May 20, 2022

Steve Brown, Stevensville District Ranger
Bitterroot National Forest
88 Main Street
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Dear Ranger Brown

Thanks so much for the opportunity to comment. I enjoy the Bitterroot National Forest on a daily basis. It is my joy. I live on the edge of the forest, near the Westside project and bordering the Hayes Creek Project. I have seen firsthand logging, thinning, and burning work in the forest.

The other day I hiked up Goat Mountain. The area was severely burned in the Roaring Lion Fire in 2016. It was beautiful. The balsamroot was glowing yellow, lupine added a touch of lavender, and the paintbrush, blazing orange. Chipmunks skittered under downed logs and bluebirds flitted in and out of cavities in the standing boles. New trees emerged while deer browsed and swifts zipped over the cliffs.

In the past few years, I have seen three-toed woodpeckers and black-backed woodpeckers in the area. Dr. Hutto is correct. Severely burned areas are biodiversity at its best, especially birds that are on the decline. He likens severely burned areas to old growth forests in diversity. To promote biodiversity, he recommends that forest managers retain "both an abundance of minimally disturbed, unburned, mature forest conditions and an abundance of severely burned forest conditions that emerge from natural fire disturbance events" (Hutto 2020). Nature is well adapted to fire, in fact needs fire and attempts to replicate nature just don't do it quite as well. How does this project comply with his recommendations for biodiversity?

I am concerned about the Bitterroot Front Project. It is vast, it spans across many miles, multiple conditions, tree species, and wildlife. It is unwise to consider a project of this magnitude. There is no way to look at it all closely to prevent mistakes and destruction of valuable habitat, clean water stores, and functional forest systems.

First, Research Natural Areas, Recommended Wilderness and Inventoried Roadless Areas must remain untouched. They are the last remnants of what once was on the Bitterroot. It is intact habitat that has been virtually untouched for many years. According to Bradley et al 2016, who studied over 1500 fires, these areas will burn less severely than managed areas. They also have less weeds. Dodson and Fielder found that unmanaged areas are less likely to be overrun by invasive species. In fact, their study in 2006 showed that the more treatment, the more invasive plant species abounded. Contrary to common thought, logging, thinning and burning cause more weeds not less. In their study, the combination of logging and weeding caused the most invasive intrusions. From what little information is available in scoping, it seems logging and burning is the plan for most of the Front project area.

Much of the project area is roadless, some Inventoried and some not. Either way it provides intact habitat for many species like wolverine, lynx, elk, grizzlies and countless bird species. Roadless areas protect streams, bull trout, and west slope cutthroat trout as well as salamanders and pearlshell mussels. These animals and fishes are running out of space to be wild. We need to preserve what little roadless, intact habitat remains for them. Montana is one of the few states that still has many of the animals present before Europeans even knew the Rockies existed. DiMarco et al 2019 found that Wilderness areas (roadless intact habitat) halved the extinction risk of terrestrial biodiversity. Considering a Presidential Executive Order asking agencies to preserve biodiversity as a top priority, it seems counterintuitive to fragment this habitat by re-blading and widening already overgrown and reclaimed roads to enter and degrade this habitat.

Please include the NEPA for all of these roads that have been surveyed in the project area. Were they meant to be decommissioned years ago, but there was no budget as seems to always be the case after a timber sale. Please also include the width of these road prisms. In the past road prisms were much narrower than are needed now for logging trucks. If you widen old prisms, you are essentially constructing new roads. Since most of these roads are not visible via google earth, one would conclude that they are barely there. Whether there is a prism on the ground or not, roads that have been naturally reclaimed should not be re-opened.

No roads should be built or re-built, temporary or permanent. Temporary roads are roads. A bulldozer is used, a road prism is created and they are rarely decommissioned to the point where 40 years later they would not be “discovered” by a Forest survey and put back into use. How do all of these roads that have been surveyed fit into the travel plan? The plan, according to the Biological Opinion for Bull Trout, promised to decommission and close more roads during site specific projects. This project seems to be doing just the opposite of that. How does it comply with travel plan commitments to the USFWS and the recovery of bull trout?

Roads affect many species like wolverine, lynx, grizzly bears, and more. How will adding more roads or putting roads in areas where they have never been before affect these animals.

Most fires, especially those where homes are destroyed (Roaring Lion, Blodgett Canyon, Denton) are started by humans. Roads allow humans to access more areas of the forest and haul wood and fireworks. It seems it would be more prudent to ban campfires as soon as conditions are dry. When the Roaring Lion fire erupted, there had already been a fire in June. Why were campfires still allowed? Why are we creating more access to remote areas knowing that most fires are human caused?

Closing roads never seems to work on the Bitterroot. The dedicated law enforcement officers are spread too thin. Two for two large forests? They also must catch folks red-handed and give them a warning the first time. No wonder there is so much poaching of closed roads and user created vehicle roads. How does this affect streams and erosion? Even skid trails are being used by trucks with monster wheels to wreak destruction on

the forest summer and winter. This must be analyzed as an effect of logging, roads and management activities.

I was surprised to learn from scoping that 54 previously logged units burned severely in past fires. Seems a testament to the weight of available science showing that logged areas burn more severely as Bradley et al found. So, why are you pursuing logging to protect communities from fire? And why are you going in after fire has done its magic, the process that you are trying to replicate with this project? As I saw on Goat Mountain, fire does wonders for the forest. There is no reason to mess with nature in this case. Previously burned areas should be left alone, to allow the biodiversity of seral forests to thrive. There are many references to the evils of salvage logging and its scar on nature. Gorgiev 2020 and Thorn 2017 both found that salvage logging put a serious dent on biodiversity. They also found that studies showing the opposite did not look at the long term. Most only studied the first five years after salvage logging operations. They looked in the long term and found very different results.

Atchley et al 2021 found that large openings increased fire speed and widened fires. What they found in their study is interesting. They tried to replicate the King fire in California with Forest Service (FS) fire modelling and could not. They realized that FS models worked with a consistent 20 mph wind. This is not a replication of reality and does not take into account atmospheric dynamics. Their more sophisticated modelling could replicate the King fire. It also showed, "Wind entrainment associated with large, sparse canopy patches resulted in both mean and localised wind speeds and faster fire spread. Furthermore, the turbulent wind conditions in large openings resulted in a disproportional increase in TKE [Turbulence Kinetic Energy] and crosswinds that maintain fire line width" (Page 9). Thinning not only dries out the fine fuels on the floor of the forest, it also allows wind to rage and intensify the fire.

The project is home to many endangered species and sensitive species. How will a project of this magnitude alongside two other large projects and ongoing projects affect grizzly and lynx recovery, wolverine, bull trout and cutthroat trout to name a few. Project documentation must disclose direct, indirect and cumulative effects of project activities on wildlife and fisheries.

The project proposes many project specific amendments. Since there has been no on the ground site specific information, it seems they must be called “project” specific. When a project is 144,000 acres, they can hardly be site specific. When two other projects of 95,000 acres combined use the same amendments, you have revised the plan without NEPA.

Coarse woody debris is a vital component to future soil, wildlife, lynx, wolverine, bears, and many other sensitive and endangered species. It is also a “reservoir of water (Amaranthus et al 2019)” in times of drought. Considering global warming and the drought conditions being experienced in Montana, coarse woody debris should be left on the ground and not slashed and burned. Amaranthus found that downed wood held 25% more moisture than the ground in drought and that downed wood was an oasis of sorts for systems in drought.

Snags are habitat to many species including Pileated woodpeckers and pine martens which are both indicator species. With the firefighters taking down every large snag they find, it is even more vital that we keep snags on our forest unless they pose a severe risk as is stipulated in the forest plan.

Hiding cover and thermal cover are not only important to elk, they are also important to the survival of all species on the forest. The EHE standards are a blanket protecting species forest-wide. Removing them does not just effect elk.

As far as road densities in third order drainages, other project analysis stated that most of the drainages on the forest are small, so it is hard to meet density standards. The folks who made that standard during forest planning knew how many drainages were that small, but still felt it was important enough to create the standard to bring those drainages into compliance. After many logging projects and over 30 years later, these drainages are still out of compliance. So much for commitments to the public. Makes me really wonder about the idea of conditions based where the decision is made before the public sees the on the ground plans, and is left with no redress. It is hard to trust. The forest plan promised to reintroduce beavers to promote healthier streams and consistent water flows through the summer months. We are still waiting after 30 plus years. Roads affect so many species. And the forest has a backlog of road maintenance. It is ill advised to build or reconstruct more roads that will eventually be in as poor condition as current roads on the system. The Camas road (brought to BMPs during the Westside project) sports huge ruts and poor erosion as does Blue Jay Lane.

Old growth standards are yet another amendment. While it seems the forest needs a more quantifiable measure for old growth, since it keeps using different methods each time, but all seem to rule out a stand so it can be logged. In the Buckhorn project, they identified a stand as old growth using Green et al, but after coring the trees, they found them to be an average of 130 years, less than the 170 required. So they logged it. Though Green called age one of the most important aspects of old growth. They warned not to use just one criteria to rule out old growth. But that is exactly what happened. The executive order calling for the preservation of mature and old growth forests should force an amendment that identifies mature AND old growth. That stand ruled out on Buckhorn, would most certainly be a stand of mature trees and it was probably functioning old growth, but it is gone. On Piquett creek, the forest plan standard was used to rule out a stand. I was told by the Silviculturist that she did a walk through and “the stand did not meet the minimum screening requirement of 15 trees per acre.” So they will cut that stand down. The Forest plan has no minimum screening requirement. The standard is “generally 15 trees per acre” and other criteria. Again it seems no matter what the standard, old growth and mature stands are cut.

The standard should be revised for both mature and old growth trees and staff should be trained to be consistent. This is best done during forest planning or with a forest wide amendment and proper NEPA focused on identifying stands that meet old growth and mature forest criteria, not during a conditions based 144,000 acre project. The best and most consistent way to identify trees to be preserved, would be a dbh rule. A 12-14 inch

dbh rule would cover mature and old growth trees, keeping carbon in the forest and maximizing sequestration. The amended Green et al definition is too vague and is not clear or easy to use. The amendment uses what Green calls the “minimum” as the definition. The minimum criteria needed for functional old growth is not the definition, it is the minimum. Project documents have stated that logging would not remove a stand from old growth status, but that status is defined by a minimum, not true functionality.

Please analyze the work of Suzanne Simard and her cohorts. Machinery on the ground, skid trails and yarding, destroy the mycorrhizal connections within the forest ecosystem. Please analyze effects on soils and connections between trees and shrubs and fungi vital to forest health.

Please also consider the work of Diana Six. She makes it clear that logging can remove the very trees that will survive the next beetle outbreak and drought. We cannot see DNA and have no way of knowing if the trees being removed are our best hope for the future.

What are the cumulative effects of 4 new projects spanning most of the forest save Wilderness? What they do not cover is currently being logged? Even areas within these projects are being logged and burned under previous decisions. What are the cumulative effects of all of these ongoing projects over the next 20 years?

Finally, climate is the number one driver of extreme weather that fuels large, destructive wildfires. Project analysis must analyze the emissions from project activities, the loss of sequestration from removing trees, and the loss of woody debris that will be a part of soil which also stores carbon. Law et al 2022 states, “Our key message is that many of the **current and proposed forest management actions in the United States are not consistent with climate goals**, and that preserving 30 to 50% of lands for their carbon, biodiversity and water is feasible, effective, and necessary for achieving them (emphasis added).” What you have proposed for the Bitterroot Front Project is the standard practices that have been used for decades. It is not consistent with climate goals and will continue and accelerate our downward spiral.

Thank you for considering my comments.

Sincerely,

Michele M Dieterich

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