed in the shade and poked around under the spruce. No boletes this time. I wandered a bit up the ridge, where a lot of the whitebark pines have died off in recent years. A warm wind was carrying a bit of distant wildfire smoke into the valley.

It would seem the basic decision we face is how much of that wildness we can hang onto. It's a question of our capacity for restraint. Of course wilderness provides advantages to humans, including clean water, clean air, meaningful experiences and even cognitive benefits not yet fully

articulated by science. I would like to see these things continue for my friends and family, including my 5-month-old son. But restraint is basically not about us, which makes it yet more difficult and important. It is about giving a bit of breathing room to other forms of life that, in a blink of time, have gotten squeezed onto smaller and smaller areas of our home ground.

These are some of reasons I support Alternative D. In these comments I would like to share a few more reasons why I believe Alternative D is the best choice.

I. The Big Picture

How to manage the Custer Gallatin National Forest should be considered within the big picture, as required by 2012 Planning Rule [sect] 219.1(b), "Land management plans guide sustainable,

integrated resource management of the resources within the plan area in the context of the broader landscape." (My emphasis added here and throughout these comments.)

1. Worldwide loss of habitat and biodiversity

The latest assessment by the United Nations of international species loss, released in May 2019, is a 1,500-page report authored by hundreds of international experts and based on thousands of scientific studies. According to The New York Times, it is "the most exhaustive look yet at the decline in biodiversity across the globe and the dangers that creates for human civilization" (Plumer, 2019). The summary of its key findings, approved by representatives from the U.S. and 131 other countries, were cited in the Times:

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* More than 500,000 land species do not have enough natural habitat left to ensure their long-term survival.
* Over the past 50 years, global biodiversity loss has primarily been driven by activities like the clearing of forests, the expansion of roads and cities, logging, hunting, overfishing, water pollution and the transport of invasive species.
* Three-quarters of the world[rsquo]s land area has been significantly altered by people.
* Roughly 5 percent of species worldwide are threatened with climate-related extinction if global average temperatures rise 2 degrees Celsius above preindustrial levels. (The world has already warmed 1 degree in that period.)
* Biodiversity loss is projected to accelerate through 2050 ... unless countries drastically step up their conservation efforts.

In a different study published in 2016, an international team of scientists mapped global decline of wilderness, characterized as ecologically intact landscapes mostly free of human disturbance (Watson et al, 2016; References listed at end of comments). The researchers found that in the period of 1990-2010, roughly one-tenth of global wilderness was lost, which the scientists called "alarming." Moreover, they found that wilderness loss was occurring at roughly double the rate of wilderness protection and concluded: "Our findings underscore an immediate need for international policies to recognize the vital values of wilderness."

1. Human pressure on the Greater Yellowstone Ecosystem

Two researchers in the Department of Ecology at Montana State University recently published a comprehensive review of the human pressures on the Greater Yellowstone Ecosystem (Hansen and Phillips, 2018). Here are a few key findings summarized in the article's abstract:

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* Human population has doubled, and housing density has tripled in the GYE since 1970. Both are projected to double again by 2050. Human development is now estimated to cover 31% of the GYE.
* Average temperature has warmed 0.8[deg]C since 1950 and is projected to increase 2.5[ndash]5.3[deg]C by 2100.
* These changes in land use and climate have reduced snowpack and stream flows, increased stream temperatures, favored pest outbreaks and forest die-off, fragmented habitat types, expanded invasive species, and reduced native fish populations. Large mammal populations, in contrast, have been increasing in numbers and expanding in range.
* The Wildland Health Index Scorecard rated 6 of 9 vital signs as relatively stable or improving in national parks and designated wilderness. On private lands, in contrast, five vital signs were rated as deteriorating.

1. Our history

The "broader landscape" evolves through time, and thus our history is a dimension of context. Our history includes the extermination of 60 million bison, the wiping out of grizzly bears from most of their native range, overgrazing, destructive mining, the introduction of noxious weeds and countless other examples of environmental degradation that are alluded to throughout the draft plan and EIS.

But our story also includes bold and forward-looking acts of conservation, including the establishment of Yellowstone National Park and multiple large areas of designated wilderness surrounding it. In each case there was widespread and outspoken opposition. In the 1970s, for instance, county boosters and motorized recreationists fought against the proposed 1 million-acre Absaroka-Beartooth Wilderness and instead wanted a paved road up the Boulder and through to Slough Creek. It is unfortunate that the Forest Service subscribed to these calls for dividing this nationally significant wildland and proposed a wilderness half the size of what we enjoy today.

Local advocates and a persistent Sen. Lee Metcalf championed the bigger vision against the odds.

Today, it is widely recognized that these permanently protected wildlands have played a key role in the regional survival and recovery of rare wildlife such as grizzly bears and bison; that these protections have not precluded economic development but rather fostered it; and that they provide local residents and far-flung visitors alike with the opportunity, increasingly rare, to experience solitude and connection to the untrammeled natural world. Few places have more direct examples of how wilderness preservation pays off in the long run.

II. General Arguments for Wilderness in Alternative D

Within the global and regional context described above, there is a need to preserve the relatively small amount of land yet unaltered by humans in order to provide habitat and stem the loss of biodiversity. Because the Wilderness Act has a well-understood meaning and provides clear management standards to ensure long-term protection, designating wilderness is the best way to do this. Furthermore, the opening of The Wilderness Act, Sec.2(a), describes the act's purpose, "to secure for the American people of present and future generations the benefits of an enduring resource of wilderness," as a response to trends that are now occurring in the GYE: "increasing population, accompanied by expanding settlement and growing mechanization."

Because it recommends the greatest fraction of suitable lands for wilderness designation, Alternative D is the best choice. Alternative D represents a once-in-a-generation opportunity to

provide long-term protection for some of the world's best remaining wild lands with relatively minor trade-offs in terms of local recreational preferences and local timber and mining economy. Other reasons why the Forest Service should choose Alternative D include:

1. Alternative D best complies with broad requirements of Planning Rule and Multiple-Use Sustained-Yield Act

The Planning Rule [sect] 219.2(b) requires that "A plan reflects the unit[rsquo]s expected distinctive roles and contributions to the local area, region, and Nation, and the roles for which the plan area is best suited, considering the Agency[rsquo]s mission, the unit[rsquo]s unique capabilities, and the resources and management of other lands in the vicinity."

If one looks at Custer Gallatin in the national context, it is clear what its "unique capabilities" are. This national forest has retained large, intact, wild landscapes that are increasingly rare. While the Custer Gallatin has modest timber value and offers opportunities for pastimes such as mountain biking, it is "best suited" for providing world-class habitat for rare wildlife such as grizzly bears, wolverines and mountain sheep, as well as world-class opportunities for humans to experience solitude and connection with wild ecosystems.

Furthermore, Planning Rule [sect] 219.1(b) requires that the final plan be consistent with the Multiple- Use Sustained-Yield Act, which defines [lsquo][lsquo]multiple use[rsquo][rsquo] as:

The management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services ... that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output." (16 U.S.C. 531(a))

Breaking this down:

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* The plan should be driven not by local recreational preferences but by "the needs of the American people." The "American people" includes millions of citizens whose local wildlands have perished, and who value wild places and wildlife even if they never visit these places.
* The plan should weigh the forest's "relative values" within the national forest system. Resources such as timber and non-wilderness recreation are provided for across a much larger proportion of the national forest system. Lands with wilderness characteristics are a minority, and are only becoming more scarce, giving wilderness a high "relative value."
* The plan should balance uses according to "relative value" and make "the most judicious use of the land" for "some" of these resources, not accommodate any and all uses because of demand from local recreational users etc.

Alternative D, by recommending the most wilderness, makes "the most judicious use" of wilderness-quality lands according to their "relative value" within the national forest system, best meeting "the needs of the American people" in accordance with the Custer Gallatin's "unique capabilities" and "the roles for which the plan area is best suited."

1. General problems with backcountry areas vs. recommended wilderness

In alternatives besides D in which the agency considers "backcountry" designations instead of recommended wilderness, several potential problems arise. Some of these I treat separately on an area-by-area basis in the next section, but general problems are considered here.

1. Can Forest Service provide monitoring within its resource constraints?

One of the main selling points within the public debate surrounding land designations is that the agency will monitor the impact of recreational use within the backcountry areas and adjust management as necessary to ensure desired conditions for wildlife and other forest resources. Is it not more difficult to manage for this performance-based standard than for the clear, prescriptive standard of wilderness? I worry that the agency, in an era of dwindling budgets, will not be able to sufficiently conduct this monitoring. This could end up creating conflict similar to the recent disputes over the travel plan. The agency should be honest with itself and the public about its capacity for monitoring backcountry areas.

1. Do administratively-determined backcountry areas conflict with the Multiple Use-Sustained Yield Act and the Wilderness Act?

Interestingly, in the lead-up to passage of the 1977 bill that created the Hyalite-Porcupine-Buffalo Horn Wilderness Study Area and other WSAs in Montana, there was a similar proposal for backcountry designation (in lieu of the wilderness study areas). When Sen. Lee Metcalf requested that the Congressional Research Service study the issue and make a recommendation, the response was firmly against a backcountry designation. Robert Wolf, who authored the report, stated:

The issue is whether the agency is substantially meeting its obligations under the Multiple Use-Sustained Yield Act and the Wilderness Act. What is proposed is a category which leads inevitably to other specific categories until finally the national forests are carved into precise units of fixed uses. (Roholt, 1977)

1. Backcountry Areas do no provide sufficient long-term protection for wilderness-quality lands

Although all land designations in the final plan will be administrative policy and therefore temporary, recommended wilderness sets the stage for the permanent, legislated protection of wilderness-quality lands as designated wilderness. Administrative designations do not provide the long-term protection that our world-class wildlands deserve, as the forest policies are readily subject to amendments. Backcountry designation, especially, provides weak protection for our wilderness candidates in the Gallatin Range, Crazies, Pryors and elsewhere.

For instance, standards defined for Backcountry Areas in Draft Plan 2.4.46 include Standard 1, which states that "temporary roads may be constructed" (p131). Even "temporary" roads create long-lasting impacts once closed, including spread of noxious weeds and ongoing illicit or legal (foot) recreational use. These are at odds with the "little permanent or long-lasting impact" stated as a Desired Condition stated for Backcountry Areas.

Another cause for concern is FW-SUIT-BCA-1, which states that "Timber harvest may be allowed for purposes such as fuels reduction, restoration, or wildlife habitat enhancement" in Backcountry Areas (p132). It is widely documented that the Forest Service is conducting commercial logging

under these auspices (as opposed to timber production). This is therefore little assurance that Backcountry Areas will not be logged.

Both temporary roads and logging could disqualify these wilderness-quality lands for future wilderness designation, which is unacceptable given the "big picture" of species and biodiversity loss. Alternative D is the best choice because it recommends our wild lands for the permanent protection they deserve.

1. Responses to common arguments against recommended wilderness

"We already have enough wilderness here."

Response: The Custer-Gallatin is about one-third wilderness, which is a sizeable fraction compared to many other national forests. As outlined above, according to the Multiple-Use Sustained-Yield Act and the Planning Rule, the agency should consider "the most judicious use of the land ... with consideration being given to the relative values of the various resources" and manage for the area's "distinctive roles and contributions" on local, regional and national scales. Because the Custer Gallatin has retained a relatively high proportion of its lands in a roadless, undeveloped state, "the combination (of uses) that will best meet the needs of the American people" should here balance more toward wilderness, just as in other national forests it balances toward timber production etc. Even if all remaining roadless lands on the Custer Gallatin were designated wilderness, one-third would remain for multiple uses.

"Wilderness shuts people out."

Response: Wilderness is available to basically everyone. Only certain recreational preferences are disallowed. This common argument, which equates recreational preference with personal access, is a logical fallacy. In wilderness I routinely encounter elderly people and children who seem perfectly content to visit wilderness on foot or horseback.

"Wilderness concentrates motorized and mechanized recreation into a smaller area, which results in increased resource damage."

Response: This argument assumes that the current level of motorized and mechanized use on the national forest is legitimate, and that users are unable or unwilling to change their recreational preferences. Furthermore, it would seem that concentrating mechanized/motorized use would actually be a preferred strategy. In my experience, relatively limited amounts of motorized use alter a trail (i.e. creating wider turns at switchbacks, ruts in wet areas, etc.), and beyond that it's difficult to discern the incremental impact.

"As population grows, available area to recreate in isn't keeping up."

Response: This is a legitimate concern and is one I've heard from people at public meetings. The assumed implication is that new wilderness should not be recommended because that would limit the construction of new roads, trails and facilities like campgrounds. To a degree this is true.

However, new trails and facilities could be built in areas that are not considered for wilderness. I support a combination of recommended wilderness in Alternative D with some Recreational Emphasis Areas in places like Hyalite.

III. Specific Recommendations

These comments focus on land designations considered in the different geographical areas of the Custer Gallatin.

1. Gallatin Range

My main concern is the long-term protection of this exceptional area for wildlife and wildland character. The time has come for designated wilderness in the Hyalite-Porcupine-Buffalo Horn Wilderness Study Area (HPBF WSA) and other wilderness-quality lands in the Gallatin Range. For decades, it has been widely recognized that this area is essentially an extension of Yellowstone, providing world-class habitat, wildlife connectivity into adjacent ranges such as the Spanish Peaks, and a buffer against the human activity in the Bozeman area. The checkerboard pattern of land ownership that precluded earlier wilderness designation has been resolved.

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1. 1993 Gallatin Range Consolidation and Protection Act

During the congressional hearing for the 1993 Gallatin Range Consolidation and Protection Act that blocked up the national forest, the intention of eventual wilderness protection was clear. Consider a few excerpts from the transcript of the legislative hearing:

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* Gov. Marc Racicot (submitted letter): "I support the consolidation and protection of the Gallatin area's important wildlife habitat, majestic scenery, pristine water quality, recreational values and wilderness potential."
* Rep. Pat Williams: "... the range's importance to the integrity of Yellowstone has never been questioned ..."
* Big Sky Lumber Company (submitted letter): "The passage of this Legislation will safeguard for future generations the finest wildlife habitat and most pristine wild lands on the North American continent."
* Patrick Graham, director of Montana Fish, Wildlife and Parks: "It is clear that these lands are of both local and national significance."

When one considers this in the current context of the growing human pressures on the GYE described above, the impetus for wilderness has only grown stronger.

Furthermore, amid the conversation about allotting the lands within the HPBF WSA to various recreational user groups (i.e. the Gallatin Forest Partnership agreement), one should consider what has already been gained and lost by various users as a result of the 1993 land trade:

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* Roughly 40 sections of national forest were gained in the Storm Castle Creek area, which is heavily roaded and which has an extensive network of trails open for motorized and mountain bike use.
* Nearly 20 square miles was consolidated in the Buck Creek and Taylor Fork area, another area where the majority of trails are open to motorized use.
* At least 13 sections were gained in the eastern Bangtails, an area used extensively by mountain bikers and where every trail is open to motorized use.
* At least six square miles were added to the already large block of private land in the Big Sky area, further severing wildlife connectivity between the southern Madison Range and the Spanish Peaks.

The HPBH WSA lands that were involved in the 1993 swap are actually a minority compared to the lands that were consolidated for motorized and mechanized use. Seen within this full context, Alternative D most fully meets the intent, expressed throughout enacting of the 1993 bill, to provide permanent protection for Gallatin Range.

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1. The Gallatin Range is "best suited" for wilderness

I hope that the plan revision team has taken time to become acquainted with the 2015 report "Wilderness, Wildlife, and Ecological Values of the Hyalite-Porcupine-Buffalo Horn Wilderness Study Area" by Frank Lance Craighead. The 155-page report analyzes the ecology of seven "focal species" in the HPBH WSA, including grizzly bear. The report "summarizes the current state of knowledge of the ecology of the HPBH WSA in an effort to provide a solid scientific foundation to determine its 'suitability for preservation as wilderness' as mandated by the Montana Wilderness Study Act," according to Craighead.

Taken as a whole, the Craighead report provides a compelling case that the HPBH WSA's "distinctive roles and contributions" and "roles for which the plan area is best suited" is as habitat for these species, and that such habitat is best ensured through wilderness protection. The executive summary of the report states:

To ensure that wildlife have sufficient habitat for population persistence into the future, and to confer resilience in the face of climate change and land use change, there must be an adequate amount of protected habitat available among the spectrum of lands that are accessible to those wildlife. The more permanent that protected habitat is, and the larger the area is, the more certainty there is that wildlife populations can persist. Fragmenting the HPBH WSA into smaller pieces of protected habitat would greatly diminish its value for wildlife habitat and the provision of ecosystems services and could nullify its ability to function as a refuge from climate change.

I am unaware of any other report or similarly compelling argument that the HPBH WSA, in portions or entirety, is best suited for other uses, including mechanized recreation.

By recommending wilderness for the entire HPBH WSA, Alternative D best complies with the requirement that the plan "reflects the unit[rsquo]s expected distinctive roles and contributions to the local area, region, and Nation."

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1. Alternative D best meets requirements for grizzly bear management

2. Draft EIS makes arbitrary conclusions about grizzly bear connectivity

Planning Rule [sect] 219.8(a)(1) requires that the Forest Service maintain and restore connectivity. Furthermore, Draft EIS 3.10.2, Federally Listed Wildlife Species - Grizzly Bear, states:

Since the Custer Gallatin covers much of the northern portion of the Greater Yellowstone Ecosystem for grizzly bears, it is important in terms of providing habitat connectivity to facilitate grizzly bear movement between the Greater Yellowstone Ecosystem and other grizzly bear ecosystems to the north, to promote genetic connectivity among grizzly bear populations in the continental U.S. (p364)

Grizzly bear movement between these ecosystems would enhance the genetic diversity and related long-term persistence of one or both populations, which is a long-term management goal under the revised plan alternatives. (p377)

The Draft EIS cites grizzly bear connectivity studies, including Peck et al 2017, and notes that Alternatives B, C and D include designation of Key Linkage Areas in the northern Gallatin and Bridger ranges that would provide connectivity for grizzly bears in areas where those studies have identified that grizzly bear mobility across the landscape is preferred.

However, citing studies including Peck et al, the Draft EIS states:

In addition to the Gallatin/Bridger mountain connection, research has shown a potential movement corridor between the Madison Range on the Custer Gallatin and the Tobacco Root/Gravelly mountains to the west and northwest, although this route was rated as secondary, or even inferior, to the Gallatin/Bridger connection. (p377)

Peck et al should be considered the best available science because it was published most recently of all the studies cited, was authored by an interagency team of biologists and is based on known GPS locations of 124 grizzly bears and the most state-of-the-art computer modeling. Peck et al shows roughly equal preference for grizzly bears outside the GYE migrating into the GYE through the Gallatin/Bridger mountain connection and the Tobacco Root/Gravelly mountains route, which would provide for the stated goal of "genetic connectivity":

The Draft EIS therefore makes an arbitrary interpretation that does not accurately interpret the best available science.

Furthermore, with regard to the Tobacco Root/Gravelly mountains route, the Draft EIS states:

... a considerable amount of National Forest System lands along this corridor are already within designated wilderness (Lee Metcalf) so it would not be subject to the same potential management pressures facing the Gallatin/Bridger Mountain connection. (p377-378)

However, this assertion ignores that a critical portion of this route on the Gallatin side lies outside the HPBH WSA

and is therefore vulnerable to development that would sever this corridor.

None of the alternatives specify a Key Linkage Area in this corridor between the Lee Metcalf Wilderness and the HPBH WSA. However, Alternative D recommends wilderness for this corridor, which would provide for the same and additional conditions for connectivity. Therefore, only Alternative D complies with the requirements for connectivity based on the best available science.

1. Draft EIS fails to take "hard look" at impacts of mechanized recreation on grizzly bears

In the public discussion surrounding the forest plan revision, one of the main issues that has arisen is the potential impact of mountain biking on wildlife such as grizzly bears if national forest in the Gallatin Range and elsewhere is designated a backcountry area instead of recommended wilderness, as it would in the Buffalo Horn and West Pine areas in Alternative C.

A May 22, 2019, article in Mountain Journal by Todd Wilkinson includes extensive discussion of the topic and quotes Dr. Christopher Servheen, who "spent four decades at the helm of the U.S. Fish and Wildlife Service[rsquo]s Grizzly Bear Recovery Team in the West (and) is an adjunct research professor in the Department of Ecosystem and Conservation Sciences at the University of Montana," according to Wilkinson. The article, among other things, quotes Servheen as saying:

I do believe that mountain bikes are a grave threat to bears[mdash]both grizzly and black bears[mdash] for many reasons and these are detailed in the Treat report and recommendations ... High speed and quiet human activity in bear habitat is a grave threat to bear and human safety and certainly can displace bears from trails and along trails. Bikes also degrade the wilderness character of wild areas by mechanized travel at abnormal speeds.

In Draft EIS 3.10.2 Federally Listed Wildlife Species - Grizzly Bear, "Effects from Recreational Events" (p385), the Forest Service acknowledges similar potential impacts on grizzly bears due to recreation:

Recreation events that involve people moving quietly through grizzly bear habitat in the dark increase the probability of a surprise encounter, which could trigger a bear attack. This plan component addresses an emerging issue and would do more to reduce avoidable bear- human conflicts than direction in existing plans.

Among other evidence that mountain biking could be expected to have detrimental impacts on wildlife such as grizzly bears, Wisdom et al (2018) used telemetry data to track recreationists and elk in Oregon and measured the differences in elk flight distance based on different types of recreation. The team concluded:

Distances between elk and recreationists were highest during ATV riding, lowest and similar during hiking and horseback riding, and intermediate during mountain biking. Our results support the hypothesis that elk avoid trail-based recreation similarly to their avoidance of roads open to motorized traffic on public forests.

However, it would appear the Draft EIS 3.10.2 Federally Listed Wildlife Species - Grizzly Bear, "Effects from Land Allocations" (p380-382) does not include any analysis of potential effects of mountain biking according to concerns raised by Servheen, a veteran grizzly bear manager.

This would seem to be an important issue especially because the two areas considered for backcountry designation in Alternative C (Buffalo Horn and West Pine) overlap with the two grizzly connectivity corridors in the Gallatin Range shown in Peck et al.

Choosing an Alternative other than D would not satisfy the required "hard look" at an issue that would clearly have an effect on grizzly bears. Only Alternative D, by recommending wilderness for the entire HPBH WSA and important grizzly bear connectivity corridors outside of it, would address these concerns.

1. Madison Range and Henrys Lake area

The full Cowboy Heaven RWA depicted in Alternative C has characteristics that make it "best suited" for wilderness, including outstanding opportunities for solitude. It would be a fine and sensible addition to the Lee Metcalf Wilderness, as would the Taylor Hilgard RWA and Cabin Creek North RWA in Alternative D, among others.

I am less familiar with the Lionhead, including its terrain and the history of how mountain biking trails have been constructed and permitted in this area, which by many accounts provides wildlife habitat as exceptional as many areas of designated wilderness on the Custer Gallatin. It would seem that altering the existing RWA defined in Alternatives A and B to accommodate mechanized recreation would set a bad precedent for management of other recommended wilderness.

1. Bridger Range

It's evident in the transcript of the 1993 Gallatin consolidation legislation that there was serious discussion at the time of wilderness in the Bridgers. There was a sense that wilderness supporters were giving up the Bridgers (among other areas) in order to protect the Gallatin Range. The land swap and management decisions since

then have all but removed serious consideration of wilderness in the Bridgers today. This should be remembered when deciding the fate of the Gallatin Range.

The grizzly connectivity study by Peck et al shows the Bridger Range as part of the major corridor extending north from the Gallatin Range. For this reason, the Key Linkage Area in Alternatives B, C and D should be a management priority for the Bridgers.

1. Absaroka-Beartooth

I hike, backpack and hunt multiple times per year in the Absaroka-Beartooth Wilderness. According to the general arguments for wilderness in Alternative D above, I support all recommended wilderness in this area, though I acknowledge that the wilderness boundaries created by some of these additions could present management challenges.

In addition to small additions proposed in Alternative A, I would encourage the revision team make the Line Creek Plateau in Alternative D a priority, because this is an area that especially seems "best suited" for wilderness.

A lot of the smaller additions are good pockets of wild country that would make fine additions to the Absaroka-Beartooth, even if they appear somewhat trivial on the map. I spend a lot of time hunting in the Sheep Creek RWA near the West Boulder River. I encountered a young grizzly bear there a couple years ago, and in general there is a lot of wildlife in that foothills area. I suspect it is similar in many of the other boundary areas proposed for recommended wilderness in Alternative D.

1. Crazy Mountains

Through my travels to public lands around the West, I have come to recognize the Crazies as nationally significant. As an abrupt, high-elevation island range on the edge of the Great Plains and Rocky Mountains, they have exceptional rugged beauty and unique ecology. These mountains could easily have been designated as wilderness or a national monument by now if not for lingering checkerboard land ownership. The ongoing progress made by the Forest Service to consolidate the national forest here suggests that the agency should begin managing the Crazies for their full future potential.

Recommending the high-elevation core of the Crazies as wilderness is consistent with the alpine environment and the prevailing user pattern, which is people backpacking to the lakes to camp and fish. Wilderness recommendation would also seem to elevate the stature of these lands, adding weight behind future land exchange and purchase here.

The wilderness recommended in Alternative D leaves much area for motorized recreation, including the Shields River drainage, Cottonwood Creek, the eastern front and southern foothills. Closing of motorized access to trails such as at Rock Creek could be compensated for by construction of new trails along the southern foothills or eastern front once land swaps are complete. The last time I visited Smeller Lake I ran into a pair of motorcyclists illegally riding that spur trail. The noise and damage to the steep trail was not compatible with this area.

Because of the spiritual importance of the Crazies to the Crow Tribe, the Forest Service should consult closely with the tribe in any management decisions that would impact their traditional uses.

1. Pryor Mountains

I visit the Pryors once or twice a year, usually to camp and hike in the spring or early summer when the south facing slopes of Big Pryor Mountain are more free of snow than other areas. I value that this area is different from any other national forest I am familiar with: dry lowlands (which are the northernmost extent of Utah juniper) interwoven with limestone canyons, rising to the open high- elevation meadows.

The wilderness recommended for the Pryors in Alternative D would protect opportunities for quiet recreation. The increase in motorized use in recent years has been very apparent. Given the Pryors' proximity to Billings, it will be increasingly difficult to protect this unique area without wilderness designation. The wilderness recommended in Alternative D is a balanced proposal that leaves open all existing motorized routes.

1. Alternative D best satisfies requirement to manage for "distinctive roles and contributions" and "unique capabilities"

The Draft EIS states that the Pryor range:

... contains a unique and diverse assemblage of botanical resources and plant associations within a relatively small area. The Pryor Mountains are important for scientific study and education. Due to the exceptional diversity in a small area, many researchers and educators in earth sciences have recognized its scientific value.

Because of a unique convergence of three floristic provinces (Northern Great Basin, Middle Rocky Mountains, and Northern Great Plains), the Pryor Mountains are considered a "botanical hotspot," rich in species and community diversity. More than 400 plant species can be found here.

In the draft EIS, the Forest Service states that "Recommended wilderness areas are ... important for species diversity, protection of threatened and endangered species, protection of watershed, scientific research, and various social values."

Furthermore, Planning Rule [sect]219.9(2) states that the plan must "maintain or restore the diversity of ecosystems and habitat types throughout the plan area," including "rare aquatic and terrestrial plant and animal communities."

Alternative D recommends wilderness of sufficient size and breadth to protect the unique contributions of the Pryors to the national forest system.

1. Draft EIS makes arbitrarily conclusions about grizzly bears in Pryor Mountains

Draft EIS 3.10.2 "Federally Listed Wildlife Species - Grizzly Bear," p364, states:

The Pryor Mountains Geographical Area is within the distinct population segment for the Greater Yellowstone Ecosystem grizzly bear population, but is not identified as suitable habitat for grizzly bears, due to the isolated nature of the geographic area. The Custer Gallatin has no documented occurrences of grizzly bears in the Pryor Mountains.

However, a May 12, 2019 article by Brett French of the Billings Gazette reports that Shawn Stewart, a wildlife biologist for Montana Fish, Wildlife & Parks based in Red Lodge, recently found sign of grizzly bear in the Cottonwood Creek area roughly halfway between the Beartooth Front and the Pryors. Stewart is quoted as saying: "It[rsquo]s always disconcerting to me when someone says that is not grizzly habitat. Bears can probably make a living in a little broader landscape than we give them credit for."

This statement by a wildlife official is evidence that grizzly habitat is a continuum across a landscape that includes, but is not limited to, the "secure habitat" analyzed in the Draft EIS.

This is also a consideration for the connectivity that the Forest Service is required to provide according to Planning Rule [sect] 219.8(a)(1). Planning Rule [sect] 219.19 defines connectivity as:

Ecological conditions that exist at several spatial and temporal scales that provide landscape linkages that permit the exchange of flow, sediments, and nutrients; the daily and seasonal movements of animals within home ranges; the dispersal and genetic interchange between populations; and the long distance range shifts of species, such as in response to climate change.

The draft plan makes an arbitrary definition of connectivity that is much narrower [mdash] not as "daily and seasonal movements of animals within home ranges," but as movement between areas defined as secure habitat. For instance, draft EIS 3.10.2 states:

... isolated ranges like the Bighorns are likely not capable of supporting a self-sustaining grizzly bear population, and were therefore excluded from suitable habitat within the Greater Yellowstone Ecosystem distinct population segment for grizzly bears. (p364-5)

While the Pryor Mountains were not specifically addressed by the U.S. Fish and Wildlife Service, the same logic applies; because the Pryor Mountains are separated by the greater distance, smaller, and have less total secure habitat than the Bridger Mountain Range, the Pryor Geographical Area does not provide good potential habitat connectivity for grizzly bear dispersal. (p365)

Furthermore, this passage cites the FWS decision (USDI FWS 2017) that was vacated by the 2018 District Court ruling (343 F.Supp.3d 999), thereby relying on faulty logic.

If the Forest Service were to consider connectivity as actually defined in Planning Rule [sect] 219.19, in light of recent documentation of grizzly bears in the Pryors area, the Pryors would correctly be seen as potentially within "the daily and seasonal movements" of grizzly bears [ldquo]within (their) home ranges."

IV. Additional Comments

1. Bison

Bison are an iconic American species woefully reduced by humans to a tiny fraction of their former abundance. The national forest surrounding Yellowstone presents a remarkable opportunity to allow bison to occupy a bit more of their historic range. Within the constraints of the interagency management framework, the Forest Service should do all it can to expand the presence of bison on the landscape they are adapted to. In the 21st century, the objectives and guidelines for bison in Alternative D are modest at best. These should be the low bar for bison management, not the high bar:

*
* Objectives (FW-OBJ-WLBI)-01: Complete three habitat improvement projects within, or for the purpose of creating or connecting, suitable bison habitat per year.
* Guidelines (FW-GDL-WLBI)-03: To facilitate bison expansion into unoccupied, suitable habitat, management actions should not impede bison movement.

1. Landing strips

The Draft EIS does not sufficiently analyze the potential impacts of landing strips. What's included on page 674 does not seem like a hard look at the consequences of allowing aircraft to descend, land and take off on the national forest. Potential impacts include noise, disturbance to wildlife, introduction of noxious weeds, increased risk of fire, and a reduction in opportunities for primitive recreation. Without analysis, it would seem to make sense to not allow airstrips, as in Alternative D.

1. Recreational Emphasis Area

It's reasonable that there would be a recreational emphasis area in the heavily used Hyalite area. The HPBH WSA should be for wildlife, however. If the recreational emphasis area is to be bigger than what's shown in Alternative D, it should be kept out of the RWA, as in Alternative E as opposed to Alternative C.

V. Summary and Conclusion

As required by the Planning Rule, the plan revision team should consider the "broader landscape," which includes ongoing worldwide loss of habitat and biodiversity because of human activities that are increasing in the Greater Yellowstone region. Because the Custer Gallatin National Forest has retained large, roadless areas where wild ecosystems are still relatively intact, the forest's "unique capabilities" are to provide habitat for rare wildlife. The forest's "distinctive roles and contributions to the local area, region, and Nation" are therefore best served by recommending wilderness designation, which provides the most proven means of protecting these capabilities into the future.

Because Alternative D recommends the most wilderness, it is the best overall choice. The plan revision team should give particular priority to:

*
* Maximum recommended wilderness in the Gallatin Range
* New recommended wilderness in the Pryor Mountains
* Key Linkage Areas in the Bridger Range and northern Gallatin Range
* Recommended wilderness in the Crazy Mountains
* Objectives and guidelines in Alternative D for proactive bison management
* Not allowing air strips per Alternative D

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