Data Submitted (UTC 11): 10/27/2022 6:00:00 AM
First name: Clinton
Last name: Nagel
Organization: Gallatin Wildlife Association
Title: President
Comments: Dear Amanda Williams:

Please accept the comments below from the Gallatin Wildlife Association and we wish them to be part of the official record. We sincerely believe this project needs to be rethought in its purpose, need and implementation. We sincerely believe this landscape deserves much better than the proposed plan as detailed.

Thank you

Attachment Text

On October 6, 2022, the U.S. Forest Service provided public notice of the Revised Draft Environmental Assessment (EA) of the South Plateau Landscape Area Timber (SPLAT) Project of the Custer Gallatin National Forest (CGNF). It is in that context, that the Gallatin Wildlife Association would like to provide comment. The project area is contained in the Hebgen Lake Ranger District located south and west of the town of West Yellowstone in Gallatin County, Montana. According to the public notice, "the project area extends from US Highway 20 on the north end, to the Montana-Idaho border on the west and south and the Yellowstone National Park boundary on the east."

Gallatin Wildlife Association (GWA) is a local, all volunteer wildlife conservation organization dedicated to the preservation and restoration of wildlife, fisheries, habitat and migration corridors in Southwest Montana and the Greater Yellowstone Ecosystem, using science-based decision making. We are a nonprofit 501 (c) (3) organization founded in 1976. GWA recognizes the intense pressures on our wildlife from habitat loss and climate change, and we advocate for science-based management of public lands for diverse public values, including but not limited to hunting and angling.

It is impossible to be informed of all ecological impacts of this timber project, but GWA is keenly aware of many as this is our third pursuit to leave official comment on this project. We relayed many concerns in our original and objection comments of September 2020 and then again, our comments of April 2021 respectively. According to the Introduction in the EA, the original EA was placed in hiatus in order that the revised draft EA could meet the conditions of the new 2022 Forest Plan. According to an article in Counterpunch New Service1 in May 17, 2021, the Forest Service only did so as a result of a group's legal challenge and the Forest Service wanted to implement the project plan in conjunction with the 2022 Forest Plan. Regardless, GWA doesn't see much difference between the plans of then and now. For a project area that is just shy of 40,000 acres with treatment units not to exceed 16,462 acres over a 15-year period, we find it mind-blowing that in either case, the Forest Service reached a conclusion of a "Finding of No Significant Impact".

We did notice in the original draft there were two alternatives listed, the "Proposed Alternative" and the "No Action Alternative". Here in the Revised Draft EA, there are no alternatives considered. This may meet the bare minimum standard of National Environmental Policy Act (NEPA) requirements for an environmental assessment, but it should not be allowed to stand for a project as extensive in size and scope as this one. This especially so being adjacent to one of this country's most beloved National Parks. It is unacceptable.

Climate change, forest management, wildfire management as well as issues such as biodiversity, sustainability and carbon sequestration all have an impact either directly or indirectly with the welfare of wildlife. It is in that context that our comments will focus.

Habitat Fragmentation and Loss:
To be blunt, as a wildlife advocacy organization, we cannot support the rationale or justification behind this project. We said so in our September letter of 2020 and we have seen nothing that has changed that perception or viewpoint here. GWA has long believed that habitat loss is the greatest threat to the planet's biodiversity and its wildlife. There is plenty of science and governmental policy that reinforces that opinion. Some of those examples will be stated here.

1.) The department of Environmental and Climate Change of Canada2, a department of the Government of Canada responsible for coordinating environmental policies and programs, as well as preserving and enhancing the natural environment and renewable resources state the following on their website. In listing the top 5 threats to Nature, notice the first one listed below - Habitat Loss.

"Learn About the Top Five Threats to Nature - Protect Nature Challenge

The delicate balance of biodiversity is now threatened.

An important way to improve the state of our natural world is to learn more about the major threats to biodiversity. In 2019, scientists around the world confirmed that nature is declining at an alarming rate."

"There are five direct drivers of biodiversity loss:

1. Habitat loss, which is the lead threat to biodiversity and contributes to the endangerment of over 80 percent of all species."

GWA sees this project as doing just that, reducing the region's biodiversity and endangering the existence of species. This project is just one among many that promote habitat fragmentation. Logging, timber thinning and road building are all prime examples of habitat fragmentation and all of those are proposed within this project.

2.) In another article posted in The Smokey Wire: National Forest News and Views, there was this quote from Jon Haber3 on May 13, 2020. The article entitled "The latest on forest plan revisions (and wildlife)", makes a poignant reference pertaining to the Rio Grande National Forest. It says:

"The plan (referring to that of the Rio Grande) prioritizes the use of active management to foster sustainable and productive use of the forest. Compared to the 1996 plan, this new plan is less prescriptive and emphasizes flexibility and commitments to working with the public. Management direction has been updated for all plant and wildlife species."

But the point the author is making in that reference is purposeful. He does so in order to make the following statement pertaining to overall U.S. Forest Service Policy.

"This seems to capture the mood of the Forest Service these days. The only commitments it has ever liked are those they have to do any way, especially if they are check-the-box kinds of procedural commitments like "working with the public." In their "update" for wildlife, rather than commit to protecting wildlife as required by NFMA and the Planning Rule, they infuse the plan with discretion."

With that being said, we ask this question. Is that what is happening here on the Custer Gallatin National Forest? You're infusing the plan with discretion not fully protecting wildlife as required by NFMA (National Forest

Management Act), but relying on the practice of agency discretion, realizing that courts have given the agency much latitude in such matters over recent years?

3.) In another online journal called BioScience, a science magazine sponsored by the American Institute of Biological Sciences, published a May 1, 2002 article entitled "Forest Fragmentation of the Conterminous United States: Assessing Forest Intactness through Road Density and Spatial Characteristics: Forest fragmentation can be measured and monitored in a powerful new way by combining remote sensing, geographic information systems, and analytical software". Written by Heilman, Gerald E., et al, there is this thought-provoking statement.

"Habitat fragmentation is considered to be one of the single most important factors leading to loss of native species (especially in forested landscapes) and one of the primary causes of the present extinction crisis (Wilcox and Murphy 1985). Although it is true that natural disturbances such as fire and disease fragment native forests, human activities are by far the most extensive agents of forest fragmentation (Burgess and Sharpe 1981). For example, during a 20-year period in the Klamath-Siskiyou ecoregion, fire was responsible for 6% of forest loss, while clear-cut logging was responsible for 94% (Staus et al. 2001)."

Continuing on, they say the following:

"Depending on the severity of the fragmentation process and sensitivity of the ecosystems affected, native plants, animals, and many natural ecosystem processes (e.g., nutrient cycling, pollination, predator-prey interactions, and natural disturbance regimes) are compromised or fundamentally altered. For many species, migration between suitable habitat patches becomes more difficult, leading to smaller population sizes, decreased gene flow, and possible local extinctions (Wilcove 1987, Vermeulen 1993)."

GWA wants to categorically state that at some point in time, discretion must be paid to this planet's wildlife. If not, it will be too late. Wildlife will either suffer, weaken and become extinct if neglected or taken for granted, or wildlife, through proper management, can become part of the region's overall biodiversity and integrity. GWA has said this time and time again, habitat fragmentation is an anomaly to dying from a thousand cuts. A cut here and there may not seem like enough to make a difference, but overtime death is, will be, the end result. This project places way too much emphasis on the harvesting of trees and assumes that wildlife can cope with the disruption and destruction on their own. We very strongly disagree.

Wildlife Corridors and Connectivity:
One of the main goals of GWA and many other NGOs is to reestablish and maintain wildlife corridors across multiple ecosystems across the west. That connectivity is vital in order to maintain the genetic health of all species, to help combat the ill-effects of climate change and to maintain stable populations of a variety of species across the west. Specifically, and closer to home, GWA is one of those who are trying to reestablish those wildlife corridors from the Greater Yellowstone Ecosystem (GYE) northward and westward to the Bitterroot and the Northern Continental Divide Ecosystem (NCDE).

It is a given fact that the area known as the South Plateau Landscape, the subject area of this project, is teaming with wildlife. The GYE is known for its richness of ecological biodiversity and integrity. So much so that Yellowstone National Park has been declared a World Heritage Site in 1978 and a Biosphere Reserve in 1976. One of the critical criterion for that declaration is the biodiversity of its flora and fauna. That biodiversity does not end at the boundary edge of Yellowstone National Park.

That richness of wildlife spills over onto adjoining landscapes, one of those is the landscape known as the South Plateau area south and west of West Yellowstone and U.S. Hwy 20, the heart of the timber project. Wildlife move from the Park northward and westward through and across this landscape into Idaho and along the Continental Divide into the Centennial Mountains and Madison Mountains of Idaho and Montana. This area is so rich in wildlife and wildlife movement that the state of Idaho is in the process of trying to mitigate wildlife/vehicle

casualties. In referencing the Idaho Transportation Department's Highway/Wildlife Linkage GIS Layers Final Report5 of June 30, 2005, these references and maps are provided.

Image included on pg. 6 showing map.

This may seem like a class in Local Ecology 101 and we are surprised that we have to exhort to this level, but we don't know how else to impress upon the CGNF that these lands are critical in wildlife movement. Figure 2 on page 3 of that report indicates the area in discussion. The very northeast corner of this map is high priority to prevent highway/wildlife conflicts. The linkage area in red highlights the seriousness of the issue. The map below highlights the same in ecosystem importance. The very northeast corner of this map, highlighted in deep red, is adjacent to the South Plateau. Wildlife has to cross the South Plateau in order to reach the Targhee Pass area, shown here in red.

Image included on pg. 7 showing zoomed in view of first image.

Finally in Table 1 entitled Expert Comments on Linkage Areas found on page 6 of that report, there are these comments concerning species that have presented conflicts to vehicle traffic as wildlife moves back and forth into and from Yellowstone National Park. In order for wildlife to make that trek, one commonality of movement includes crossing the South Plateau, the subject landscape of this project. This data as well as visual reports, personally and otherwise prove that this habitat is vital to the free movement of wildlife and to maintain connectivity across the region.

AOI ID Species of Interest Comments

ID6E69elk/moose/black bearLinkage area for bears, moose, elk. Linkage area. ecosystem. Elk Migration, also Moose roadkill along Howard Creek.
ID6E70elk/black bear/wolverineMulti-species linkage including carnivores and bears and wolverines. Major linkage period. Elk movement from Montana to Idaho below Targhee Pass along east side of SH87 to Raenolds Pass.

The South Plateau includes habitat for a great multitude of species including bear, elk, Canadian Lynx, grizzly bear, moose and many others species including wolverines. We're disappointed in the current SPLAT EA whereas connectivity was only mentioned 11 times throughout the entirety of the document and 10 of those referenced Canadian Lynx with the other mentioning wildlife in general. None of those references emphasized the critical role that connectivity plays upon species health.

GWA sincerely believes implementation of this project will hinder if not be in violation of the Endangered Species Act by impacting both grizzly bear habitat and their respective corridor routes, their ability to move freely upon the landscape. The map following is from the Montana Fish, Wildlife and Parks6 highlighting dispersal routes of male grizzly bears to move from one ecosystem to another.

"While grizzly bear populations have increased in numbers and range extent over the past several decades, the Greater Yellowstone Ecosystem population is generally isolated from other ecosystems. This isolation hinders the genetic diversity and overall health of the population. A study published in 2017 (Peck et al.) identified potential pathways for male grizzly bears from the Continental Divide Ecosystem population to disperse into the Greater Yellowstone Ecosystem. Using information from 124 GPS collared male grizzly bears monitored in the Northern Continental Divide Ecosystem from 2000 to 2015, the researchers modeled how male bears use the landscape relative to physical habitat characteristics and human presence. Results of the modeling indicate that bears have a variety of routes to move between ecosystems and observations of bears between the ecosystems generally support the model results.

GPS tracking technologies enable this type of population study and ultimately provide information for wildlife managers to make informed decisions about habitat conservation and efforts to minimize conflict with dispersing animals. Grizzly bears exist in low densities outside of their established range, but there is a chance of encountering a grizzly bear anywhere in western Montana."

Image included on pg. 9 showing a map.

"Predicted (modeled) male grizzly bear dispersal routes (Peck et al., 2017) with purple areas representing the most likely/shortest routes for a male grizzly bear to successfully travel from one ecosystem to the other.

Note: These are not confirmed dispersal pathways rather areas most likely to provide the suitable habitat for a bear to move through. Other pathways are available and bears behave independent of one another. Blue triangles represent confirmed grizzly bear observations outside of the Northern Continental Divide and Greater Yellowstone Ecosystems."

-- Peck, C. P., F. T. van Manen, C. M. Costello, M. A. Haroldson, L. A. Landenburger, L. L. Roberts, D. D. Bjornlie, and R. D. Mace. 2017. Potential paths for male-mediated gene flow to and from an isolated grizzly bear population. Ecosphere 8(10):e01969. 10.1002/ecs2.1969

Road Density and Fragmentation:

This seems like a good time as any to bring up the issue of road density. As stated earlier, roads and highways are a prime example of habitat fragmentation and one huge impediment to wildlife connectivity. It is hard for our organization to fathom the need for constructing an additional 56.8 miles of temporary roads within the project area. The EA doesn't even state where these roads will be located because according to the statement on page 9, the CGNF doesn't know themselves. Isn't this a violation of NEPA? The failure to disclose where and when roads will be built? How is the public supposed to fully analyze and understand the scope of the project without details such as this?

At any rate, GWA believes this amount of road building will be devastating to the habitat at large in spite of the fact these 56.8 miles of roads will be temporary. The volume of proposed road building in an area with a surplus of already existing roads is considered inexcusable. Even if the roads are temporary and will not be under construction or in use all at the same time, the damage will already have been done. Scars upon the landscape will not be so easily erased, especially on the landscape of the South Plateau with the soil conditions such as they are. But more importantly, 15 years of this kind of disturbance is a long time in terms of wildlife. That is where the real harm comes into play, not necessarily what we see on the landscape, but how wildlife views these scars. Even with that said, with some species like wolverines, they have a problem with linear infrastructure. More on that later. Years after roads would be decommissioned and returned back to a natural state, harm would have already taken place to the soil, becoming vectors for disease and noxious weeds, and disturbing the natural runoff pattern from snowmelt and rainfall.

In an article found in Sierra Forest Legacy7, GWA would like to bring recognition to these harms done by road construction; harms that surpass the obvious listings such as habitat fragmentation, road kill, and barriers for wildlife.

"The road construction which occurs during logging operations leads to compacted soils, disturbed organic layers, and excessive rates of soil erosion. Soil compaction which can last for decades restricts root growth and greatly minimizes the nutrients available to vegetation in these areas. Soil compaction also reduces the oxygen and water available to vegetation and has a significant detrimental effect on microorganisms found in the soil. The loss of organic layers affects mycorrhizal fungi, which are important to many tree species in accessing nutrients. As a result of this damage to vital soil resources, trees suffer from moisture stress, reduced growth

rates, inability to establish seedlings, and reduced resilience in the long term."

These are the reasons and rationale as to why roads are harmful to a region's natural ecology. The negative effect of road building remains long after logging has ceased, even though all impacts may not be visible to the naked eye. This map has been shown before, but it is a good example of the problem with an oversaturation of roads within the GYE. This map was produced the USGS8 and highlights the area in question. The consensus? This map highlights the road density outside of Yellowstone National Park.

Image included on pg. 11 showing a map of roads.

Wildlife, Endangered and Threatened Species:

Habitat conditions upon the South Plateau is fraught with different stressors upon the landscape. Climate change affecting wildlife food sources along with man's increasing encroachment fragments the existing habitat. All this places wildlife on the defense without much if any protection on their behalf. The project area is critical for wildlife habitat and connectivity just due to its location with Yellowstone National Park. With the Park on the east and the potential corridor connections to the north and west, the South Plateau is at the heart of wildlife importance. That connectivity is a long-term goal by GWA and many NGOs and federal agencies in assisting species to make those far-reaching connections to other ecosystems such as the Northern Continental Divide and the Bitteroot and beyond. It should be the goal of the CGNF.

Grizzly bear:

The revised draft EA spends considerable time discussing grizzly bear issues on pages 59-67. GWA is glad to see the CGNF acknowledging the existence of grizzly bear habitat on the South Plateau. Page 61 of the draft EA states:

"The South Plateau project area provides suitable habitat for and is occupied by grizzly bears."

But this forces us to ask the question, if this is suitable habitat, why is there so much disturbance (timber thinning, clearcutting and motorized use) being projected on these lands, especially when these lands are all located within the Grizzly Bear Recovery Zone/Primary Conservation Area GBRZ/PCA)? One would think this land-use designation would provide protection for the iconic grizzly bear, but sadly, this does not seem to be the case. The map above indicates the amount of road viability there is in the greater portion of the GYE. The map below highlights the Grizzly Bear Recovery Area/Primary Conservation Area. The project area is on the west side of the Grizzly Bear PCA. Map provided by CGNF 2020 Final Forest Plan9.

Image included on pg. 13 showing map from LMP EIS.

If we were to overlap one onto the other, we would notice that many roads crisscross the region, even lands within the Primary Conservation Area for grizzlies. We are talking about security, grizzly bear security. According to the revised draft EA's own definition on page 63 and 64, security is defined and/or described as below.

Security:

"Grizzly bear security is associated with the presence of roads. Roads have been shown to increase mortality risk to individual grizzly bears, either directly, through motor vehicle collisions and illegal shooting, or, indirectly, through habituation to human presence, which increases the potential for conflicts between humans and grizzly bears (U.S. Department of the Interior 2017). The most recent Motorized Access Database, maintained by the

Interagency Grizzly Bear Study Team, was used to model the effects of the proposed project on the motorized access resource indictors (secure habitat, Total Motorized Access Road Density, and Open Motorized Access Road Density) for each of the affected Subunits."

Following is a definition of grizzly bear secure habitat from page 64.

Grizzly Bear Secure Habitat:

"Grizzly Bear Secure Habitat is one measure of overall security and is defined as areas larger than 10 acres that are more than 500 meters from an open or gated motorized road, reoccurring helicopter flight line, or perimeter of a developed site. Secure habitat is listed as the percentage of a given subunit meeting this criterion. Habitat conditions for bears are managed to meet or exceed secure habitat baseline levels."

Evidently the land-use designation of PCA does not provide complete protection for grizzly bears. We say that because the U.S. Fish and Wildlife Service (USFWS) have design standards or criteria for grizzly bear management and have instituted man-made grizzly bear management units and subunits to help in this effort. Secure habitat standards or criteria is based upon the amount of lands that meet that definition within these subunits. See Figure 2 below from the "2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem10. Look at the west side of the PCA, specifically the Madison, Henry Lake and Plateau management units.

Image included on pg. 15 showing Bear Mgmt Unit boundaries

Figure 12 as shown below (from the revised draft EA) shows a blown-up portion of the above map above highlighting the more specific grizzly bear management subunits affected by the SPLAT project.

Image included on pg. 1 of GBear Subunits

After reading the definition above for secure habitat, one may think this is a low bar. How could we, as a society, not maintain 10 acres free from development and road building? How could we not maintain this landscape free from this degradation? Is not the South Plateau Landscape Treatment Project going to make the matter worse not better? How could it not? Is it not the Forest Service's responsibility to improve conditions for grizzly bears within the Grizzly Bear PCA for which it is named? How could this happen within the PCA? The answer is "loopholes". More on that below.

Now with the project's proposed treatment of thinning and clearcutting, and the construction of 56.8 miles of temporary roads, how is this going to be managed without hindering the habitat security even more? The answer is apparently it is not. Read the paragraph below and examine Table 9 copied from page 64 of the revised draft EA.

Temporary Reduction:

"Up to 56.8 miles of temporary roads would be constructed as part of the proposed project to facilitate access to timber treatment units. Temporary roads would temporarily affect grizzly bear secure habitat as shown in Table 9."

Table 9.Temporary effects to secure habitat resulting from the proposed action. Grizzly bear secure habitat is shown as a percentage of a Bear Management Subunit.

Bear Management SubunitSecure Habitat Baseline1Existing (as of 2021)2 Secure HabitatSecure Habitat During Project Implementation3Change from Baseline4Change from Existing

Henry's Lake #252.0%52.0%49.3%-2.7%-2.7%
Madison #267.4%67.4%67.1%-0.3%-0.3%
Plateau #168.6%70.6%69.3%0.7%-1.3%

Notes:

1 Baseline for Henry's Lake #2 and Madison #2 refers to access management values at full Travel Plan implementation. Baseline for Plateau #1 is the secure habitat level present in 1998.

2 2021 is the year when the analysis was completed; the most recent grizzly bear access database (2020) was used. Additional changes made since 2020 data was made available were also incorporated, including use of the "footprint" methodology for some developed sites.

An explanation is necessary. As stated in the footnotes above, the baseline for secure habitat is derived from the secure habitat level as determined in 1998. That is important as according to the "2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem".

"The Secure Habitat Standard requires that inside the PCA the percentage of secure habitat within each bear management subunit must be maintained at or above levels that existed in 1998 (Appendix E). The sole exception to the 1998 secure habitat baseline applies to the three subunits identified in the 2007 Conservation Strategy as in need of improvement above 1998 levels (Gallatin #3, Henrys Lake #2, and Madison #2). These three subunits must be maintained at or above levels attained from full implementation of the 2006 Gallatin National Forest Travel Management Plan (Appendix E). Authorized Federal projects that result in temporary or permanent changes to secure habitat are allowed per the Application Rules identified below."

The above criterion states that secure grizzly bear habitat must be either maintained or improved in comparison to the secure habitat standard of 1998, which is the baseline column shown in Table 9. As we can see in Table 9, if this project were allowed to continue as projected, there will be a decrease in secure habitat (stated in last column). But as we see in the last sentence of the above paragraph from the 2016 Conservation Strategy, there is an opt-out option.

Application Rules for Temporary Changes in Secure Habitat:

"Temporary reductions in secure habitat below baseline levels inside the PCA are allowed when associated with authorized Federal projects. Project activities should be concentrated in space and time to minimize disturbance. The following conditions must be met for temporary projects:

[bull] Only one project affecting secure habitat may be active within a given bear management subunit at any one time.

[bull] Total acreage of secure habitat affected within a given BMU does not exceed 1 percent of the acreage in the largest subunit within that BMU. The acreage of a project that counts against the 1 percent limit (i.e., the amount of secure habitat affected) is measured as the acreage within the 500-meter buffer around any temporary motorized access route or low-level helicopter flight line that intrudes into existing secure habitat.

[bull] Use of project roads will be limited to administrative purposes associated with project activities. Project implementation shall not reduce secure habitat below baseline levels for more than 4 consecutive years. The collective set of project roads that affect secure habitat below baseline levels shall be closed to all motorized travel after 3 years. Project roads shall be decommissioned such that secure habitat is restored within 1 year after road closure."

With these so-called legal excuses, "loopholes", GWA asks the question: why bother to exercise the program at all? These loop-holes do nothing to protect grizzly bear habitat. Perhaps GWA is a little naive, but our understanding of the PCA goals were to at the very least maintain the percentage of secure habitat, but ideally increase the availability of those lands, not maintain the status quo over 24 years with no or little improvement. Now, with the exercise of this project, secure grizzly bear habitat lands will actually decrease, in one case albeit minimally, but decrease none the same. With the use of this kind of management, whereby agencies can always make excuses to minimize secure habitat, we ask what is the point? How can the grizzly bear ever really have secure habitat and how can the species ever make connectivity with other ecosystems as long as we make allowances for some federal project?

For this reason, GWA does not approve of this project. It is one more way to delay progress for the bear, one more way for the public not to observe the success it wishes to experience, but more importantly, it is one more way for the species not to experience the protection they deserve.

Methods to Improve Secure Habitat:

Having said that, the revised draft EA states the following on page 65.

Permanent Changes

"The proposed permanent access changes to roads would permanently change secure habitat. The Madison #2 and Henry's Lake #2 subunits were identified as needing improvement in secure habitat by the Grizzly Bear Conservation Strategy (Yellowstone Ecosystem Subcommittee 2016). Secure habitat in the Henry's Lake #2 subunit would be permanently increased by decommissioning or obliterating three administrative roads (1704B, 2543A, and 2543B) in the subunit."

We applaud this decision and ask the questions: 1. Why wasn't this action done sooner? And 2. Are there more roads that can be decommissioned? GWA suggests that an analysis be done to determine additional roads which can be removed from public and/or administrative access. This should not be done just to offset temporary road construction, but done to increase secure habitat for grizzlies on a more permanent basis.

Grizzly Bear Science:

A lot of good science has been done and a lot of public dollars have been spent over the years in trying to understand just how "mother nature" works. We hate using that term because it dumbs down the intricacy and complexity of our natural systems, but it works in its simplicity in this regard. GWA would like to refer the CGNF to the following reference by Mattson, David J., Knight, Richard R.11, "IMPLICATIONS OF SHORT-ROTATION (70-120 YEAR) TIMBER MANAGEMENT TO YELLOWSTONE GRIZZLY BEARS":

"The Yellowstone grizzly bear population has not yet been proven viable. Consequently, any timber harvest and associated activities should be assumed to have a negative effect on the bear population unless proven through appropriate consultation to not contribute to mortality risk or habitat degradation. We also suggest measures to mitigate for timber harvest effects in instances where harvest has been deemed appropriate or is on-going."

This may be a little dated, but the science is good and the point and the argument are still valid. This is our concern. Can we prove the mortality risk or habitat degradation is a non factor in all that we do? This is our main point.

Second, GWA would like to refer the CGNF and the U.S. Forest Service to a very timely and relevant science article, again by Dr. David Mattson12 of the U.S. Geological Survey. The article entitled "USE OF LODGEPOLE PINE COVER TYPES BY YELLOWSTONE GRIZZLY BEARS" published in the Journal of Wildlife Management

in 1997 draws a very pertinent conclusion. Part of that is found here:

"These results do not support the premise that widespread conversion of lodgepole pine forests to early successional stages would benefit grizzly bears in the Yellowstone area. There is no rationale here for the systematic harvest of older stands to increase bear use of berries. Yellowstone's grizzlies consume few berries probably because of climatic constraints especially upon globe huckleberry production (Mattson et al. 1991, Mattson and Reinhart 1994)."

Further on, there is this finding.

"Even so, these results suggest that Yellowstone's grizzlies would not respond strongly to any changes in lodgepole pine forest structure, per se, with the following 2 provisos. First, I cannot address the effects of changes in landscape level structure of lodgepole pine forests beyond the range of what was analyzed here. This point holds for effects of the 1988 fires, especially given the attrition of snags expected during the next 2 decades (Lyon 1984) and the possible complications to movement posed by such an accumulation of large woody debris (Fancy and White 1985). Second, because whitebark pine seeds are a high-quality food, and because seed production is limited to mature or near-mature trees, grizzlies will be affected adversely by the removal of lodgepole pine-dominated stands that contain productive whitebark pine (Mattson and Reinhart 1994)."

There are other references which could be provided upon request, but these last two references should lead us to the proposition that all may not be as easy as it seems. This is the importance of exploring the vast amount of science and research that has been done. For these reasons and others, GWA does not support the Proposed Alternative.

Wolverine:

The wolverine has still not received federal protection by USFWS at the time of this writing. At the moment, the wolverine is considered "Proposed" under the Endangered Species Act (ESA) under review by the agency. Wolverines are thought to be considered sensitive species, loners who live in undisturbed areas with limited intrusion or contact. They are one of many species, who are suspected to be very sensitive to climate change. Even the Federal Register lists climate change as one of the primary threats to their survival.

We are disappointed in the minimal coverage the wolverine received in the Revised Draft EA. On page 67, the EA specifically states the wolverine is known to occur in the Henry's Mountains. The following statement is made in conjunction with the impact this project will have on the wolverine.

"The Proposed Action may displace wolverine from the project area through disturbance of both individual wolverines and their prey (outside of winter), but wolverine would be able to alter their travel routes into adjacent areas to avoid project activities and, in the context of the analysis area, the disturbance from this project would be relatively minor."

Further down below, the following statement is also made.

"As the proposed actions are not a primary or secondary threat to the wolverine, and wolverine are capable of and would cope with disturbance associated with treatment activities, and no barriers to wolverine movement or dispersal would result, it has been determined that the South Plateau Project is not likely to jeopardize the continued existence of the wolverine."

Yet the draft EA of 2020 discussed to at least a minor extent, the potential harm wolverines were facing as a result of habitat fragmentation and climate change. On pages 98 and 99 of that document there were these statements.

"The primary threats to the contiguous United States wolverine population (Distinct Population Segment or DPS) listed in the federal register (USDI 2013) include climate change and inadequacy of existing regulatory mechanisms to climate change with harvesting/trapping and small population size as secondary threats, per the USFWS five factor analyses."

"The best scientific and commercial information available indicates that only the projected decrease and fragmentation of wolverine habitat or range due to future climate change is a threat to the continued existence of the species."

That discussion was omitted from this most recent EA. The question is why? GWA has concern as both of those threats are looming before the wolverine population in the GYE. It's ironic that this project actually exacerbates these threats of habitat fragmentation and climate change. How can the CGNF make the statement that this project wouldn't exacerbate the threat of the wolverine (either from climate change or habitat fragmentation) when previous statements from the CGNF and the Federal Register verbally classify those threats as primary or at least secondary. You can't say it on one hand and then ignore the fact you said it on the other.

Coexistence with man? There seems to be a difference of opinion or perhaps a difference of science or at the very least, a difference in how the science is interpreted on this subject. On pages 98 and 99 of the draft EA of 2020, there were these statements quoted from the USFWS:

"Overall, human disturbances have likely resulted in some minor, but unquantified, loss of wolverine habitat, but wolverine have also been documented to persist and reproduce in areas with high human use and disturbance, including alpine ski areas and areas with high snowmobile use[hellip]..

Preliminary evidence suggests that wolverines can coexist amid high levels of dispersed motorized and nonmotorized use (Heinenmeyer et al. 2012, entire), possibly shifting activity to avoid the most heavily used areas within their home ranges.

More recent scientific literature (Fisher et al. 2013, Heim et al. 2017, Heinemeyer et al. 2019, and Kortello et al. 2019) supports the USDI Fish and Wildlife Service (2013) findings that human disturbance in occupied habitat can affect wolverine habitat use, but not at the scale that would be a threat to the DPS."

Just because wolverines may be able to tolerate man's activities upon the landscape in some cases, doesn't mean they should. We'll refer back to the comments we provided during the Draft Revised Forest Plan.

GWA's Previous Comments on the Wolverine

from the Draft Revised Forest Plan:

"Outside of climate change, man is perhaps the greatest threat. The Craighead Institute's paper, Wilderness, Wildlife, and Ecological Values of the Hyalite-Porcupine-Buffalo Horn Wilderness Study Area, (Craighead, Lance13, 2015, pages 102, 103, 106) places the history of wolverines in Montana in perspective:"

"Wolverines in Montana have persisted despite a past history of unlimited trapping and hunting solely because of the presence of designated wilderness and remote inaccessible habitat (Hornocker and Hash 1981")

"A review of wolverines and recreation recommended that managers should avoid placing new recreational trails and roads through previously unfragmented habitats, and they also should be located away from potential denning areas. Negative impacts on wolverines were found from snowmobiles, skiing, hiking, and human presence (Snetsinger and White 2009). No data were found on effects of biking and horseback riding."

"Within the DEIS on page 400, there is this truth stated about the threats of human conflict."

"Given the strong association between wolverine habitat and snow cover, winter recreation uses such as skiing and snowmobiling may also be key stressors for this species."

"There is growing scientific evidence that man is inflicting unwarranted negative impact upon the wolverine. Whether it is a direct impact as man/wolverine contact or an indirect impact such as humans simply invading wolverine habitat, the result can be the same. A very important research paper entitled Wolverine - Winter Recreation Research Project: Investigating the Interactions between Wolverines and Winter Recreation (Heinmeyer, Kimberly S.14 et al. 2017, page 42, 43 respectively) lays out the premise as stated:"

"Clearly, at some point, displacement from high quality habitats would affect the reproductive and survival fitness of animals. Given the low density and fragmented nature of wolverines in the contiguous United States, impacts to the relatively few reproductive females should be minimized. We found that the effects of winter recreation on wolverine habitat are dependent upon the relative intensity of recreation and that winter recreation patterns are highly variable at the scale of wolverine home ranges."

"Our results suggest that winter recreation should be considered when assessing wolverine habitat suitability, cumulative effects and conservation. Our research provides land managers with a more detailed understanding of important habitat characteristics used by wolverines within home ranges and should inform management of wolverine habitats across the large landscapes they require. Further, it shows that female wolverines are sensitive to dispersed winter recreation which results in indirect habitat loss during the critical denning season. The functional responses to dispersed winter recreation provide insight into these negative effects, and suggest that lower levels of dispersed recreation will have less effect on wolverines than more widespread and intense recreation."

"We include one more final piece of scientific evidence indicating the sensitivity that wolverines have on man's intrusion into the forest. In a scientific study conducted by Matt Scrafford, a wolverine biologist in Alberta, Canada, trapped and collared three wolverines in northern Alberta. Justina Ray (Ray, Justina15, 2018), President and Senior Scientist of Wildlife Conservation Society of Canada, wrote of the research in Canadian Geographic. The link and snippets of the last few paragraphs are below:"

https://www.canadiangeographic.ca/article/why-wont-wolverines-cross-road

"These findings led both researchers to a similar set of recommendations. The first and foremost is to limit road building as much as possible in high quality habitat areas for wolverines and grizzly bears. The second is to reduce the overall road footprint by "clustering" roads in an area as much as possible, especially high traffic routes. Finally, Scrafford and Lamb note that roads that do run through key habitat areas must be carefully managed. Public access to backcountry roads, for example, should be restricted when wolverines are denning. Similarly, disused roads should be decommissioned to reduce stress and mortality for wildlife."

"Wolverines are listed as a Species of Special Concern in Canada and may be at risk in Alberta, though due to the elusive nature of the animal, precise population data is lacking. Still, unchecked road building in the forests predators depend on is a key factor in the disappearance of these and other iconic animals. If we want wolverines (and grizzlies) to thrive in our wild areas, we need to put up a stop sign on indiscriminate road building."

"Finally, there is this found on page 103 of the draft EA of 2020."

"The Proposed Action may displace wolverine from the project area through disturbance of both individual

wolverines and their prey (outside of the winter). Most of the project area provides dispersal habitat, and dispersal habitat is widespread and abundant across the analysis area, so wolverine would be able to alter their travel routes into adjacent areas in order to avoid project activities."

The statement directly above and from the draft EA of 2020 is similar in nature to that found on page 67 of the revised draft EA of 2022. Where is the science that backs the following statement:

"wolverine would be able to alter their travel routes into adjacent areas in order to avoid project activities."

We ask because that particular conclusion seems based upon several assumptions and contrary to the science we just provided. For that reason and for the reasons of science research we've brought to the table, and for the conflicting statements by the Forest Service to that known science, we have to disagree with the assumption that the wolverine would not face any harm as a result of this project. At some point in time, we have to say "NO" to the excuses we as a society make for continued logging. We do not see the benefit of disrupting grizzly bears and wolverine. How much of this disruption will be short-term over time? We don't know. There is no way to know. We are fairly self-assured; however, we have already done long-term damage to wildlife and their habitat based upon what we thought would be short-term disruption only to find out otherwise after the fact. We cannot continue to make the same mistake expecting a different result."

Canada Lynx:

GWA did not provide comments during the comment period of 2020 concerning the Canadian Lynx, but plan to do so now. To be honest in reading the revised draft EA, our organization just has to shake our heads in what we're finding and what the CGNF is willing to accept. As the current EA states, the Canadian lynx is listed as a threatened species under the Endangered Species Act of 2000. On page 56 of the document, the EA specifically states:

"Clearcut harvest is limited to 4,600 acres in lynx habitat to ensure that NRMLD standards VEG S1 and S2 (which serve as cumulative effects thresholds by addressing the quantity and rate of change for winter snowshoe hare habitat on the landscape) would be met[hellip][hellip].

Under a maximum impact scenario given the project Design Features, the

project would affect about 19% of lynx foraging habitat currently in the Lynx Analysis Unit[hellip]..

Accordingly, the proposed project may affect, and is likely to adversely affect lynx."

However, then the EA makes this statement:

"However, the proposed project is not expected to significantly impact the species because it would be consistent with lynx management direction, including all standards and associated exemptions. The NRLMD standards were analyzed and determined to provide protection to lynx habitat."

GWA has seen many statements or conclusions like this before. Basically, the EA is assuming that project actions may harm the population of a particular species in the project area, but not harm the species overall. We basically find these types of statements counterproductive. They provide an excuse to continue the project in face of continued negative impacts. The numbers that really provide an insight to the real harm of the project is that 4,600 acres of lynx habitat will be subjected to a clearcut harvest and about 19% of the lynx foraging habitat will be affected. These are the numbers that have meaning and these numbers are significant. The CGNF is basically saying in a number of ways that we know there will be harm to wildlife and their habitat, but that is okay; we are willing to accept those impacts. GWA is not.

On page 57 of the revised draft EA, there is this statement.

"The temporal context for analysis is from project implementation to approximately 40 years in the future, because where thinning treatments are applied, it would take approximately 40 years for stands to enter a multistory habitat structure. Clearcut harvest stands would require a minimum of 15 years to enter a structural stage that would support snowshoe hare foraging during the winter."

There is no way that a federal agency should accept these types of timeframes when considering impacts upon wildlife. Most species of wildlife have a fairly short lifespans when compared to humans. It is the arrogance that we see shining forth here. We may not think this disruption is large to our eyes, but to that of wildlife, it can be their full existence. This would provide a disruption for several years, decades, but we say we are okay with that because we can see ourselves outliving those scenarios. This is much to the fault of our arrogance.

Finally in the subject matter of connectivity for Canadian lynx, a couple of statements on page 58 caught our attention. The revised draft EA does state that in order to maintain habitat connectivity, the CGNF needs to permit "enough" vegetation cover arranged in a way that allows lynx to move around. There is a subjective adjective here "enough". What exactly does that mean? Who decides if there is enough and on what basis?

Another problem with a connectivity statement is this further down on the page is this.

"Thinning and fuels treatments may occur in the linkage area, but these types of treatments generally leave enough trees to provide adequate cover to maintain travel and resting habitat for lynx."

The qualifier "generally" is another subjective word. How are we, the general public, supposed to measure this statement. This makes it very hard for us to derive in any objective way, the impacts of these actions. Does this mean these treatments are or are not going to leave enough trees to provide adequate cover to maintain travel and resting habitat for lynx. And by the way, there is that word "enough" again. Who is going to decide whether or not there are "enough" trees existing for such a purpose? We find an acknowledgement that these criteria are important to the lynx, but we have no assurances that we (the CGNF or the Forest Service) know how to meet that obligation.

Wolves:

Wolves were not discussed in this revised draft EA, primarily we're guessing because they are no longer listed on the ESA list for the Northern Rocky Mountain region. But once again, wolves are known to be on the landscape and they will have an impact in how this predator-prey relationship will evolve during the phase of this project. A complete and scientific environmental assessment should be discussing impacts on all wildlife, not just those mandated by policy. What is the impact this forest project would have on wolves? Being that this project is in line with wildlife movements of fellow predators and prey, we may never know, but we should research and learn. The USFS should want to know the impact this and other projects have on the total ecological integrity of a region, not just those mandated by policy or an administration.

Management Indicator Species:

We noticed a rather significant change between the two draft EAs on the SPLAT project. The draft EA of 2020 included a discussion of the phrase "management indicator species", which is according to the 2020 EA an attempt to meet the requirement of the National Forest Management Act (NFMA). On page 117 of that EA, there is this statement pertaining to that intent.

"The fundamental premise for meeting the NFMA diversity requirement is that Forest Plan components for

ecosystem integrity and diversity will provide the ecological conditions to maintain the diversity of plant and animal communities and to support the persistence of native species."

"To aid in meeting this requirement, the FP (Forest Plan) identifies MIS (Management Indicator Species). MIS are selected because their population changes are believed to indicate the effects of management activities (USDA Forest Service 2012)."

That language and that discussion is missing from the revised draft SPLAT EA of 2022. We're determined to ask the question "why" but feel we found the answer on page 71 of the revised draft EA of 2022 in the discussion of the Bald Eagle. MIS is only mentioned twice in this document and both occur in discussion of the Bald Eagle.

"The new Land Management Plan does not include management indicator species, rather all of the components combined provide for the diversity and long-term persistence of native species in the plan area."

So, from what we gather then, the SPLAT EA of 2022 is not discussing the health and welfare of MIS species because the new Forest Plan doesn't acknowledge them either? Instead, the new Forest Plan (that of 2020) is supposed to include all the components combined to provide for the diversity and long-term persistence of native species in the plan area? This rationale is absolutely jaw-dropping. GWA has long thought that the Revised Forest Plan of 2020 was well short of protections for wildlife, this proves our point. A couple of things wrong with this reasoning.

Number 1) this is a huge assumption -

Number 2) how can there be any monitoring of the species with this kind of attitude. CGNF is basically assuming that all species are doing well because they have everything they need to do well. What kind of science is this?

Number 3) how can you eliminate the discussion of a species when we already know that the species population is affected by Forest Service projects?

So, because of this reasoning, discussion of other species such as the American Pine Marten is not part of the analysis of the revised draft 2022 SPLAT EA because it was considered a management indicator species, which now is considered "not applicable".

The American Pine Marten:

In spite of what we just learned above; we're going to discuss the American Pine Marten because we believe it needs to be considered. This species and any other species should be considered in every forest project EA, especially if that project will have impacts on that particular species, which is the case of the pine marten. It met the definition of a species being affected from Forest Service projects. The draft EA of 2020 states the species uses moist forest types and mature forests. Old-growth forests come to mind. But as stated on page 565 of the Final Environmental Impact Statement for the CGNF Revised Forest Plan, it also provides this statement:

"[hellip]. pine marten are species with known affiliations for mature to over-mature forest conditions, including the presence of large trees, snags and logs, and relatively high canopy cover. While these individual habitat components are most abundant in mature and old growth forest, they can be found in earlier successional stages as well."

Knowing that and with the knowledge old-growth habitat seems to be quite rare in the project area, the following statement is found on page 149 of the draft EA of 2020:

"Vegetation treatments proposed in this project have the potential to affect pine marten habitat. Habitats meeting the Green and others (1992) definition of old growth, as well as those that do not, would be affected by the proposed treatment activities."

This gets our attention and with good reason. Under the section called Environmental Consequences on page 151 of the draft EA of 2020, the paragraph opens with the following:

"As shown in Table 79, under the Proposed Action a total of 28 acres of preferred pine marten habitat would be commercially thinned, which accounts for 8% of the 334 acres currently available in the analysis area. A total of 4,258 acres of suitable marten habitat lies within the current stand pool (14 acres aspen, 10 acres burning, 3,175 acres clearcut, 256 acres Douglas-fir Thin, 134 acres Fuels treatment, 89 acres pre-commercial thinning, and 580 acres Thinning), which accounts for 53% of the 7,977 acres of suitable habitat currently available in the analysis area. In all, a total of 4,286 acres of suitable and preferred pine marten habitat lies within the current stand pool. These acres are displayed in Figure 28. As regeneration harvest would remove most of the overstory structure in affected stands, reducing cover and increasing susceptibility to predators, these acres would not be considered suitable habitat for marten post-implementation."

Further on, it states the following:

The proposed treatments would alter preferred and suitable pine marten habitat to a lower quality condition by simplifying forest structure. Potvin and others (1999 and 2000) found that marten avoided clearcuts where shrubs and coniferous regeneration were sparse.

It is clearly evident this project does not do the America pine marten any favors. These actions fly in the face of our goal to maintain and/or improve biological diversity. Table 61 of the draft EA of 2020 (on page 152) states and verifies the paragraph above in just how severely pine marten habitat would be disrupted:

Table 61. Effects of the Proposed Action on pine marten habitat

Habitat TypeProposed Action
Acres %
Preferred288%
Suitable4,25853%
Total4,28652%

GWA finds this amount of disruption unsatisfactory for a species of any region. The summary and conclusion of concerning the Pine Marten on page 152 of the draft EA of 2020 is profound.

"Primary and suitable marten habitat would be affected by the proposed treatment activities. Up to 53% of current primary and suitable habitat in the analysis area lie within the current stand pool."

GWA finds the omission of these facts from the most recent revised draft EA of 2022 absolutely appalling. Once again how can the public make an objective, scientific and morality laden decision when facts such as this are removed from the public's knowledge. For those residents, citizens and concerned advocates for wildlife, all of them have a right to know the full extent of a project's impact. This EA fails in that context.

Forest Practices:

Picture below taken by members of GWA of the landscape and vegetation of the South Plateau in October of this year.

Image included on pg. 31 showing conifer forest interspersed with grassy openings.

To be honest, GWA sees this project in similar terms as many others in a long line of misrepresented forest health projects across our public land. There is nothing new here. What is being presented to the public is a list of slanted reasons why timber thinning needs to be undertaken, while in reality, wildlife and their habitat become more and more fragmented. GWA has mentioned in previous comments to the Forest Service that a new paradigm needs to be undertaken to address climate change, a paradigm which needs to be practiced nationwide.

This paradigm is a shift from one of exploitation to one of preservation. We must recognize our forests have more value in preserving the health of our planet just by their original design in maintaining atmospheric gases than a source of wood for construction. New technologies should be in play to address that issue. Carbon sequestration is just one of the ways our forests make life possible as we know it. Society must acknowledge if we want to find and utilize inexpensive methods to mitigate climate change, the use of our forests was designed to do just that. Until that happens, we will see little improvement in wildlife habitat, because biodiversity is a by-product of proper forest management. As long as the U.S. Forest Service presents forest management in terms of 19th century thought, there will be land-use and wildlife mismanagement.

Is Disease Justification for this Project?

The original draft EA of 2020 placed a lot of emphasis upon disease as justification for this project. The Forest Service cover letter dated October 6, 2022 restates that theme in their opening remarks to the public. That particular paragraph is stated below.

"The South Plateau landscape is dominated by even-aged mature lodgepole pine that is generally infected with dwarf mistletoe and highly susceptible to mountain pine beetle outbreaks. We designed treatments to increase forest resilience to insects and disease. The tools we would use include clearcut harvest and thinning. Clearcut harvest would only be used in lodgepole pine stands that are over 80 years old, and clearcut units would be limited to 40 acres or less in size. This type of treatment would be applied on up to 5,551 acres, or 14% of the landscape. Clearcut harvest has the added benefit of increasing landscape heterogeneity, or patchiness, which is important because it both mimics the natural disturbance regime of lodgepole pine and benefits wildlife through increased foraging opportunities in created openings."

There is much in this paragraph that is wrong with the intent and reality. The excuse to use disease as a precipice for vegetative treatments (clearcutting, logging, thinning, etc.) is not to tell the full story of the role of disease on the forests. Diseases, while cyclic in nature, are always present upon the landscape. To mislead the public that these actions are going to eliminate this threat from this forest is not based in reality and not truthful. There are questions as to the effectiveness of these treatments. That reality will be described in more detail below. The statement that a "clearcut" mimics the natural disturbance regime of lodgepole pine is highly dubious if not downright unscientifically wrong.

Even though the justification for the project is centered on disease mitigation, the discussion of disease control within the EA doesn't have the same emphasis. The 2022 revised draft EA explains the justification for the project below found on page 3. Rationale 1 relates to disease.

1.) Reduce the risk from and increase stand resistance and landscape resilience to insects and disease, particularly long-term losses of lodgepole pine stands.

2.) Contribute to a sustained yield of timber products and improve the productivity of forested timber stands.

3.) Treat hazardous fuels to increase fire suppression effectiveness and reduce risk to the public and first responders.

Much emphasis of the draft EA of 2020 pertained to dwarf mistletoe and mountain pine beetle. That does not seem to be the case in the revised draft of 2022. Basically, this EA proposes we cut and manage the forest of the South Plateau before the forest becomes infested, not after. This may be proactive, but the degree that we use proactiveness can become extreme. For example, it is also proactive to say we will cut all the trees down to eliminate disease or to prevent fire upon the landscape. It may be proactive, but it is also not feasible, sensible, or acceptable. Thinning forest to prevent natural occurrences upon the landscape is not proper forest management. It just becomes an excuse for more logging.

GWA is going to address the factor of disease on this forest, one of the rationales for the SPLAT project. Adherence to some common sense must be realized. Therefore, we start in the beginning. Many relationships exist in forest ecology, hence that is what ecology is. But man has managed to intervene in many of these, thereby interrupting the natural processes. First, there is this fact found in the science journal PLOS ONE dated Sept. 2014 written by Michelle C. Agne16, et al:

"Dwarf mistletoe (Arceuthobium americanum) also influences stand structure and occurs frequently in post-mountain pine beetle epidemic lodgepole pine forests. Few studies have incorporated both disturbances simultaneously although they co-occur frequently on the landscape."

There is a relationship between these two greatest threats upon a pine forest today, the mountain pine beetle and LPDMT. Both occurrences can weaken forest health and given enough time, since LPDMT is a slow-growing infestation, can play out with tree mortality. But also, in play here is the role of climate change. Our changing climate can wreak havoc on the health of a forest by denying trees and surrounding vegetation adequate water and nutrient uptake; all compounding and exacerbating the problem of forest health.

Proof of this fact can be found in the Forest Service's own literature, General Technical Report PSW-GTR-236, "A Risk Assessment of Climate Change and the Impact of Forest Diseases on Forest Ecosystems in the Western United States and Canada", by John T. Kliejunas17. The following statements are found on page 35 and 36 of the documents:

* "Increases in temperature will increase dwarf mistletoe survival and host infection. Decreases in precipitation will likely increase host stress, increasing damage from the pathogen."
* "As climate changes, the distribution of dwarf mistletoes is expected to follow the shift in distribution of their hosts. Because cold temperatures limit the ranges of many dwarf mistletoes, increases in temperature likely will result in range extensions."
* "Dwarf mistletoe (A. americanum) on lodgepole pine occurs at the lower but not at the upper elevational limits of its host (Hawksworth 1956)."
* "The growing season at higher elevations may not be long enough for the fruit of the mistletoe to mature before autumn frosts occur[hellip].Warmer temperatures may enable range expansion of some dwarf mistletoes. An increased incidence of summer drought would increase mortality of infected trees."

These facts and many others available are indelible proof that climate change is having a negative impact upon forest health today, both directly and indirectly, whether it be pathogens, diseases or other infestations which may or may not occur naturally upon the landscape. Man can exacerbate the problem as specified above in bullet point one; simply by clearcutting a landscape, thereby opening the landscape to more sun, drier conditions, and warming the natural surrounding landscape on a micro-ecological and micro-meteorological scale.

This leaves open the question of whether or not these treatments are actually helping to address the real issue of forest health which is driven by climate change or are they just excuses to further the cut? We need to seriously have this debate.

Other influences of man on LPDMT:

To further this debate, GWA would also like to present the following reference. The U.S. Forest Service should be knowledgeable and aware of the facts presented and found on the forest pathology.org18 website.

1. "In presettlement forests of western USA, it is generally considered that dwarf mistletoes tended to be patchily distributed ?[9]?. Some early management practices tended to increase the abundance and distribution of dwarf mistletoes, and some (especially fire exclusion) continue to do so. Thinning commonly practiced in ponderosa pine of the Southwest ("improvement selection") may have prevented mortality due to mistletoe, but also contributed to its spread and intensification ?[1, 4, 7]?. Selectively harvesting the most valuable trees (high-grading) concentrated the mistletoe in the overstory while creating opportunities for reproduction, establishing ideal conditions for dwarf mistletoe spread and intensification. Similarly, incomplete clearcuts left unmerchantable, infected trees that led to heavy infection of the regeneration. Excessive grazing, road building, and direct fire suppression have decreased fire frequency, enhancing multi-story, dense stands that are more susceptible to dwarf mistletoes in some forest types, while at the same time removing the single most important natural control of dwarf mistletoes."
2. "Similar surveys over a 41-year period on the Bighorn National Forest indicate continuing increase in incidence of lodgepole pine dwarf mistletoe from 31% in 1958 to 36% in 1978 and a conservative estimate of 44% in 1999 ?[3]?, an increase of 42% in only 41 years."
3. "Logging and changes in fire regime likely increased mistletoe infection over large areas in lodgepole pine forests of Colorado. Dwarf mistletoe infection in lodgepole pine increased with time since the last fire, or decreased as fire frequency increased, in several studies, and a general increase in dwarf mistletoe intensity and distribution over time was anticipated due to changes in fire return interval ?[9, 15]?. In lodgepole pine forests of eastern Oregon and Washington, although dwarf mistletoe was undoubtedly severe in some presettlement forests, it is now more widely distributed and carrying over between stands now partially replaced by mountain pine beetle rather than more completely replaced by fire ?[8]?. In lodgepole pine of western Montana and northern Idaho, the increase in dwarf mistletoe, together with fire exclusion and increasing mountain pine beetle vulnerability, have created a huge potential for fires ?[11]?. An exception is the Targhee National Forest in Idaho, where incidence of dwarf mistletoes declined in both lodgepole pine and Douglas-fir between 1978 and 1996 ?[14]?. In that case, widespread bark beetle outbreaks and threat of wildfire led to a huge effort at salvage, regeneration and seedling protection that shifted forest structure from mostly mature, heavily infested stands to younger, lightly infested stands."

We've learned that fire suppression has most likely increased the severity and distribution of LPDMT as well as increased the likelihood of fire. And we can also surmise that thinning and clearcutting of past practices have actually made the distribution of LPDMT worse rather than better, as also stated in that same document:

"As a practical matter, within the range of densities usually found in managed forests (on the left side of the graph), mistletoes spread more rapidly in open than in dense stands ?[12]?."

We say this in order to question the treatment as stated on page 16 of the draft EA of 2020. Even though this language is not referenced from the current EA of October 2022, this was the thinking of the SPLAT project.

"Clearcutting in LPDMT infected stands would improve stand productivity at the landscape level. Growth losses due to LPDMT can be severe when mistletoe infections are high (Hawksworth and Dooling 1984). Clearcutting would remove mistletoe infections from a stand and allow a new generation of lodgepole pine to mature with lower or no LPDMT infection and have faster growth rates compared to stands of similar ages with heavy

infections."

This raises the question: Are we not making the problem worse by continuing to use the same practices of the past. It is the suppression of fire to begin with that led us to where we are today. It is the denial of climate change by many in power who have influenced the policies and practices of land management agencies that led us to where we are. From what we just learned; thinning can actually lead to the dispersal of LPDMT on the landscape.

That counters the statement found in the draft EA of 2020 on pages 13 and 16, where it states the following respectively:

Dwarf mistletoe will generally spread and intensify more slowly in larger openings than smaller ones (Hoffman 2004).

"Thinning increases growing space for individual trees and allows them to grow into larger diameters more quickly than unthinned stands. Thinning can increase the total volume produced by a stand compared to unthinned stands, provided trees are young and vigorous enough to respond to thinning (Oliver and Larson 1996)."

So why are we formulating a practice that can actually compound the problem rather than resolve it? Do we really know what we are doing? Are we not making matters worse instead of better? On top of which, we must also be mindful of the fact that LPDMT presents a complex relationship with wildlife. GWA will not get into all of those matters here, but we will provide the source and reference: "Dwarf Mistletoes: Ecology and Management in the Rocky Mountain Region"19. This publication by the U.S. Forest Service in November 2013 lays out the intricate balance of insects, vertebrates and other animals in a LPDMT forest.

Between this country's policy of exacerbating climate change, agencies continue to suppress fire, utilizing policies that clearly dries out the forest by thinning and clearcutting, we need to seriously discuss using and acknowledging the best science available for how to deal with forests with LPDMT.

The "X" Factor:

One particular reference GWA would like to use is from the Montana Field Guide20, specifically the header entitled "Ecological Systems", "Rocky Mountain Poor Site Lodgepole Pine Forest". From the general description, there is this summary of Lodgepole Pine Forest.

"The most notable occurrence of this system is in the West Yellowstone Basin and surrounding Yellowstone Highlands, such as the Madison Plateau. In this region of Montana, cold-air ponding and coarse, rhyolitic outwash obsidian sands are the major factors contributing to the extensive development of this system in southwestern Montana. Fire is infrequent in this system, averaging every 150-400 years in subalpine forests. Following stand-replacing fires, lodgepole pine will colonize rapidly on sites that are too extreme for the establishment of other coniferous species, developing into dense, persistent, even-aged stands. Mature stands are primarily open, and develop past their initial even-aged structure to become a multi-aged structure. These stands last for longer intervals between disturbances than do conventional lodgepole pine-dominated stands."

Image included pg. 37 showing lodgepole tree trunks.

Scene taken on the South Plateau which indicates a normal growth pattern of lodgepole pine forest in

dominance.

Further down on the website under Vegetation, there is this paragraph.

"These forests are dominated by lodgepole pine (Pinus contorta) with sparse undergrowth. At the closed canopy stage of stand development, undergrowth may be totally lacking. Some open stands with very sparse understories can experience a form of mixed-severity burning along downed logs when there are insufficient fuels between logs to carry fire. Depending on the arrangement and loading of logs to living trees, either mortality or fire-scarring may occur."

Further down under Dynamic Processes, there is this description of the forest process.

"Establishment of lodgepole pine in this system is episodic and linked to stand-replacing fire. Lodgepole pine forests with very sparse understories experience longer fire return intervals ranging from 120 to over 300 years in comparison to stands with more productive understories (U.S. Department of Agriculture, 2012). This ecosystem also experiences a greater percentage of fires of mixed severity, with fewer stand-replacing fires than more productive lodgepole forests (USDA, 2012). Longer fire return intervals and decreased fire severity is largely attributable to the absence of significant ladder fuels in this system (Anderson, 2003). Fuel loading in this system is primarily a result of downed woody debris from past disturbances (e.g. mountain pine beetle, windfall), and sparse understory is not effective at sustaining high-intensity fires (Agee, 1996; Smith and Fischer, 1997). Fire severity is therefore only great as a result of long-term fuel accumulation, or severe climate conditions (Agee, 1996; Smith and Fischer, 1997)."

"Dense, even-aged stands resulting from stand-replacing fires are increasingly susceptible to windthrow and snow damage as they mature (Smith and Fischer, 1997). Individual trees that have matured in dense stands obtain a degree of protection from neighboring trees, such that the development of deep roots and other physical mechanisms to withstand wind exposure are unnecessary. Additionally, the shallow soils typical of this system contribute to the development of shallow rooting systems. As a result, increased wind exposure resulting from natural or mechanical thinning amplifies susceptibility to windfall (Anderson, 2003)."

There is more within the website, but from this we can gather that ecological dynamics are at play. With this being said, it appears that the forest as it stands in the South Plateau region has behaved and colonized itself as it should. While the article also states the harm that these forests can inherit from LPDMT and mountain pine beetle, the truth is manmade treatments are not going to eliminate that threat.

The revised draft EA seems to indicate the desire to increase biodiversity of the site by vegetative treatments, trying to spur growth of other species. Yet in reality, the lodgepole pine is undoubtedly the climax species for this environment. From what we just read; it also appears the forests of the South Plateau would be better off without manmade intervention. If anything, the harsh description of growing conditions of climate and soil should raise concern about the ability of other species to regenerate especially in times of climate change.

As we will read below, Lodgepole pine forest is the species to naturally colonize and adapt to this type of environment. The conditions we have now, primarily the rhyolitic soil conditions (also reported as obsidian sand soil) and climate change make it hard for a variety of species to inhabit this area.

According to Terry Thomas, a wildlife biologist and naturalist, lodgepole pine forest will self correct themselves if given time. In a June 18, 2020 article21 in the Post Register newspaper of Idaho Falls, Idaho, Terry Thomas makes this statement concerning the growth pattern of lodgepole pine.

"When the cones open, lodgepoles repopulate the site quickly. Seedling densities can easily reach 20,000 per acre. As the seedlings grow, they create a forest that is nearly impenetrable for any animal much larger than a

squirrel. These "dog hair" stands also shade the ground so completely that little, if any, ground dwelling plants can grow, resulting in what I refer to as a "lodgepole desert." Over time, these stands will self-thin, and the forest will slowly open up as weaker trees succumb to the shading of faster growing relatives."

For the most part, this is what we see here in the South Plateau. GWA fails to see that what is occurring in this region is anything outside of normal. What is occurring here is what one would expect to see in this kind of forest. It does not need help from man.

The only real reason for the CGNF to continue this project is to meet cutting requirements of the CGNF.

With the soil conditions and climate extremes as we are experiencing on the South Plateau, there must be some concern whether or not even the lodgepole pine forests will grow back in lieu of a changing climate. Do we really think these forests will forever be sustaining itself into the future?

Speaking of which, how does this project advance President Biden's directive in Executive Order 14,072 to conserve mature and old-growth forests for their tremendous wildlife, carbon-storage and watershed-protection values? This project is everything wrong when compared to the national directive from the President. For all of these many reasons, GWA cannot support this timber project.

Old-growth Forest:

One of GWA's primary concerns of forest health is the perpetual existence of biological diversity and integrity. Old-growth forests are key to that goal. The draft EA appears to define old growth as trees at breast height greater than 10 inches with no clearcut activity within 150 years. Page 8 of draft EA of 2020 states the following:

Stands that have VMAP data showing diameter at breast height (dbh) <10", areas with past clearcut activity within 150 years, and stands with past stand exams showing a stand age of <150 years were not surveyed for old growth and were presumed to not be old growth due to lack of large trees or sufficient age.

GWA is unsure of the number of acres or details of old growth forest available. The only clue is what the draft EA states here.

"Approximately 7,000 acres of stand-level walkthrough and old growth data was collected in the summer of 2019- this information is available in the Project Record."

The importance of old-growth forest is key to maintaining the biodiversity and integrity of the forest and so GWA is concerned over the descriptions mentioned in the table on page 69 of the draft EA of 2020 as it pertains to old-growth of whitebark pine. The importance of whitebark pine is especially concerning since it is a favored and popular food source for grizzly bear. GWA would like further explanation of any and all treatments in or in close proximity of all old-growth forest, especially those of whitebark pine, before any treatments proceed. With 91% of the project area described as a lodgepole pine forest, any old-growth sections should be avoided by human activity, again, especially old-growth consisting of whitebark pine.

Forest Regeneration:

GWA strongly believes the CGNF has to be very aware and concerned about the possibility that regeneration on these landscapes will occur as easily as they think they will. The science does not support that conclusion. In the advent of climate change, the proof is less positive of such action. This leads us into the next topic of climate change, but for now, GWA would like to refer the CGNF to the reference listed in the publication of Proceedings of the National Academy of Science, March 11, 2019 entitled "Wildfires and climate change push low-elevation forests across a criticalclimate threshold for tree regeneration" by Kimberley T. Davis22 et al. This report drew

the following conclusions in relation to forest regeneration:

* "Climate change will also change vegetation. With hotter drier weather patterns there will be more fire. The aftermath of the fires could lead to vegetative changes.
* Climate change in the American West may be crossing an ominous threshold, making parts of the region inhospitable for some native pine and fir forests to regrow after wildfires, new research suggests.
* As temperatures rise, the hotter, drier air and drier soil conditions are increasingly unsuitable for young Douglas firs and ponderosa pines to take root and thrive in some of the region's low-elevation forests.
* Wildfires in these areas could lead to abrupt ecosystem changes, from forest to non-forest, that would otherwise take decades to centuries, the study says.
* Once a certain threshold was crossed, and then the probability of tree establishment decreased rapidly," said Kimberley Davis, a researcher at the University of Montana and lead author of the study. "The climate conditions are just a lot less suitable for regeneration."

These conclusions from the research cannot and should not be ignored. There is a need to properly address and discuss the science in an open forum. Rushing into all of these fuel reduction projects are beginning to sound like a response to political interference and pressure than logical science. There is more and more recent science that is coming out to reinforce this opinion. GWA recommends that CGNF should seriously research the research.

Southwest Montana is already in a drought condition according to the US Drought Monitor. The area is categorized anywhere between abnormally dry to extreme drought conditions in 71% of the landscape of the South Plateau landscape. Serious forest regeneration is not going to be very conducive under these conditions. Opening up the forest canopy is not going to be of much help, if any. There really needs to be a full detailed and honest discussion as to the best remedies for forest improvements in order to mitigate climate change.

Climate Change:

GWA is disappointed in the position taken by the U.S. Forest Service over the issue of climate change. Their position of [ldquo]it[rsquo]s not going to make a difference anyway so we don[rsquo]t need to instill climate change mitigation policies[rdquo] is honestly not responsible for a federal land-use management agency. This is especially true for an agency that prides itself on using the best available science. This attitude is showcased here in these few snippets found on page 192 of the draft EA of 2020.

[ldquo]Meaningful and relevant conclusions on the effects of a relatively minor land management action such as this on global greenhouse gas emissions or global climate change is neither possible nor warranted in this case.[rdquo]

[ldquo]These changes would be localized and infinitesimal in relation to the role the world[rsquo]s forests play in ameliorating climate change and indistinguishable from the effects of not taking the action.[rdquo]

GWA finds these comments shocking that there is such an indifference from a science and resource management agency. So much for the idea that all of us have a role to play in fighting climate change. Even though it may be true globally, we have to think cumulatively. It is also not true locally. What happens on the South Plateau of the CGNF will affect the micro-climatic conditions at the surface. As we open up the forest

canopy to more sunlight and heat, soil conditions and climate conditions under the canopy will be altered toward a more dry and warmer micro-climate. Temperatures will rise and humidity levels will fall providing the same effects as global warming. See the following reference described by the Pacific Biodiversity Institute23:

[ldquo]There have been few empirical studies looking at the effectiveness of thinning as a treatment for reducing wildfire hazard (Frost 1999). The studies that have been conducted have reported highly variable results. Some studies indicate that burning treatments designed to reduce fire risk actually increase the risk and severity of the fires (Huff, et al. 1995, van Wegtendonk 1996, Weatherspoon 1996). Althought these treatments may reduce the flammable biomass in the area, they also lead to drier forests and higher winds (Countryman 1955, Agee 1997). Additionally, silvicultural treatments, even when conducted carefully, can lead to the following adverse conditions (excerpted from Frost 1999):

* Damage to soil integrity through increased erosion, compaction, and loss of litter layer (Harvey, et al. 1994, Meurisse and Geist 1994).
* Increased mortality of residual trees due to pathogens and mechanical damage to boles and roots (Hagle and Schmitz 1993, Filip 1994)
* Creation of sediment that may eventually be delivered to streams (Beschta 1978, Grant and Wolff 1991)
* Increased levels of fine fuels and near-term fire hazard (Fahnestock 1968, Weatherspoon 1996, Wilson and Dell 1971, Huff, et al. 1995)
* Dependence on roads, which result in numerous adverse effects (Henjum, et al. 1994, Megahan, et al. 1994)
* Reduced habitat quality for sensitive species associated with cool, moist micro-sites or closed-canopy forests (FEMAT 1993, Thomas, et al. 1993)

GWA believes the CGNF needs to be more forward thinking and proactive in formulating policies and practices that can be altered by climate change. This driver of change is not only going to change what we see, but change what we don[rsquo]t see or take time to see. Climatic changes will affect forest vegetation and wildlife habitat, but also that of the soil, air and water. For all of these reasons, GWA believes the Forest Service needs to change their paradigm in how they address and plan for climate change.

The Forest Service seems to be [ldquo]caught between a rock and a hard place.[rdquo] They acknowledge climate change[rsquo]s existence on one hand, but also try to rationalize their inability to do anything about it on the other. We[rsquo]ve already described the latter concerning their rationalization, but as we see here from page 192 of the draft EA of 2020, we want to acknowledge their acceptance of climate change:

Global climatic warming is not something that is about to happen. It has been ongoing for many decades and the trend is expected to continue into the distant future, continuing to increase risks to our nation[rsquo]s forests (Dale, et al. 2001; Barton 2002; Breashears and Allen 2002; Westerling and Bryant 2008; Running 2006; Littell, et al. 2009; Boisvenue and Running 2010, Hicke et al 2012). The existing project area conditions and trends are an expression of the local climate (which may or may not parallel ongoing regional, continental, or global trends) as it has interacted with the other local natural and anthropomorphic influences. As such, the ongoing effects of climate change were considered in developing the proposal.

As we can see, their acknowledgement of climate change is critical, but we feel it is not enough to make a difference if the wrong policies are in place. We should not be utilizing policies and practices that will dry out the forest and make them more susceptible to fire in a changing climate. But the phrase used above concerning [ldquo]anthropomorphic influences[rdquo] caught our attention. What exactly is the draft EA of 2020 referring to here? Perhaps the local and regional population need to be educated as to the responsibility of the Forest Service, that the lands are owned and used by all Americans, not just locals. Perhaps they need to be educated as to the full range of dangers, treatments and options available in forest planning as it pertains to climate change.

As we all know, climate change leads to fires and as GWA writes these comments, we cannot ignore the danger and threats of fire on these landscapes. We would like to refer CGNF to a very time relevant article dated September 10, 2020 by California Chapparal Institute24 in regards to the fires along the West Coast this summer:

[ldquo]As with the Creek Fire, logging, habitat clearance, and the creation of forest plantations by private corporations and the US Forest Service in the northern Sierra Nevada Bear Fire area are making the fire worse, and threatening lives as a result.[rdquo]

And then they make these statements:

[ldquo]The Main Take Aways

1. Logging and forest plantation forestry is a contributor to increased fire spread and fire severity (Zald and Dunn 201825, Bradley et al. 2016 [ndash] see below).
2. Weather and climate change are the dominant drivers of fire behavior.
3. Promoting logging as [ldquo]fuel reduction[rdquo] under the guise of fire risk reduction flies in the face of the facts.[rdquo]

These take aways match those expressed by GWA. GWA expresses the need to really research the science of wildfires in the interface between wildlands and the urban community. Anywhere where we are making it easier for humans to recess further into the wildlands, we are going to have problems with fire especially in times of climate change. When those perfect conditions arise, it will be hard to maintain control over the resource. The Forest Service needs to stop making it easier for humans to get further back into the wild. Building logging roads (temporary or not) and motorized access (whether it be commercial or recreational) will allow further inroads into a drying out community. The Forest Service does have a role to play here, should they choose to take it.

Carbon Sequestration:

The discussion of carbon sequestration was minimal in the revised draft EA of 2022. What was found was a few paragraphs on page 34. The quote below is essentially describing a condition of carbon sequestration after the

timber harvest has commenced. The problem with this statement, it fails to acknowledge the better alternative which is the carbon would be better sequestered in the forest[rsquo]s current condition. It is the mature and old growth forests that are more efficient in storing carbon. Harvesting those trees now will forever keep this forest in a perpetual state of young, immature trees that would be inefficient of carbon sequestration.

[ldquo]Over the long term, management activities that are consistent with Land Management Plan desired conditions are likely to increase carbon storage and reduce emissions by reducing disturbance risk and storing carbon in wood products. Specifically, harvesting and prescribed fire treatments would achieve a more resilient forest condition that maintains critical ecosystem functions into the future and would improve the ability of the Forest to maintain carbon stocks and enhance carbon uptake.[rdquo]

The last sentence of that section on page 34 says carbon sequestration was not analyzed further, yet the Forest Service did release a Carbon Storage and Sequestration document dated September 30, 2022 over the SPLAT project. A couple of quotes from that document are below, following that will be our response. A paragraph from page 1.

[ldquo]In a global atmospheric CO2 context, even the maximum potential management levels described by the plan alternatives would have a negligible impact on national and global emissions and on forest carbon stocks, as described below. As in this case, when impacts on carbon emissions (and carbon stocks) are small, a quantitative analysis of carbon effects is not warranted and thus is not meaningful for a reasoned choice among plan alternatives (U.S. Department of Agriculture 2009). Although advances in research have helped to account for and document the relationship between GHG and global climate change, it remains difficult to reliably simulate observed temperature changes and distinguish between natural or human causes at smaller than continental scales (Intergovernmental Panel on Climate Change 2007).This analysis considers the potential effects of management actions on climate change as indicated by consideration of changes in carbon sequestration and storage arising from natural and management driven processes.[rdquo]

In summary, the last paragraph states the following.

[ldquo]In summary, this proposed action impacts a relatively small amount of forest land and carbon on the Custer Gallatin National Forest and, in the near-term, might contribute a small quantity amount of carbon relative to national and global scales. This proposed action will not convert forestland to other non-forest uses, thus any carbon initially emitted from this proposed project actions will only have a temporary influence on atmospheric CO2 concentrations as carbon will be removed from the atmosphere over time as the forest regrows. Some proposed vegetation treatments will also produce wood products which will provide long term storage of carbon. Moreover, this proposed action is consistent the Land Management Plan EIS and with internationally recognized climate change adaptation and mitigation practices.[rdquo]

Basically, these statements are setting the public premise that local forest projects are on such a small scale

they[rsquo]ll have no effects on global warming. These impacts are negligible and are undetectable. We have seen these responses before and we believe they are a trope that the USFS is using across the country undermining and downplaying the USFS[rsquo]s role in mitigating climate change. Instead of participating on a national and global scale in fighting and mitigating climate change, the lack of action by the USFS is making the agency complicit by its inaction.

Each time projects like this are undertaken, we make the effects of climate change worse as if the climate is suffering a death from a thousand cuts. It is the cumulative effect where we are going wrong. To make the excuse in saying this project is too small to have a positive impact on carbon global emissions is taking the [ldquo]easy way out[rdquo]. GWA would like to refer the USFS and the CGNF to a scientific paper entitled [ldquo]Meeting GHG Reduction targets requires accounting for all forest sector emissions[rdquo] by Tara W Hudiburg26, et al.

In the Abstract, there is this statement.

[ldquo]We find that Western US forests are net sinks because there is a positive net balance of forest carbon uptake exceeding losses due to harvesting, wood product use, and combustion by wildfire. However, over 100 years of wood product usage is reducing the potential annual sink by an average of 21%, suggesting forest carbon storage can become more effective in climate mitigation through reduction in harvest, longer rotations, or more efficient wood product usage. Of the[sim]10 700 million metric tonnes of carbon dioxide equivalents removed from west coast forests since 1900, 81% of it has been returned to the atmosphere or deposited in landfills. Moreover, state and federal reporting have erroneously excluded some product-related emissions, resulting in 25%[ndash]55% underestimation of state total CO2 emissions.[rdquo]

We will close out this section by restating part of the conclusion found on page 7 of this report. It would behoove the CGNF and the USFS to analyze this report and other to change the premise that we originally mentioned in this segment of Forest Practices.

[ldquo]The United States government currently requires all federal agencies to count forest bioenergy as carbon neutral because the EPA assumes replacement by future regrowth of forests somewhere that may take several decades or longer (EPA 2018). While it is theoretically possible that a replacement forest will grow and absorb a like amount of CO2 to that emitted decades or a century before, there is no guarantee that this will happen, and the enforcement is transferred to future generations. In any rational economic analysis, a benefit in the distant future must be discounted against the immediate damage associated with emissions during combustion. Furthermore, the goal for climate protection is not climate neutrality, but rather reduction of net GHGs emissions to the atmosphere to avoid dangerous interference with the climate system. Allowing forests to reach their biological potential for growth and sequestration, maintaining large trees (Lutz et al 2018), reforesting recently cut lands, and afforestation of suitable areas will remove additional CO2 from the atmosphere. Global vegetation stores of carbon are 50% of their potential including western forests because of harvest activities (Erb et al 2017). Clearly, western forests could do more to address climate change through carbon sequestration if allowed to grow longer.[rdquo]

In other words, the CGNF and the USFS needs to do more.

The Timber Resource:

GWA questions the need for this project and as far as we can tell the only reason for doing so is to [ldquo]get the cut out[rdquo] as they say. We don[rsquo]t agree with the USFS or CGNF that this project is going to help forest biodiversity, integrity or forest resilience. In fact, as far as we can tell these ongoing projects actually harm the forest more than they protect the resource. We[rsquo]ve had GWA members who have described conditions before previous logging attempts as having more biodiversity than there is now, this even after decades later. The forest does not have a chance to develop understory because the USFS wants to remove it. Where is the biodiversity in that madness? The forest also doesn[rsquo]t have a chance to enrich other species of trees in the project area because the USFS either clearcuts or does vegetation treatment projects. The fact that the forest has poor growing conditions doesn[rsquo]t help in that regard.

The revised draft EA of 2022 states that they plan to log 83 million bd feet over the 15-year period. This means that the South Plateau sale is going to fulfill more than half of the timber to be logged of the entire 15-year life of the Forest Plan [ndash] forest wide. Is this accurate? Can this be true? GWA is suspicious of such accounts. Something isn[rsquo]t making sense in our review of this project. Please clarify.

Recreational Emphasis Area:

And then there is the issue of recreation. This proposed treatment area comprises over half of the Hebgen Winter Recreation Emphasis Area (HWREA) specified under Alternative F of the 2020 Final Forest Plan. The South Plateau Area Landscape Treatment Project covers nearly 40,000 acres of the 72,000 acres of the HWREA, the largest recreation emphasis area on the CGNF. On page 41 of the revised draft EA of 2022, it states this another way.

[ldquo]The entire project area is part of the Hebgen Winter Recreation Emphasis Area.[rdquo]

GWA wonders if the emphasis on recreation directly or indirectly influenced the overall health policy of trees and vegetation in the project area. Specifically, we are asking the following question. Is the rationale for timber thinning and clearcutting of dead or dying trees resulting from LPDMT related to the area being designated as a recreation emphasis area? If so, that means that recreation is once again driving the decision making on the CGNF, one of our main concerns of the 2020 Final Forest Plan. We say this because on page 41, it again says this.

[ldquo]The effects of the proposed project on recreation resources were qualitatively assessed through professional judgement within the spatial boundary of the proposed South Plateau project area, and within the temporal boundary of the period of project implementation plus twenty years because after this time evidence of timber harvest would be less noticeable to the casual observer and apparent naturalness would be restored.[rdquo]

It sounds like recreational interests were given some authority to override the scope of the project, but we don[rsquo]t see any such or equal concern of wildlife given the same leverage. It seems like wildlife is once again on the receiving end of decision making.

On page 555 of the Final Environmental Impact Statement, there is this statement referring to the HWREA:

[ldquo]Concentrated recreation use occurs in this area year-round, but the management emphasis in the plan allocation would focus on winter recreation pursuits such as snowmobiling and skiing.[rdquo]

This allows us to raise another question: How has and how will this concentrated summertime recreation affect the lodgepole pine forest, a forest that is already under stress from climate change, fire suppression, pine beetle infestation, and LPDMT? Not only does this management policy leave open the questioning of wisdom on how these actions affect the forest, but what about the wildlife that inhabit the area?

With all of these actions and events proposed on the South Plateau, the effects of this proposed treatment have to leave the area highly fragmented in terms of wildlife habitat. It has to erode the biodiversity and ecological integrity of the forest, a result that GWA strongly opposes. Not only that, but how are all of these actions going to affect the watershed, the water quality? Soil compaction, soil erosion, induction of invasive species; an issue which always seems to perpetuate from these kinds of activities will degrade the forest health. The construction of 56.8 miles of temporary roads, timber thinning and clearcutting, all opening up the forest floor to more sun and heat is going to alter the micro-climatic conditions at soil level even more. All of these effects will remain for generations to come. They[rsquo]re going to change the forest as we know it. Where is the room for wildlife in this scenario?

Conclusion:

The span and scope of this project is going to have a large decadal impact upon the South Plateau landscape. As with many species, those impacts could very well last throughout an animal[rsquo]s individual lifetime. Whenever society sets upon a course of action to extract or exploit resources from this planet, there[rsquo]s generally going to be an disruption of that ecological balance. In all likelihood, there will be long-term consequences to some degree depending upon the severity of the action and the site and specific nature of the action. The same is true here.

It is hard for GWA to accept how the CGNF and the USFS arrived at a [ldquo]Finding of No Significant Impact[rdquo]. How intense was the careful and deliberative analysis? This is especially true of a project adjacent to and bordering the western flank of Yellowstone National Park. GWA feels a much deeper and more scientific analysis is warranted, but to be honest, the science would have to be purely honest and not prone to political interference. The science would have to drive the outcome, not the political or societal whims of a certain few. For if the latter scenario is still in play, most likely our overall perception of this project would not change.

GWA believes the landscape of the South Plateau is getting back to a scenario of a mature forest, reaching an equilibrium of ecological processes from previous logging decades ago. Now the CGNF and USFS wants to undermine that natural process all over again with another timber sale. The forestry dynamics that appear to be in play on the South Plateau is being carried out in a natural, progressive way reaching the climax of a lodgepole pine forest. The diseases of mountain pine beetle and LPDMT are cyclic, exacerbated by drought and climate change. The USFS can actually be a part of the solution in bringing about and implementing policies on climate change mitigation. But to think these proposed actions are going to resolve a hereditary and ecological process that we think is a threat to the economic well being of a forest is very shortsighted.

Until then, the potential of negative impacts upon wildlife and their habitat could render disruptions to a healing forest, all resulting from current political, economic, and ideological pressures. This problem needs to be resolved

through a societal paradigm shift, realizing that our forests have other, greater purposes. Wildlife has a right to exist without constant threats from society. However, this seems to be a theme across our country, especially the west. There is this belief that wildlife can always adapt; the thinking that [ldquo]wildlife will always find a way[rdquo]. There is also this theme that is projected by land and wildlife management agencies when providing their analysis of biological opinions. It is a phrase stating a project [ldquo]may affect, likely to adversely affect[rdquo], a species but then they state the project [ldquo]would not jeopardize the status of the species[rdquo]. That needs to end, for let[rsquo]s call it what it is, the project is going to have a negative impact upon the species. It may be negligible compared to worldwide populations, but on a local, ecological basis, it could be quite impactful to the ecological integrity of the local landscape.

We expect the SPLAT project to be impactful for many reasons, for a variety of species, much of that said here in these comments. The impact lies with a loss of habitat and with the increase in habitat fragmentation. The impact lies from the interruption of migration patterns of species to a disruption in the predator/prey relationship. Wildlife connectivity and mobility cannot and should not be under appreciated in the role it plays in species existence. Displacement of species will most likely take a decade or more for ecological balance and a biodiverse landscape to return back to pre-project conditions, simply because of the nature of the 15-year project.

Logging, especially from clearcutting and road construction will add to the fragmented ecosystem. We mentioned our concern over the well-being of Canada lynx, grizzly bear, elk and the American pine marten, but there are all the other species, large and small that will be impacted by these actions. Issues such as invasive plants, soil compaction and threats to riparian areas were barely mentioned in our comments, but they exist and we acknowledge them, just the same.

For all the reasons stated in this conclusion and above throughout the totality of these comments, GWA opposes the further progression of this project. The environmental harm supersedes any financial or societal benefits. From what we understand, the projected bid is at or near 2.6 million dollars. According to a fellow GWA member, with the price of timber at the retail market, this sale could represent $114,125,000 in today[rsquo]s dollars. But the American taxpayer won[rsquo]t see those funds go into their bank account. This is a lose/lose financial transaction for the American people. We see this all too often.

We will close with this thought from Steven Davis27 in an article entitled [ldquo]Democracy, Collective Value and Public Land[rdquo] dated May 2019 found on Headwater Economics website.

[ldquo]Likewise, a spectacularly persuasive case for public lands can be made on economic grounds as well. Only in the most torturously narrow terms of operational costs vs. revenue can public lands be shown to [ldquo]lose[rdquo] money and thus be a bad deal for the taxpayer. But widen the lens just a little bit to include other, quite orthodox economic measures, like spin-off (multiplier) effects on surrounding communities and regions or return on investment for the acquisition or even operation of federal land and the cost/benefit ratio swings convincingly toward maintaining these lands. And if you widen the lens further still, you might recognize and include the trillions of dollars in unpriced but vital services, such as water retention and filtration, carbon sequestration, nutrient cycling, and pollination that spin off of the intact ecosystems on public lands, day-in, day-

out, unnoticed and unvalued by any market.[rdquo]

This is the trouble with the current dynamics of our society when it comes to management of public lands. The corporate special interest is driving the system and the wildlife, our environment and our sense of morality is being driven off the cliff. It is time for a paradigm shift to a better world.

Sincerely,

Clinton Nagel, President

Gallatin Wildlife Association

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