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Title: Board Member
Comments: Objections that concern the East Paradise Allotments:

Please accept the following objections to the East Paradise Allotments from the Gallatin Wildlife Association.

I have providedconcise statements explaining my objections and suggestions how the proposed plan should be improved:

[bull] The reasons for these objections are: Broadly put, the Forest is at risk of misrepresenting the viability of its intended management for protection of the threatened grizzly bears and Canada Lynx. The Forest Service has not proven that the proposed action will provide the required resilience, ecological integrity, and desired future conditions that take into account climate change, short and long term drought, corridors that wildlife will need to adapt to changing conditions, protecting crucial habitat, improving water quality, and that they have not evaluated livestock impacts on threatened species on the East Paradise allotments. This lack of evaluation affects wildlife, endangered and threatened wildlife and the habitats that they require to be sustainable for the long term.

These allotments are some of the most important wildlife areas in the Paradise Valley. To put livestock back into these allotments asks for incredible conflict.

Almost every day members of Gallatin Wildlife read about nature's dangerous decline as "unprecedented", species extinction rates "accelerating" "The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide. This report is from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). With this the strongest warning to date about the health of ecosystems and the species that depend on them GWA is objecting to the East Paradise allotment plan.

The goal of GWA is to secure the strongest ecosystem protections for the Greater Yellowstone Ecosystem in Montana. The decisions on the health of this precious ecosystem are in your hands. GWA submits these objections to the Objection Reviewing Officer.

GWA has objection points

Drought and Climate Change and the lack of evaluation is an objection point

U S Drought Monitor for June 8, 2021 shows the East Paradise allotments to be abnormally dry.

One week later, June 15th, the allotments went from abnormally dry to moderate drought.

The drought is classified as short and long term.

Drought will have immediate effects and long term. Some will say that drought maps can change and that long term management decisions can't be made using them. But, climate scientists are showing a changing future, a future with hotter temperatures.

More data comes from the 2017 Montana Climate Assessment.

"The 2017 Montana Climate Assessment (MCA) was produced by the Montana Institute on Ecosystems as a collaboration of universities, agencies, tribal colleges, nonprofit organizations and individuals. Foremost among MCA findings were that temperatures in Montana have increased 2-3 degrees F since 1950 and could be as high as 10 degrees F by the end of the century. Warmer temperatures are reducing our high elevation water supplies as rain replaces snow and leading to earlier snowmelt, faster runoff, summer water shortages and more wildfires. The report considered these impacts on Montana's water resources, agricultural sector and forests."

"How will climate change affect our wildlands? We are overdue for an assessment of the future of Montana's protected lands, fish and wildlife in the face of climate change. This foundational information is needed to guide state-level conservation planning as well as educate resource stewards and the public about ongoing environmental change.

Above quotes are from Cathy Whitlock from the article below. Cathy Whitlock is a Regents Professor Emerita at Montana State University and lead author of the Montana Climate Assessment (montanaclimate.org).

Missoulian.com/opinion/columnists/opinion-montanas-wsas-must-be-part-of-climate-smartconservation/article_faece043-271b-5585-90be-081a7c59850b.html

East Paradise allotments should not be reopened, not just for this year, but for the future.

Another study is coming from the American Geophysical Union, here is their press release.

AMERICAN GEOPHYSICAL UNION NEWS RELEASE 19-MAY-2021
Yellowstone National Park is hotter than ever
New tree ring method highlights climatic changes over the last 1,250 years

The team, led by Karen Heeter, a dendrochronologist at the University of Idaho in Moscow, found that the 20th and 21st centuries, and especially the past 20 years, are the hottest in the new 1,250-year record

, Heeter said. "The warming trend we see beginning around 2000 is the most intense in the record. The rate of warmth over a relatively short period of time is alarming and has important implications for ecosystem health and function," she said.

" Heeter said. "But I hope that it might also be useful to other researchers who are studying other aspects of the ecosystem

The East Paradise allotments are in an area that is impacted with increased temperatures and decreased precipitation. These conditions are ecosystem drivers. Wildlife will need more habitat to survive, they should not share it with livestock.

Just out is a Greater Yellowstone Climate Assessment that shows big changes coming. The Forest Service needs to prepare and protect our public lands for today and the future.

Greater Yellowstone Climate Assessment shows that big changes to the ecosystem have and will continue to occur, the lack of evaluation by the Forest Servise is a GWA objection point

The Greater Yellowstone Climate Assessment has just come out and is available, GYC_June2021_FullReport.pdf

The report summarizes how climate change could progress by 2100 based on various greenhouse gas emission scenarios and concluded that since 1950, temperature significantly increased and snowfall decreased because of climate change. And the trends are likely to continue.

Since 1950 temperatures have significantly increased. This is a huge impact on the ecosystem that the East Paradise allotments are in. Putting livestock into a climate stressed environment will have negative effects.

Snowfall has decreased because of climate change since 1950. Again huge impacts on a climate stressed environment.

This means big changes ahead. By the end of the century, the region could see:

* Annual precipitation increase by 9-15%, but the combination of elevated temperatures and higher evaporation rates will likely make future conditions drier in summer;
* Reduced soil moisture in the summer months, which will be an additional stress on plant communities that could make drought and wildfires more common; and

40-60 more days per year exceeding 90 degrees Fahrenheit in Bozeman, Montana, and in Jackson, Pinedale, and Cody, Wyoming, if there is little to no mitigation of future emissions

The Forest Service needs to use current data and future climate predictions is a GWA objection point

The Forest Service used annual precipitation data, Table 2, that shows average precipitation in the allotments that ends in 2004 and goes back 30 years. This is not what we are seeing now. The average in Livingston is 14.81 inches and Belgrade 13.99 inches. Today the June 22, 2021 month to date precipitation in Belgrade is .13 inches but the normal month to date should be 1.85 inches, it is far less than normal so far in June, which is usually one of our wettest months.

The table should use data that reflects current conditions. The Forest Service should recognize that climate change is happening and will continue.

It is not acceptable to not include climate change as a factor that should be evaluated in the East Paradise allotment evaluation and GWA objects.

Wildlife Corridors and habitat connectivity should be considered and the impacts of livestock grazing on those habitats should be evaluated. The failure to consider corridors and wildlife connectivity is a GWA objection point

Many corridor maps show wildlife corridors in the area. The East Paradise allotments will negatively impact wildlife movement with the loss of movement potential. Especially affected will be the grizzly bear.

The Absarokas have repeatedly been identified as a key part of connective habitat potentially linking grizzly bears in the Greater Yellowstone Ecosystem to grizzly bears in the Northern Continental Divide Ecosystem through the Crazy, Castle, and Little Belt Mountains.. This should give Forest Service managers pause.

The study cited below states the importance of large protected areas (National Park and Wilderness) and corridors connecting the protected areas so wildlife can more. Movement is more important than ever when climate change is factored in.

Identifying Corridors among Large Protected Areas in the United States; Belote RT, Dietz MS, McRae BH, Theobald DM, McClure ML, Irwin GH, et al. PLOS ONE 11 (4):e0154223. doi: 10.1371/journal.pone.0154223; April 22, 2016

Identifying and protecting critical wildlife habitat should have been evaluated, especially since threatened species are in the area, the lack of assessing crucial habitat is a GWA objection point.

Montana Fish Wildlife and Parks has a habitat assessment program, Crucial Areas Assessment, which identifies and ranks core areas important for wildlife as well as key wildlife connectivity areas.

The CrucialAreasPlanningSystem (CAPS), is a mapping service aimed at helping decision makers make smart conservation decisions. The CAPS program is intended to help balance human and environmental uses.

A CAPS map of North Sixmile allotment shows these areas to be the highest level, crucial habitat, for wildlife

* Sixmile
* North Fork Sixmile
* Big Pine Creek
* Little Pine Creek
* Gold Prize Creek

Sixmile Creek and the tributaries are of the highest crucial habitat rank and should not be included in the Sixmile North allotment.

Climate change, drought and grazing will negatively affect critical and crucial habitat that wildlife depends on is lacking adequate analysis and is a GWA objection point

Grazing Influences have not been adequately addressed and is a GWA objection point

General Grazing Influences The effects of livestock grazing on riparian resources in the western United States are well documented. Riparian zones are often grazed more heavily than upland zones because they have flatter terrain, water, shade, and more succulent vegetation (Platts 1991). The effects are summarized by Platts (1991

In the Rapid assessment site by stream mile, the latest assessment shows

2020 North Fork Sixmile Creek	Functioning at risk	
2020 Big Pine Creek	Functioning at risk	2020
Six Mile Creek site 2	Nonfunctioning	

If livestock are placed in riparian zones, which are often grazed more heavily than upland zones because they have flatter terrain, water, shade, and more succulent vegetation wildlife will be negatively impacted by the loss of forage. And since there are threatened species, that are protected under the Endangered Species Act, it is not acceptable to take crucial habitat away.

Wildlife, Threatened, Endangered and Species of Greatest Conservation Concern have not been adequately evaluated and is a GWA objection point

Below is information on of Species of Greatest Conservation Concern. The source is the Montana Natural Heritage Program, Montana Field Guide (Montana Field Guide 2021)

The range maps from the Montana Field Guide show observations 25mammal species and 10 avian species have been observed in the allotment areas and are species of conservation concern.

Two threatened species, the Canada Lynx and the Grizzly bear have been observed in the East Paradise allotment area. The Wolverine is a potential candidate for listing and has been observed in the allotment area.

Of the Federally listed species, Canada lynx and Grizzly bear, the effects determination on Table 6 states;

Lynx "May affect, not likely to adversely affect"

Grizzly "May affect, likely to adversely affect"

To knowingly place threatened species at further risk is not acceptable, especially when the allotment area has not been evaluated for wildlife connectivity routes, effects of climate change, effects of drought and the impacts of livestock grazing on critical habitat

Riparian Conditions and Monitoring Riparian Conditions are now not meeting acceptable standards but livestock are going to be put in the area is an objection point for GWA

The stream reaches that will be monitored are in the North Sixmile (much area taken from the South Sixmile). Below are the conditions. These riparian areas should not be opened for grazing. To expect these areas to improve with grazing is not realistic, especially with climate change and drought in the area. To have monitoring be the responsibility of the Forest Service and the permittee is not acceptable.

* 2020 North Fork Sixmile Creek Functioning at risk
* 2020 Big Pine Creek Functioning at risk
* 2020 Six Mile Creek site 2 Nonfunctioning

Alternative 3 would incorporate pastures from Sixmile South into Sixmile North allotment and add a new section to the allotment. Both alternatives would allow grazing livestock in allotments that have been vacant for up to twenty years.

To allow grazing after not allowing it for 20 years, to have stream assessments in the riparian areas listed above as functioning at risk and nonfunctioning, to know that grazing is likely to affect the threatened grizzly is not acceptable.

Adverse Effect on Grizzlies because of the potential removal of the grizzly because of depredation on livestock is a GWA objection point

Grazing use, by livestock, may increase livestock interactions with grizzly bears. This would allow grazing livestock in allotments that have been vacant for up to twenty years. The result would be an increased potential for bear/livestock interaction and an increased risk of depredation and subsequent management control actions.

Earlier Stocking with Cow-Calves Virtually Guarantees Increased Depredation. Calves account for almost all victims of grizzly bear depredation on cattle.

The typical resolution of a depredation "problem" entails calling in someone from Wildlife Services to kill predators. I see no language in the management plan requiring that permittees exercise better husbandry. The upshot will almost certainly be more dead more dead grizzly bears. There are many preventative practices that have proven effective and should be required.

GWA objects to grazing in known grizzly habitat. This is evidenced with the adverse effect determination for the grizzly bear by the U. S. Fish and Wildlife Service.

Forest Service has dismissed the importance of ecosystem changes, particularly the loss of the whitebark pine this is an objection point for GWA

Most of the cone-producing whitebark pine in the Gallatin Range and in the Absaroka Mountains adjacent to the East Paradise grazing allotments were killed by an outbreak of mountain pine beetles between 2000 and 2010. Losses of mature whitebark pine ecosystem-wide have probably amounted to around 70%. By all indications, loss of this critically important food source for bears resulted in increasing reliance by grizzlies on meat from large ungulates, coincident with declines in regional elk populations, and rapid expansion of grizzly bears into peripheral areas, including the Absaroka Mountains. This increased reliance on meat has created and increase in conflicts resulting from grizzly bear depredation on cattle.

The Forest Service has said that grizzlies are omnivores and can find other food sources. However, the best source of protein is meat and the easiest prey will be young livestock. Stocking Sixmile North from 6/1-10/15 with 96 livestock or 446 AUMs (an AUM is a cow/calf unit, so the total number of livestock is double) is problematic.

Please accept the objection points made by the Gallatin Wildlife Association

Nancy Schultz Board Member

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