

Please accept this submission as comments on the Custer Gallatin Forest Plan Revision.

**My Background:** I, Glenn Monahan, have been recreating in the CGNF since the early 1970's, in activities including backpacking, hiking, hunting, fishing, mountain biking, floating, peak-bagging, and seeking solace in the natural world.

BS Geology, Montana State University

## Preface

### A Plea to Decision Makers

You have been charged with a massive responsibility. The Gallatin National Forest contains lands that are of great significance, and are threatened, as are lands everywhere on Earth, by the onward crush of a burgeoning population of humans. Since the last CGNF Plan, the population of Earth has increased 37%, that of Montana 23%, and the lands surrounding the Greater Yellowstone ecosystem have been discovered, developed, and populated.

The GYE is the best preserved, most intact temperate ecosystem in the world. And the primary measure of the quality of the GYE is its wildlife populations. Above all, this is what we must protect, with the most conservative, protective landscape protections that are available – WILDERNESS.

We must provide the utmost protection for grizzly bear, wolverines, bison, elk, bighorn sheep, pikas, cutthroat trout, martens – from the pressures of an exploding population, and from climate change.

We must protect migration routes, so that wildlife can freely migrate between Yellowstone NP and the Northern Continental Divide Ecosystem, and points in between.

The incessant pressures of human development and encroachment into wild lands must be checked. We must leave substantial landscapes in their wild, natural states.

Protecting the GYE is something that you'll be doing for your kids, and for succeeding generations, using the precautionary principle – since any further degradation of CGNF lands will be permanent, and will have irreversible impacts on our wildlife – they have nowhere else to go.

## Part 1:

### **Present State of Our Local, Regional, and Planet-wide Ecosystems**

Tragically, we are now living at a time where the impacts of overwhelming human population are taking a massive toll on our ecological systems at all scales, from local to planet-wide.

The CGNF, although a large landscape in its own right, cannot be managed in isolation. In formulating a plan for the CGNF, it is imperative that we, as a society, consider the CGNF's role as a component of our regional, national, and even planetwide ecosystem.

The following list highlights the current state of ecosystem health on both a local and planet wide scale, and should be seriously considered by forest planners. Clearly, human impacts are destroying Earth's ecosystems, at unprecedented rates – there is no way to soften this message.

### **Current Health of Planet Wide Ecosystems & and Human Impacts**

United Nations Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, May 6, 2019. This alarming report warns of deteriorating worldwide environmental conditions. Specifically:

- Tens to hundreds of times: the extent to which the current rate of global species extinction is higher compared to average over the last 10 million years, and the rate is accelerating
- Up to 1 million: species threatened with extinction, many within decades

- 30%: reduction in global terrestrial habitat integrity caused by habitat loss and deterioration
- 45%: increase in raw timber production since 1970 (4 billion cubic meters in 2017)
- +/-13 million: forestry industry jobs
- 50%: agricultural expansion that occurred at the expense of forests
- 50%: decrease in net rate of forest loss since the 1990s (excluding those managed for timber or agricultural extraction)
- 68%: global forest area today compared with the estimated pre-industrial level
- 7%: reduction of intact forests (>500 sq. km with no human pressure) from 2000-2013 in developed and developing countries
- 290 million ha (+/-6%): native forest cover lost from 1990-2015 due to clearing and wood harvesting
- 110 million ha: rise in the area of planted forests from 1990-2015

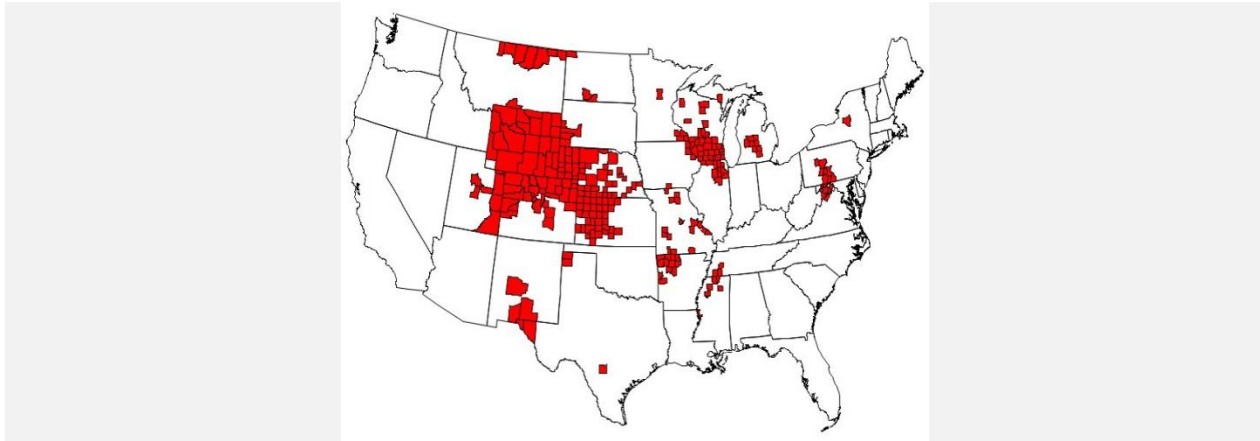
## **Crashing Insect Populations**

Reference: The Insect Apocalypse is Here; New York Times (Brooke Jarvis, author); Nov. 27, 2018

This unnerving report summarizes numerous peer-reviewed studies that are showing dangerous, precipitous, worldwide declines in flying insect populations, in some cases 75%.

## **Chronic Wasting Disease**

The map (US Centers for Disease Control, 2019), below, shows the present extent of CWD, and the trend is for the disease to be aggressively spreading – it is presently at the doorstep of the wildlife populations within the CGNF.



## Decimation of Whitebark Pine Ecosystems

Whitebark Pine Ecosystems in the GYE and CGNF, a keystone species, and foundation for sub-alpine ecosystems have been almost completely eliminated as a result of climate change, with wide-ranging consequences for grizzly bear, Clark's Nutcracker, and other species.

This has been reported in the paper: Whitebark pine vulnerability to climate-driven mountain pine beetle disturbance in the Greater Yellowstone Ecosystem; Ecological Applications; Jesse A. Logan, USDA Forest Service, Box 482, Emigrant, Montana 54927 USA, William W. Macfarlane, GeoGraphics, Incorporated, 90 West Center Street, Logan, Utah 84321 USA, Louisa Willcox, Natural Resources Defense Council, Box 70, Livingston, Montana 59047 USA; 01 June 2010.

The authors conclude: "...it is conceivable that the fragility of whitebark pine forests to MPB disturbance, combined with other anthropogenic driven ecological stresses like white pine blister rust, could lead to loss of the role as a foundation and keystone species that these climax forests have historically played."

From Romback and Kendall, 2011: "...Large, nutritious whitebark pine seeds are an important food-source for at least 13 species of birds in 6 families and 8 species of mammals in 3 families. These include Clark's Nutcracker; many songbirds such as nuthatches, chickadees, woodpeckers, crossbills, and pine grosbeaks; ground squirrels, chipmunks, Douglas squirrels, and red squirrels; and grizzly and black bears (Tomback and Kendall 2001). Furthermore, whitebark pine forests provide

food, shelter and nest sites for many more wildlife species, including deer, elk, grouse, and other game species, neotropical migrants, snowshoe hares, and birds of prey.”

## **Climate Change**

Whether climate change is anthropogenic or not is insignificant for forest planning – what is significant is that it is an established phenomenon, that is and will continue to impact CGNF ecosystems. A recent peer reviewed paper focuses on the GYE: Origins of abrupt change? Postfire subalpine conifer regeneration declines nonlinearly with warming and drying; Hansen and Turner; 2019.

The impacts of this trend on CGNF lands can only be imagined, specifically impacts on wildlife populations, as large tracts of burned forests become converted to grassland, with resultant loss of habitat and cover. The authors stated that, “ *In our field experiment, warmer and drier conditions, consistent with mid-21<sup>st</sup>-century projections, led to a 92% and 76% reduction in establishment of lodgepole pine and Douglas-fir. Within three years, all seedlings that established under warmer conditions died, as might be expected at lower elevations and lower latitudes of species’ ranges.* ”

## **Conclusions**

In light of the above facts, the CGNF Plan should be aggressively and ambitiously proactive, in preserving as much of the forest lands in a pristine state to act as a buffer to the disastrous trajectory of massive ecological collapse that we, as a species, are currently causing. It is imperative that decision makers realize the crucial role that they play in creating a refuge in the CGNF, particularly given the fact *that the GYE is widely recognized as a treasure – specifically as the best preserved temperate ecosystem on Earth.*

## Part 2: My Recommendations & Positions

### **General Support for Alternative D**

In general I support CGNF Alternative D for the following reasons:

- Greatest amount of wilderness, where natural processes are free to function.
- Superior connectivity for wildlife migration, particularly in providing a migration corridor between Yellowstone NP, through the Gallatin Range, across I-90, and continuing into the Bridger/Bangtail areas. This will help to connect the GYE with the Northern Continental Divide/Bob Marshall/Glacier NP ecosystem. Such connectivity is crucial for genetic exchange among individual species.
- Wilderness designation for ALL EXISTING ROADLESS AREAS will provide maximum levels of protection for our precious wildlife populations from an onslaught of recreational uses, such as motorized vehicles, mountain bikes, etc.
- Threatened and endangered species (Wolverine, Grizzly Bear) will be provided with maximum protection from encroachment.
- Wilderness will protect large areas from forest management practices, such as logging, thinning, burning, etc – thus allowing ecological processes to proceed naturally.
- Wilderness is a congressional designation that cannot be altered by local/regional USFS officials. This consistency is crucial to protecting our last wild places.

### **Additional Recommendations Beyond Alternative D:**

- 1) In accordance with the 1977 act that created Wilderness Study Areas, the CGNF should reverse all of the administrative actions that it has taken which are not within the spirit and intent of the law, which states that WSA's should be managed in a manner that protects their wilderness qualities. The MWSA instructed that the Forest Service "maintain presently existing wilderness character." (MWSA, 91 Stat. 1243 (1977) at§ 3(a))

- 2) All eligible streams in the CGNF should be designated as Wild and Scenic
- 3) The Crazy Mountains should be designated as wilderness, with an aggressive plan to consolidate/acquire checker boarded holdings.
- 4) The Pryor Mountains are a unique landscape, with an unusual assemblage of plants. The Pryors should be considered for wilderness, and would be an excellent place for bison restoration, especially with its proximity to adjacent Crow Tribal Lands. Although – in my comments - I have not included relevant excerpts from their submission, **I fully support the comments submitted to CGNF by the Pryor Mountain Coalition,** but for brevity, will refrain from repeating the full contents of their comments. There are four recommended wilderness areas (Lost Water, Big Pryor, Punch Bowl, and Bear Canyon) which should be designated as wilderness and managed to allow only foot and horse travel. It is critical to have areas like this in the Pryor Mountains, because they retain ecological services and provide havens for ecological diversity in contrast to the majority of the Pryor Mountains, which already allows motorized vehicles and bicycles.
- 5) No backcountry airstrips should be allowed in the CGNF – they benefit only a miniscule user group.
- 6) Riparian areas should not be used for cattle grazing. These are incredibly productive habitats, of which only a small percentage have been not heavily impacted by cattle grazing. They are important for native plant/animal species, hydrologic processes, and water quality, and should not be squandered by utilizing them as a cattle feedlot.
- 7) The Bridger/Bangtail Ranges should be managed primarily for wildlife habitat, with recreation a secondary use. Due to historically heavy logging, and the low value of the present timber, logging should be eliminated, with a shift to private lands in more temperate parts of the US for our national timber needs.
- 8) I support Wilderness designation for the Lionshead area, and exclusion of mountain bikes.

- 9) Reroute the Big Sky Snowmobile Trail away from the backcountry area in the Porcupine/Buffalo Horn area, and place it close to Highway 191.

**Statement on the Porcupine/Buffalo Horn Area (PBH):**

In examining a map of the Greater Yellowstone Ecosystem the following pattern is clear: the **entire** eastern and southern boundaries of Yellowstone NP (YNP) have adjacent wilderness areas. It can be easily argued that these wilderness areas play a highly significant role in protecting or buffering YNP – and its abundant wildlife – from disturbances. This is demonstrated by the extensive use of these wilderness areas by hunting outfitters, who take advantage of robust game populations.

Conversely, the western/northwestern boundary of YNP has no adjacent wilderness, and the northern boundary of YNP is only partially bounded by wilderness. The PBH represents a unique once-in-a lifetime opportunity to protect this highly productive area, and to add to the wilderness bounding YNP.

This area is particularly threatened because of its proximity to the Big Sky Mega Development, whose proximity threatens to turn this crucial wildlife habitat into a recreation playground, and resultant heavy impacts on wildlife.

Of all the lands within the CGNF, I believe that the PBH is unquestionably the most important wildlife habitat, forest-wide. Specifically:

- Important Grizzly habitat including denning sites
- Elk calving and migration area
- Wolverines have been documented
- Relatively low relief, low elevation provides quality habitat
- Both the Wilderness Society, and the Greater Yellowstone Coalition have provided Congressional testimony in support of the areas importance for wildlife, in sharp contradiction to their present weak positions.

I recommend the following management actions in the PBH:

- Full wilderness designation
- Rerouting of the Big Sky Snowmobile Trail to closely parallel HWY 191
- Banning motorized and mechanized transportation (including mountain bikes)



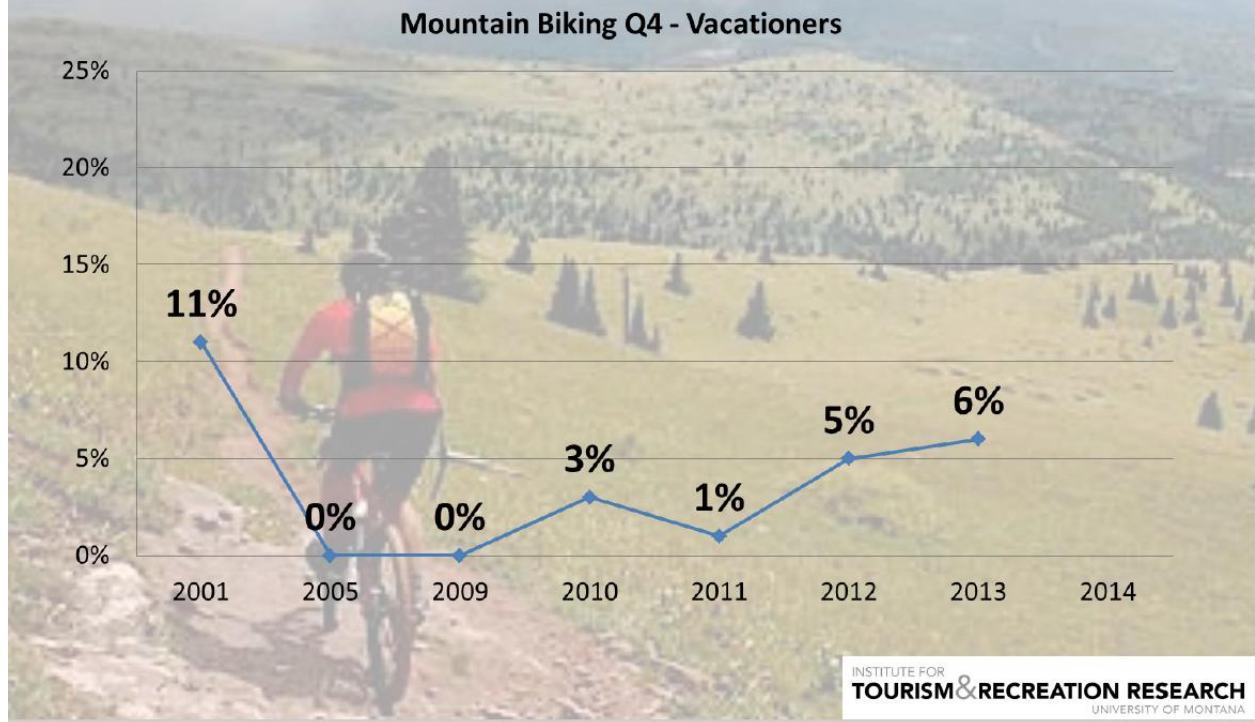
## **Statement on Mountain Bikes**

**Mountain Biking Must Be Regulated** Mountain bike technology has/continues to advance. Vast miles of trails in the CGNF are presently open to mountain bikes, and they do not need additional trails. Mountain biking, because of the speed involved, can be disruptive to other trail users, and is impactful to wildlife.

USNF does not have adequate resources to monitor and study mountain bike impacts of wildlife. In the Elkhorn Wildlife Management Unit, Helena National Forest, rogue mountain bikers have constructed many miles of unauthorized, **Illegal Trails**, frequently exploiting “game trails”. Helena National Forest’s response to these illegal trails is to incorporate them into the existing trails system, in a sad capitulation to its inability to adequately enforce regulations.

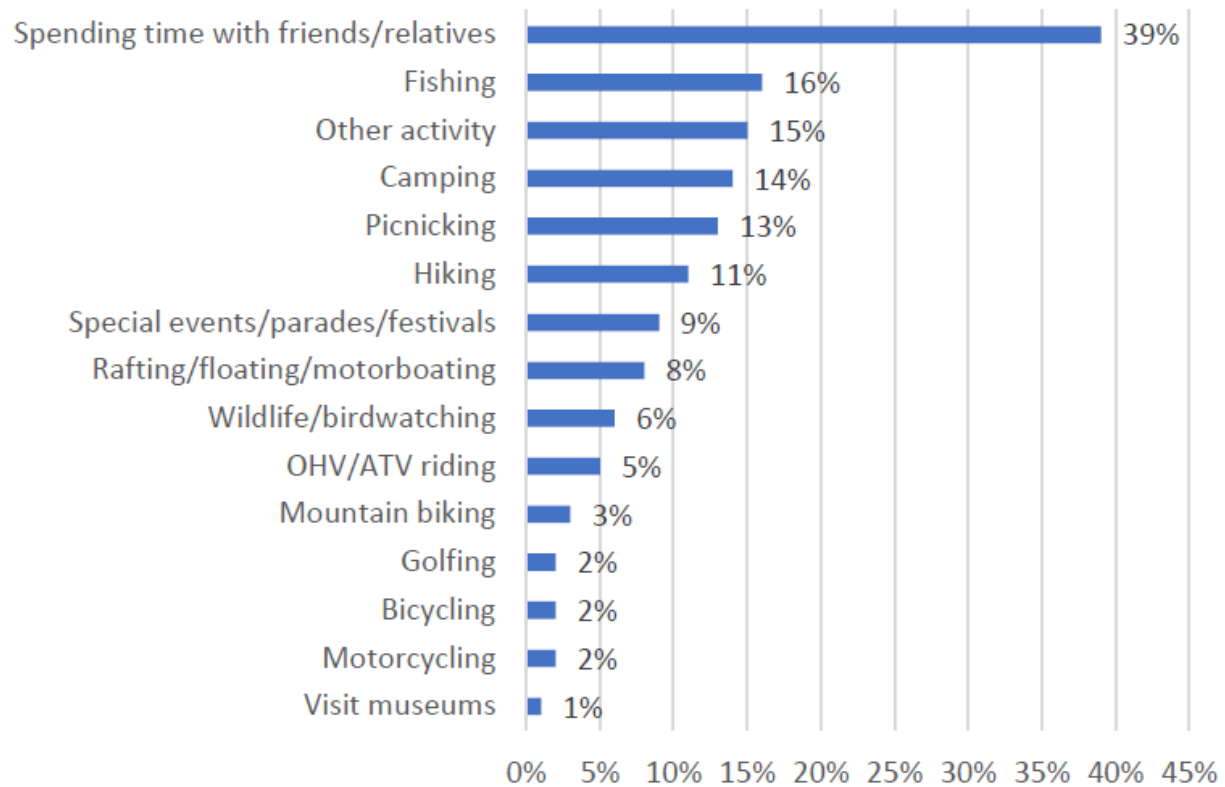
**Mountain Biking is a Low Participation Activity** Mountain biking advocates in Montana are a highly vocal group, particularly those who identify with “singletrack” riding, or “trail shredding”. They demand more riding opportunities, and frequently portray themselves as victims of efforts to exclude this activity. This small faction of mountain bikers is populated by young, fit, adrenaline seeking riders. However, statistically, mountain biking is not a significant activity in Montana. Data presented by the University of Montana’s Institute for Travel and Tourism Research (ITRR) shows that only 6% of visitors to Montana participated in mountain biking:

# Mountain Biking



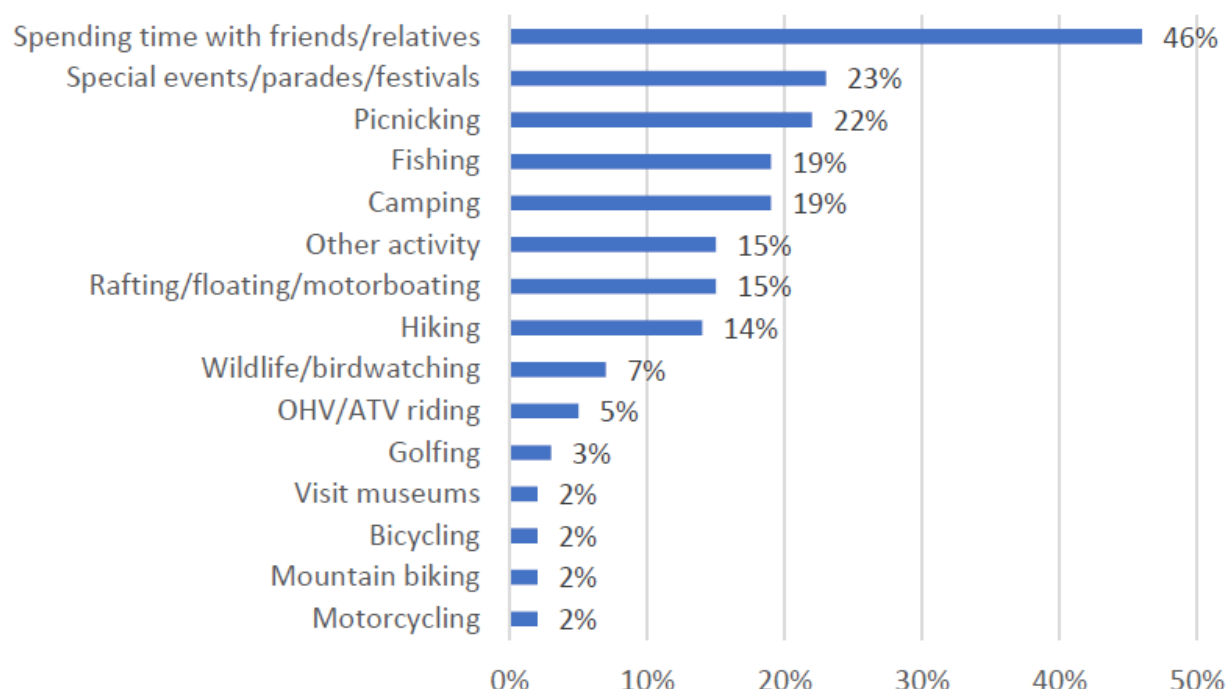
Furthermore, ITRR surveyed Montanan residents regarding their activities during Memorial Day, and July 4<sup>th</sup> activities for year 2019. These statistics show a mere 2% and 3% participation by Montanans in mountain biking (Source: Montana Trends: Travel and Recreation; 2019; Norma Nickerson, Univ. of Montana; ITRR). And, we must ask - of those who reported participation in mountain biking, what percentage were riding on gravel roads and on biking trails??? Although this data was not analyzed, we can assume that only a portion were singletrack riders.

### Activities Montanans will do over Memorial Day Weekend



*Source: Montana Trends: Travel and Recreation; 2019; Norma Nickerson, Univ. of Montana; ITRR*

### Activities Montanans will do on the 4th of July holiday



*Source: Montana Trends: Travel and Recreation; 2019; Norma Nickerson, Univ. of Montana; ITRR*

Again, the results clearly show that mountain biking is an overwhelmingly minor activity, contrary to the impression that groups such as Southwest Montana Mountain Biking Association (SWMMBA) would have us believe. SWMMBA is by the way, affiliated with - and funded by – the International Mountain Biking Association, an insustry sponsored group that promotes a radical agenda for mountain biking access for the purpose of selling more mountain bikes.

**CGNF Lack of Resources to Manage Mountain Biking** With strained budgets, CGNF – as in the case with the Helena NF, does not have the resources to adequately monitor impact of mountain bikes in new areas.

**Mountain Bike Impacts on Wildlife** Impacts on Wildlife caused by mountain biking has been studied, and research is showing heightened impacts on wildlife, when compared with hiking:

1. Mountain bikes have a significant impact on wildlife, including increased flight response distances, as compared to hiking. Recent statements by a noted Grizzly Bear researcher, Dr. Chris Servheen (Griz Expert Says Mountain Bikes are a Grave threat to Bears; Mountain Journal, June 3, 2019), raise serious concerns about impacts of mountain bikes on sensitive species.
2. USFS researchers have concluded that: “Our results from 2002 also show clear differences in elk responses to the four off-road activities. Elk reactions were more pronounced during ATV and mountain bike riding, and they were less so during horseback riding and hiking.” (Effects of Off-road Recreation on Mule Deer and Elk; Transactions of the 6<sup>th</sup> North American Wildlife and Natural Resources Conference; Michael J. Wisdom et al; U. S. Department of Agriculture, Forest Service)
3. Both movement rates and probabilities of flight responses were higher for ATV and mountain bike riding than for horseback riding and hiking. Research on the effects of mountain bikes indicates that elk flight responses were triggered at a significantly greater distance by mountain bikes as compared to hikers and equestrians. (Elk Responses to Trail-Based Recreation on Public Forests; Forest Ecology and Management; Michael J. Wisdom, Haiganoush K. Preisler, Leslie M. Naylor, Robert G. Anthony, Bruce K. Johnson, Mary M. Rowland)
4. The Bitterroot NF issued a Record of Decision banning mountain bikes from the Blue Joint and Sapphire WSA’s, stating that mountain bikes would compromise the wilderness character of these lands, which the USFS is charged with maintaining in wilderness condition.

### **Mountain Bikes in the CGNF**

- Should be strictly prohibited from travel in Wilderness Study Areas, and from other wildlife sensitive areas.

- I oppose the recommendations of the Gallatin Forest Partnership, to open the Porcupine/Buffalo Horn WSA to mountain biking, and I oppose the designation of the West Pine area as a “mountain biking playground”. These areas are crucial wildlife habitat, and are crucial connectivity routes.
- Electric Mountain Bikes are becoming very popular, and have the potential to inundate backcountry wildlife habitat with new riders, on machines going faster, further, higher, and deeper into the backcountry. Electric mountain bikes are equivalent to motorcycles, and should be restricted to operate only on trails that are open to motorcycles. Unfortunately, the International Mountain Biking Association (IMBA) – an industry-sponsored advocacy group – has recently adopted a position of promoting Class 1 electric bikes on any trail where pedal powered bikes are permitted. I oppose this position.

### **Statement on the Hyalite Recreation Area**

The number of acres presently in the Hyalite Recreation area should remain unchanged. This area has already been developed to the point that it can be viewed as a sacrifice area to recreational development, which presents a hostile environment for wildlife. On any given summer day there are hundreds or thousands of people recreating there. Between January and March, 2013 a study reported 12,742 vehicles entering the Hyalite Reservoir area.

It is to the CGNF’s credit that it has recognized the recreational potential of this area, and facilitated ease of use for local residents. However, this area should not be expanded. Expansion would put extreme pressure on wildlife, as well as water resources.

The proposals in Plans B,C,E, and the proposal from the Gallatin Forest Partnership will sacrifice tens of thousands of acres for “recreational development” that will include hordes of mountain bikes, snowmobiles, ATV’s, motorcycles, and will likely result in additional roads, trails (including illegal ones), and displacement of wildlife.

Perhaps most significantly, expansion of the Hyalite Recreation Area will compromise connectivity routes for wildlife traveling between YNP and points north.

## **Statement on Wildlife**

### **Grizzly Bear**

The CGNF, and specifically the Gallatin Range, is habitat for species of native wildlife that MUST be given maximum protection because they are threatened and/or endangered. Specifically, Grizzly Bear occur in less than 2% of their original range, and the Gallatin Range provides crucial habitat as part of the GYE. I oppose ANY change to Wilderness Study Areas (except full wilderness designation), or to inventoried roadless areas.

In addition the Gallatin Range provides a two-way connectivity link northward into the Bridger, Bangtail, Little Belt, and Big Belt ranges for ultimate connectivity with the Northern Continental Divide Ecosystem – the only other place that has wild grizzly populations. Any new CGNF Plan must provide for maximum protection for grizzly habitat and connectivity.

I am specifically and greatly concerned with the proposal from the Gallatin Forest Partnership for the Porcupine/Buffalo Horn area. They are proposing a non-wilderness designation, that would allow mountain biking in the best grizzly habitat in the Gallatin Range. This proposal relies on monitoring and adaptive management, which I believe is beyond the capabilities of the CGNF, given the strained budgets and staffing, and is fraught with unknowns. It also ignores the research – cited above – regarding mountain bike impacts on wildlife.

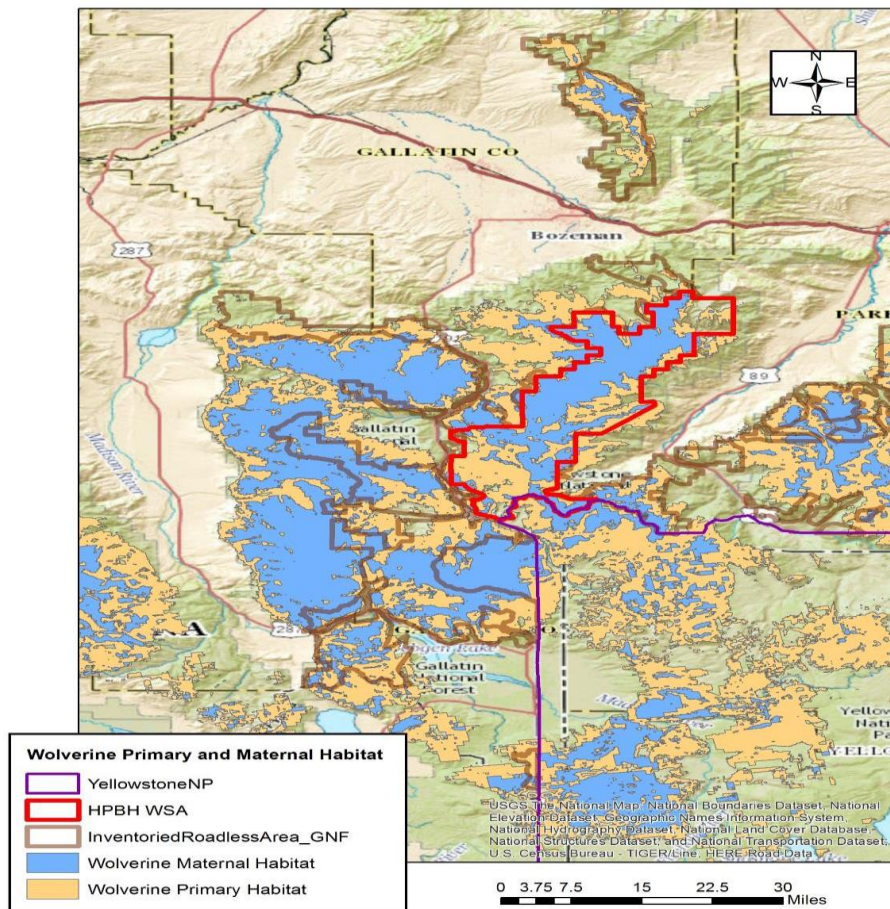
The only way to assure the best chances for healthy grizzly populations is to manage the Porcupine/Buffalo Horn as wilderness, as well as wilderness designation for the entire Gallatin Range.

### **Wolverine**

It is estimated that only 300 Wolverine remain in the lower 48. Clearly, this species is not listed as endangered solely for political reasons.



Wolverines have been documented in the CGNF (USGS Map, below), including both maternal and primary habitat (Wilderness, Wildlife, and Ecological Values of the Hyalite-Porcupine-Buffalo Horn Wilderness Study Area; Craighead, Lance; 2015). Craighead also cites the importance of connectivity for continued wolverine populations, with connectivity with both the Colorado Rockies – and of specific importance for the Gallatin Range – connectivity with the Canadian Rockies.



MAP (USGS) DOCUMENTING WOLVERINE PRIMARY AND MATERNAL HABITAT.



## Conclusions

I sincerely hope that CGNF planners will take into account the unsettling state of affairs regarding ecosystem health – or lack thereof – on a worldwide basis. And a recognition that here in Southwest Montana we are experiencing diminishment of ecosystem health.

We in Southwest Montana live in a bubble – an anomalous situation when compared with most of the lower 48 states - in which we live in close proximity to an ecosystem, the GYE, that is still intact and functioning. But the future of the GYE is not guaranteed.

We have exploding human populations (Big Sky, Bozeman), massive increases in wildlands encroachment by recreationists, climate change, threatened/endangered species, predatory forest insects/diseases, invasive species, wildland/urban interface growth, etc.

The legacy of this Forest Plan will impact the future of the GYE in perpetuity. The opportunity to save and conserve the few wild places that remain is now in the hands of planners. Given the current state of Earth's environment, atmosphere, and ecosystems, the Precautionary Principle should prevail – maximum protections for all WSA and Roadless lands.

I urge you to Adopt Alternative D, and to furthermore add more wilderness (Crazy Mountains, Pryor Mountains) to the final plan.

If we err on the side of “too much” wilderness, that can always be undone by future generations and planners, but lands that are left out of wilderness (for example Recreation areas or Wildlife Management Areas), will be difficult – or impossible – to designate as wilderness in the future.

I urge you to strongly apply the Precautionary Principle in your deliberations and decision making.

Thank you, Glenn Monahan

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