June 10, 2021

Bitterroot National Forest
Stevensville Ranger District
Att: Eastside Forest & Habitat Improvement Project
88 Main Street
Stevensville, MT 59870

Re: Eastside Forest & Habitat Improvement Project

Dear Ranger Brown ,

We thank you for allowing us to comment on the Eastside Forest & Habitat Improvement Project. While we appreciate the notification you provided to us, we were very disappointed by the process utilized for this project—i.e, a categorical exclusion (CE) described in a two page letter, which is designed to avoid the analysis and documentation required by an Environmental Impact Statement (EIS). Your CE letter was wholly inadequate in meeting the requirements for a project of this nature under the Bitterroot National Forest Plan, and in meeting the NEPA requirements of sharing information and collaborating with the public. In the interest of avoiding repetition, we hereby fully incorporate the comments made relating to this proposed project by a) Michelle Deiterich; and b) by Mike Garrity (on behalf of Alliance for the Wild Rockies), Sara Johnson (on behave of Native Ecosystems Council), Jason Christensen (on behalf of Yellowstone to Uintas Connection), and Jim Miller (on behalf of the Friends of the Bitterroot).

The claimed wildfire mitigation benefits from fuel reduction and proposed treatments are not only contradicted by the information and comments provided by Deiterich and Garrity *et.al.*, but they appear be contrary to other significant studies. One such study[1] looked at 1,500 forest fires affecting over 23 million

[1] Dominick A. DellaSala, Ph.D., Geos Institute; Chad Hanson, Ph.D., John Muir Project, Earth Island Institute; and Curtis Bradley, Center for Biological Diversity, *Logged Forests Across the West Burn at Higher Severities Compared to Protected Forests (Summary)*

acres of pine and mixed-conifer forests in the West from 1984 – 2014 in what was purported to be the largest dataset ever then used to test the assumption of increasing fire severity with increasing forest protection. It involved over 11 western states and considered 45 different variables (including such things as climate ecoregion and topography). It noted just the reverse of what is normally assumed…i.e., that the more actively managed (less protected areas with more logging) forests resulted in higher burn severity, as below noted:

> We found no evidence to support the prevailing forest/fire management view that higher levels of forest protection [like parks and wilderness] are associated with more severe fires when fires eventually occur. On the contrary, using over three decades of fire severity data and a broad analysis area, we found support for the opposite—burn severity tended to be higher in pine and mixed-conifer forests with lower levels of protection—more intense management—after accounting for topographic and climatic conditions.
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> …While we did not test for the specific mechanism responsible for our findings, we suspect based on published literature…that logged areas tended to burn more severely than protected areas due to logging slash and homogenization of dense vegetation found in most forest plantations. Also in forests with higher canopy cover, which are frequently found in protected areas, woody material on the forest floor can stay moister later into the fire season, due to the cooling shade of the forest canopy.[2]

Thus the claimed value of the proposed treatments in contraindicated.

Beyond the comments we have incorporated from the others (as referenced in our initial paragraph), we would especially like to add some additional concerns in this letter focusing on serious public health considerations relating to this project. Namely, the prescribed burns being proposed are a danger to the persons in the Bitterroot Valley (as well as undoubtedly to others who will likely be exposed by prevailing weather patterns). Before referencing this information, please note that the Current Clean Air Act requirements for particulates is set out in https://www.epa.gov/criteria-air-pollutants/naaqs-table. The particle pollution

[2] *Id.* at p. 4

allowable for very small particles (PM 2.5 [2.5 μm]) and the number of the same allowed over various time periods—especially over a 24 hour period--are often used in association with health issues that can arise relating to these particles. In that regard we first point to a technical paper examining the nature of prescribed burns and their production of such particles, written by Haikerwal, *et. al.*[3] That article warned of special potential concerns regarding prescribed fires:

> Unlike wildfires that are of high intensity, prescribed fires are cool low-intensity burns and produce relatively short plumes…While low-intensity prescribed burns (low heat, light emissions) cause minimal risk to life and property, they can however emit large amounts of smoke particulates… . Furthermore, prescribed burns are conducted on a regular basis (annually) and impact communities each year. Wildfires, on the other hand, are unpredictable episodic events. There may also be differences in the pattern of smoke exposure (such as duration and frequency) from prescribed fires compared to wildfires. Exposures to smoke plumes from prescribed fires are generally shorter in duration but occur more frequently than wildfire events, although studies are required to quantify the impacts from this. Prescribed burns are conducted under favorable meteorological conditions, for example, light winds and wind gusts, low temperature, and moderate humidity. These conditions limit the ventilation rate and smoke dispersion and thus promote the buildup of air pollution. As a result, smoke from prescribed burning can have a substantial impact on rural/regional areas, along with potential to impact airsheds due to long-range transport of smoke particles.
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> One of the important pollutants present in high concentrations in smoke from prescribed burns and wildfires is fine particulate matter (PM 2.5 with aerodynamic diameter <2.5μm), and research studies have shown that PM 2.5 concentrations consistently exceed the air quality guidelines… Smaller particles are of greater public health concern than larger size fractions for two reasons: First they remain in the atmosphere for longer

[3] Haikerwal, Reisen, Sim, Abramson, Meyer, Johnston and Dennekamp, *Impact of smoke from prescribed burning: Is it a public health concern,* Journal of the Air & Waste Management Association, 65 (5):592-598, 2015.

> periods of time and second, they can penetrate further in the respiratory system where they promote local and systemic inflammation. …

A subsequent study from the Medical Journal of Australia has been reviewed in various articles, as noted in https://www.scimex.org/newsfeed/health-impacts-of-prescribed-burns-significant and https://medicalxpress.com/news/2020-04-negative-health-impacts-significant.html. Those articles reiterate that a significant number of premature deaths, and hospitalizations (and related costs) attributable to elevated PM 2.5 concentration. "The study found that, although the impacts of smoke from individual prescribed fires was much lower than that of severe bushfires, their cumulative impacts were similar because of much greater frequency of prescribed burns" [quotation from Schmex].

For a summary of the systemic effects of breathing fine particles suspended in air, *see: https://hms.harvard.edu/magazine/racism-medicine/particulates-matter*. That article points out how such particles (PM 2.5) can cause a host of health conditions including not only cardiovascular or respiratory vulnerabilities, but as many as 12 additional diseases, including kidney failure, urinary tract and blood infections, and fluid and electrolyte disorders. This was based on a study of 95 million Medicare hospitalization claims from 2000 to 2012. "The research demonstrates that even small, short -term increases in exposure can be harmful to health, and quantifies the economic impact of the resulting hospitalizations and lives lost" (p.1). The article went on to point out that while older people may be more vulnerable than younger people with healthy immune systems, everyone is affected.

So where does this information leave us relating to the Eastside Forest and Habitat Improvement Project being proposed? Prescribed burning "to control understory of hardwoods in stands of southern pine" [??--was this originally lifted from another source?] as well as to "reduce natural fuel build-up and improve plant vigor" is proposed in the CE. The project is to take place over almost the entire length of the east side of Bitterroot—in other words, it's huge. It is also to occur "over the course of several years." [Hard to tell what that means, but given the maps of the treatment areas (which are not clear to the public because "TSI" and "Warm PVT's" are not explained), it would appear that "several years" is an understatement.] In other words, the citizens of this county and those probably

to the east as well, can expect to be exposed to very unhealthy, particulates over a long period of time. The damage to the well-being of our citizens certainly deserves consideration. This project should not go forward as a CE. An EIS review should be required for public health (meeting Clean Air Act requirements) as well as other reasons referenced herein and in the other incorporated comments.

The National Environmental Policy Act (NEPA; 42 USC Section 4321 *et seq.*) requires federal agencies to complete detailed analyses of proposed actions that may significantly affect the quality of the human environment." The severity of the impact should, amongst other factors, include: "the degree to which the proposed action affect public health or safety"; the "degree to which the effects on the quality of the human environment are likely to be highly controversial"; "the degree to which the effects on the human environment are highly uncertain or involve unique or unknown risks"; and whether "the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment" (item 2,4,5, and 10 of 40 CFR 1508.27). Surely these factors are met here. As to state and local law, Montana's Department of Environmental Quality requires air quality consistent with the Clean Air Act, and Montana's Constitution even entitles its citizens to "a clean and healthful environment" (Article IX, Section 1). We respectfully request that the Bitterroot National Forest Service honor and protect these rights and the well-being of all the people living in this county (as well as the environment and wildlife) which may otherwise be negatively impacted by the proposed Eastside Forest & Habitat Improvement Project.

Thank you for your time and consideration. If you need any further information or documentation (including any of the articles referenced herein), please advise and we will endeavor to provide the same.

Stephen S. Goheen

922 Little Willow Ck Rd
Corvallis, MT 59828
Phone: (406) 360-7506

Gail H. Goheen

922 Little Willow Ck Rd
Corvallis, MT 59828
Phone: (406) 360-7502