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First name: Tom

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Organization: American Forest Resource Council

Title:

Comments: Attached are my scoping comments for the Pine Phlats project. This is a good Project and should move forward quickly.

Thank you,

Tom Partin

AFRC

January 15, 2025

Dear Nate:

On behalf of the American Forest Resource Council (AFRC) and its members, thank you for the opportunity to provide comments on the Pine Phlats Project.

AFRC is a regional trade association whose purpose is to advocate for sustained yield timber harvests on public timberlands throughout the West to enhance forest health and resistance to fire, insects, and disease. We do this by promoting active management to attain productive public forests, protect adjoining private forests, and assure community stability. We work to improve federal and state laws, regulations, policies, and decisions regarding access to and management of public forest lands and protection of all forest lands. Many of our members have their operations in communities within and adjacent to the Kootenai National Forest and management on these lands ultimately dictates not only the viability of their businesses, but also the economic health of the communities themselves.

The Pine Phlats Project is located in the Libby Ranger District of the Kootenai National Forest.

The Project is located immediately north and west of Libby, Montana in the Bobtail and Lower

Pipe Creek area, west of Highway 37 and north of the Kootenai River Road. The area has been

the focus of needed fuels treatments since receiving a priority designation under the Montana

Forest Action plan for high risk and forest health concerns. Modeling has also shown the City of

Libby and the many small subdivisions west of Libby are at extreme risk from wildfire (area included in Pine Phlats Project).

Additionally, the Pine Phlats area was designated as part of a wildfire resilience program in accordance with Section 605 of the Healthy Forests Restoration Act (HFRA) (16 U.S.C. 6591d) (FSH 1909.15, 32.3(9)). The Project is in an area designated prior to March 23, 2018, in

accordance with HFRA section 602(b) and (c). A hazardous fuels project may be carried out under this authority to reduce the risk or extent of, or increase the resilience to, insect or disease infestation, or to reduce hazardous fuels in the area (HFRA, Sections 602(d) and 603(a)).

AFRC supports the Purpose and Need for the Pine Phlats Project which includes:

- * Improve forest resistance and resilience to insects, disease, fire, and drought by reducing tree density and increasing size and age class diversity across the landscape. The need exists to reduce tree densities and canopy layers in some stands to increase stand health and lower crown fire potential.
- * Reduce fuel loading throughout the project area, including hazardous fuels adjacent to private property.
- * Improve soil conditions on detrimentally disturbed areas through restoration to reduce soil compaction and displacement.

While AFRC strongly supports the Project, we offer the following suggestions and information that we hope will help strengthen your planning document.

1. AFRC strongly supports the proposed plan of treating 2,392 acres commercially within the 3,570-acre project area. Additionally, 585 acres of non-commercial treatments are planned, totaling 2,977 acres planned for treatment. Since this acreage amount is below the 3,000-acre HFRA threshold AFRC strongly supports using HFRA Section 603 of categorical exclusion (CE) for planning purposes. We also support summarizing all of our thoughts in this single comment period.

2. While providing raw materials for the local infrastructure is not one of the Purpose and Needs for this Project, the timber that will be removed is very important to sustain the existing milling infrastructure to financially help surrounding counties and communities that depends on the Kootenai. Montana's forest products industry is one of the largest components of manufacturing in the state and employs roughly 7,000 workers earning about \$300 million annually. There are several sawmills, post and pole, and smaller wood operations where the Project is located. The timber products provided by the Forest Service are crucial to the health of our membership and the counties and communities where they are present. Without the raw material sold by the Forest Service these mills would be unable to produce the amount of wood products that the citizens of this country demand. Without this material, our members would also be unable to run their mills at capacities that keep their employees working, which is crucial to the health of the communities that they operate in. These benefits can only be realized if the Forest Service sells their timber products through sales that are economically viable. This viability is tied to both the volume and type of timber products sold and the manner in which these products are permitted to be delivered from the forest to the mills. Studies from the University of Montana's Bureau of Business and Economic Research has shown that for every million board feet of timber harvested there are 15-18 direct or indirect jobs created.

3. AFRC noted that in your logging plan you call for 60 acres of cable logging out of the total of 2,392 acres of commercial acreage. AFRC would like to remind the Forest that the benefits of implementing the proposed treatments can only be realized if the Forest Service sells their timber products through sales that are economically viable. This viability is tied to both the volume and type of timber products sold and the manner in which these products are permitted to be delivered from the forest to the mills. There are many ways to design a timber sale that allows a purchaser the ability to deliver logs to their mill in an efficient manner while also adhering to the necessary practices that are designed to protect the environmental resources present on Forest Service forestland. The primary issues affecting the ability of our members to feasibly deliver logs to their mills are firm operating restrictions. As stated above, we understand that the Forest Service must take necessary precautions to protect their resources; however, we believe that in many cases there are conditions that exist on the ground that are not in step with many of the restrictions described in Forest Service EA's or CE's and contracts (i.e. dry conditions during wet season, wet conditions during dry season). We would like the Forest Service to shift their methods for protecting resources from that of firm prescriptive restrictions to one that focuses on descriptive end-results; in other words, describe what you would like the end result to be rather than prescribing how to get there.

There are a variety of operators that work in the Montana market area with a variety of skills and equipment. Developing an EA or CE and contract that firmly describes how any given unit shall be logged may inherently limit the abilities of certain operators. For example, restricting certain types of ground-based equipment rather than describing what condition the soils should be at the end of the contract period unnecessarily limits the

ability of certain operators to complete a sale in an appropriate manner with the proper use of their equipment. To address this issue, we would like to see flexibility in the EA/CE and contract to allow a variety of equipment to the sale areas. We feel that there are several ways to properly harvest any piece of ground, and certain restrictive language can limit some potential operators. Though some of the proposal area is planned for cable harvest, there are opportunities to use certain ground equipment such as fellerbunchers and processors in the units to make cable yarding more efficient. Allowing the use of processors and fellerbunchers throughout these units can increase its economic viability, and in some cases decrease disturbance by decreasing the amount of cable corridors, reduce damage to the residual stand and provide a more even distribution of woody debris following harvest. Tethered-assist equipment is also becoming a more safe, viable, and available option for felling and yarding on steep slopes. This equipment has been shown to contribute little additional ground disturbance when compared to traditional cable systems. Please prepare any ensuing timber sale or stewardship contracts in a manner that will facilitate this type of equipment.

Since 585 acres are being planned for non-commercial treatments and a large portion of those acres will be precommercial thinning, it is imperative that the planned commercial treatments are viable and will yield adequate stumpage dollars back to the District to get this needed work completed.

4. AFRC supports the District creating two openings over 40 acres to treat forest health conditions in the project area. Unit #23 would create an 81-acre opening and Unit #706 would create a 75-acre opening. We expect the Regional Forester will approve this request and we support the District proceeding with the required 60-day notice regarding openings larger than 40 acres.

In general, we are pleased to see the District propose regeneration treatments as a silvicultural tool in addition to intermediate thinnings and partial harvests. The shelterwood, group selection, clearcut, and seed tree treatments are an integral component of a sustainable timber management paradigm. The Forest Service cannot maintain a sustainable timber program in perpetuity in the absence of regeneration treatments as thinning opportunities will eventually be exhausted.

5. The area being treated within the project area is 100 percent Forest Service land. However, Montana DNRC and Lincoln County lands are interspersed throughout the project area. To effectively address the heavy fuels and dense stands of trees found throughout the project area, AFRC suggests reducing the basal area in all silvicultural prescriptions to 40 sq. ft. This will lower the fuels loading, improve forest health, and greatly improve tree vigor for the remaining trees.

6. In the Preliminary Design Features section of the scoping document, it was mentioned that the District has not yet identified the design criteria for applying riparian habitat conservation areas to streams and other water bodies. AFRC believes that active management in riparian areas can help to achieve forest restoration goals. It has been well documented that thinning in riparian areas accelerates the stand's trajectory to produce large conifer trees and has minimal effect on stream temperature with adequate buffers. Removal of suppressed trees has an insignificant short-term effect on down wood, and a positive effect on long-term creation of large down woody debris and large in stream wood, which is what provides the real benefit to wildlife and stream health. We encourage the Forest Service to focus their riparian reserve treatments on a variety of

native habitats. There is a need for treatments that meet the need of multiple habitat types, and we encourage the District to look for ways to incorporate treatments that meet those needs. Utilization of gap cuts to promote early seral habitat in the reserves, treatments to diversify all areas of the reserve, and prescriptions that account for the full range of objectives that the Project mandates should be considered.

The tradeoffs that the Forest Service will likely be considering through the ensuing environmental analysis will be between achieving these forest health benefits and potentially having adverse impacts to streams. These impacts to streams typically include stream temperature, wood recruitment, and sedimentation associated with active management.

We would like the Forest Service to review the literature cited below and consider incorporating their findings into the Final Decision that will shape the level of management permitted to occur in riparian reserves.

Stream temperature

Janisch, Jack E, Wondzell, Steven M., Ehinger, William J. 2012. Headwater stream temperature: Interpreting response after logging, with and without riparian buffers, Washington, USA. *Forest Ecology and Management*, 270, 302-313.

Key points of the Janisch paper include:

- * The amount of canopy cover retained in the riparian buffer was not a strong explanatory variable to stream temperature.
- * Very small headwater streams may be fundamentally different than many

larger streams because factors other than shade from the overstory tree canopy can have sufficient influence on stream temperature.

Anderson P.D., Larson D.J., Chan, S.S. 2007 Riparian Buffer and Density Management Influences on Microclimate of Young Headwater Forests of Western Oregon. *Forest Science*, 53(2):254-269.

Key points of the Anderson paper include:

- * With no-harvest buffers of 15 meters (49 feet), maximum air temperature above stream centers was less than one-degree Celsius greater than for unthinned stands.

Riparian reserve gaps

Warren, Dana R., Keeton, William S., Bechtold, Heather A., Rosi-Marshall, Emma J. 2013. Comparing streambed light availability and canopy cover in streams with old-growth versus early-mature riparian forests in western Oregon. *Aquatic Sciences* 75:547-558.

Key points of the Warren paper include:

- * Canopy gaps were particularly important in creating variable light within and between reaches.
- * Reaches with complex old growth riparian forests had frequent canopy gaps which led to greater stream light availability compared to adjacent reaches with simpler second-growth riparian forests.

Wood Recruitment

Burton, Julia I., Olson, Deanna H., and Puettmann, Klaus J. 2016. Effects of riparian buffer width on wood loading in headwater streams after repeated forest thinning. *Forest Ecology and Management*. 372 (2016) 247-257.

Key points of the Burton paper include:

- * Wood volume in early stages of decay was higher in stream reaches with a narrow 6-meter buffer than in stream reaches with larger 15- and 70-meter buffers and in unthinned reference units.
- * 82% of sourced wood in early stages of decay originated from within 15 meters of streams.

Collectively, we believe that this literature suggests that there exists a declining rate of returns for "protective" measures such as no-cut buffers beyond 30-40 feet. Resource values such as thermal regulation and coarse wood recruitment begin to diminish in scale as no-cut buffers become much larger. We believe that the benefits in forest health achieved through density management will greatly outweigh the potential minor tradeoffs in stream temperature and wood recruitment, based on this scientific literature. We urge the Forest Service to establish no-cut buffers along streams no larger than 40 feet and maximize forest health outcomes beyond this buffer.

In addition to the benefits of managing in the riparian areas listed above, AFRC believes that this Project will have beneficial impacts to fisheries resources as indicated in the

scoping document. Culverts need to be replaced to help with fish passage, thinning is needed to increase water yield, and density reduction is needed to mitigate wildfire risk that will lessen the chances for mass soil movements into streams following fires.

7. AFRC was pleased to see the District mentioned climate change in analyzing this project.

"Climate change is impacting forests in various ways. The combination of higher temperatures, lower snowpack, and more consecutive hot days has and will continue to impact soil moisture and drought stress. Drought-stressed vegetation is more susceptible to insect outbreaks and leads to higher fire risk. "

AFRC encourages the Forest to conduct a detailed analysis on the Project's impacts to climate change, carbon sequestration, and greenhouse gas emissions. Interim CEQ regulations pertaining to the analysis of this resource have recently been updated and the Forest Service must conduct its analysis on this Project accordingly. Specifically, those regulations require that greenhouse gas emissions be analyzed for all federal actions. Those regulations also encourage federal agencies to consider the context of short-term emissions as a result of actions that will improve long term sequestration and storage. We strongly believe that the minor, short-term emissions associated with timber harvest and other associated treatments are dwarfed by the long-term benefits associated with such treatments.

We urge the District to clearly outline how the proposed treatments, while possibly emitting carbon in the near term, would ultimately benefit climate change mitigation goals by 1.) reducing the likelihood of carbon emissions through wildfire; 2.) increasing the rate of carbon sequestration by reducing competition to residual trees; and 3.) storing

carbon in long lasting wood products that would otherwise be at risk of loss through wildfire. Carbon loss through high intensity wildfire has become a leading cause of our national forests transitioning from carbon sinks to carbon sources. Active management to reduce such a transition would not only reduce carbon loss but accelerate carbon sequestration. And ultimately, any timber products harvested to further these two objectives has been shown to have long lasting carbon storage potential.

Please consider the points below from a technical report by the Climate Change Vulnerability Assessment and Adaptation Project (SWOAP) in Southwest Oregon.

- * Wood harvested from the forest, especially timber used for durable structures, can be reservoirs of long-term carbon storage (Bergman et al. 2014).

- * Forests and their products embody a closed-loop system in which emissions associated with harvests and product use are eventually recovered as forests regrow.

- * Although products may be retired in solid waste disposal sites, they decompose quite slowly, causing carbon to continue to be stored for many decades.

- * Products derived from the harvest of timber from national forests reduce carbon emissions by substituting for more energy-intensive materials including concrete, steel, and plastics.

There is scientific support for the practice of regular harvests at an age where tree growth begins to slow, storage of that tree carbon in long-lasting wood products, and proactive reforestation. A failure to do so would hamper that acre's ability to maximize carbon sequestration through the replacement of slow growing large trees with fast growing

small trees and the storage of those large trees in long-lasting wood products. Not storing that carbon in wood products also poses the risk of losing the carbon in standing trees from high intensity wildfire, which is becoming increasingly prevalent on public lands in western states. A 2022 study estimated that wildfires in California in 2020 emitted 127 million metric tons of carbon into the atmosphere, making the greenhouse gas (GHG) emissions from wildfires the second most important source in the state, after transportation. For context, the U.S. Forest Service recently disclosed that the agency only "commercially harvests one tenth of one percent of acres within the National Forest System each year. Harvests are designed to improve stand health and resilience by reducing forest density or removing trees damaged by insects or disease make up 86 percent of those acres. The remainder are final regeneration harvests that are designed to be followed by reforestation." There is an extraordinary opportunity to increase the practice of sustainable forest management on federal lands as an effective tool to sequester carbon.

Harvesting trees and transferring the stored carbon to wood products allows a land manager to "stack" the sequestration potential of that land. For example, assume an objective to maximize carbon sequestration on 100 acres over a 150-year period starting at year zero. Without active management and timber harvest, those trees would grow to 150 years and represent the only carbon sequestered on those 100 acres at the end of the 150-year cycle (assuming they don't burn in a wildfire). Alternatively, the trees could be harvested on a 50-year rotation and stored in wood products. After 150 years, there would be carbon stored in an existing 50-year-old stand, plus carbon stored in wood products from an additional two 50-year-old stands previously harvested. The figure below from the IPCC (2007) illustrates the concept of stacking. Please consider adopting this

graph into the Pine Phlats project analysis.

We believe that this graph encapsulates the forest management paradigm that would be most effective at maximizing carbon sequestration on a per-acre basis by "stacking" storage in wood products and regrowth of newly planted trees. A 2013 study from the Journal of Sustainable Forestry summarized these concepts well: More CO₂ can be sequestered synergistically in the products or wood energy and landscape together than in the unharvested landscape. Harvesting sustainably at an optimum stand age will sequester more carbon in the combined products, wood energy, and forest than harvesting sustainably at other ages.

We would like to encourage the Libby Ranger District to consider several additional documents related to carbon sequestration related to forest management.

McCauley, Lisa A., Robles, Marcos D., Wooley, Travis, Marshall, Robert M., Kretchun, Alec, Gori, David F. 2019. Large-scale forest restoration stabilizes carbon under climate change in Southwest United States. Ecological Applications, 0(0), 2019, e01979.

Key points of the McCauley paper include:

- * Modeling scenarios showed early decreases in ecosystem carbon due to initial thinning/prescribed fire treatments, but total ecosystem carbon increased by 9-18% when compared to no harvest by the end of the simulation.

- * This modeled scenario of increased carbon storage equated to the removal of

carbon emissions from 55,000 to 110,000 passenger vehicles per year until the end of the century.

* Results demonstrated that large-scale forest restoration can increase the potential for carbon storage and stability and those benefits could increase as the pace of restoration accelerates.

We believe that this study supports the notion that timber harvest and fuels reduction practices collectively increase the overall carbon sequestration capability of any given acre of forest land and, in the long term, generate net benefits toward climate change mitigation.

Gray, A. N., T. R. Whittier, and M. E. Harmon. 2016. Carbon stocks and accumulation rates in Pacific Northwest forests: role of stand age, plant community, and productivity. *Ecosphere* 7(1):e01224.10.1002/ecs2.1224.

Key points of the Gray paper include:

* Although large trees accumulated C at a faster rate than small trees on an individual basis, their contribution to C accumulation rates was smaller on an area basis, and their importance relative to small trees declined in older stands compared to younger stands.

* Old-growth and large trees are important C stocks, but they play a minor role in additional C accumulation.

We believe that this study supports the notion that, if the role of forests in the fight against climate change is to reduce global greenhouse gasses through

maximizing the sequestration of carbon from atmospheric CO₂, then increasing the acreage of young, fast growing small trees is the most prudent management approach.

U.S. Department of Agriculture, Forest Service. 2023. Future of America's Forest and Rangelands: Forest Service 2020 Resources Planning Act Assessment. Gen. Tech. Rep. WO-102. Washington, DC. 348 p. <https://doi.org/10.2737/WO-GTR-102>.

To further support the concepts validated by Gray et al., the USDA recently published a Technical Report on the future of America's forests and rangelands.

Key points of the Report include:

- * The projected decrease in young forests and increase in older forests will result in overall decreases in growth rates and carbon sequestration.
- * The amount of carbon sequestered by forests is projected to decline between 2020 and 2070 under all scenarios, with the forest ecosystem projected to be a net source of carbon in 2070.
- * Without active management, significant disturbance, and land use change, forests approach a steady state in terms of C stock change over time.
- * Annual carbon sequestration is projected to decrease, indicating carbon saturation of U.S. forests, due in part to forest aging and senescence.

Gustavsson, L., Madlener, R., Hoen, H.-F., Jungmeier, G., Karjalainen, T., Kl[Ouml]hn, S., [hellip] Spelter, H. (2006). The Role of Wood Material for Greenhouse Gas Mitigation. Mitigation and Adaptation Strategies for Global Change, 11(5-6), 1097-1127.

Lippke, B., Oneil, E., Harrison, R., Skog, K., Gustavsson, L., Sathre, R. 2011 Life cycle impacts of forest management and wood utilization on carbon mitigation: knowns and unknowns, *Carbon Management*, 2:3, 303-333.

McKinley, D.C., Ryan, M.G., Birdsey, R.A., Giardina, C.P., Harmon, M.E., Heath, L.S., Houghton, R.A., Jackson, R.B., Morrison, J.F., Murray, B.C., Pataki, D.E., Skog, K.E. 2011. A synthesis of current knowledge on forests and carbon storage in the United States. *Ecological Applications*. 21(6): 1902-1924.

Skog, K.E., McKinley, D.C., Birdsey, R.A., Hines, S.J., Woodall, C.W., Reinhardt, E.D., Vose, J.M. 2014. Chapter 7: Managing Carbon. In: *Climate Change and United States Forests, Advances in Global Change Research* 57 2014; pp. 151-182.

It should be derived after reading the documents listed above that in the absence of commercial thinning, the forest where this proposed action would take place would thin naturally from mortality-inducing natural disturbances and other processes resulting in dead trees that would decay over time, emitting carbon to the atmosphere. Conversely, the wood and fiber removed from the forest in this proposed action would be transferred to the wood products sector for a variety of uses, each of which has different effects on carbon (Skog et al. 2014). Carbon can be stored in wood products for a variable length of time, depending on the commodity produced. It can also be burned to produce heat or electrical energy or converted to liquid transportation fuels and chemicals that would otherwise come from fossil fuels. In addition, a substitution effect occurs when wood products are used in place of other products that emit more GHGs in manufacturing, such as concrete and steel (Gustavsson et al. 2006, Lippke et al. 2011, and McKinley et al.

2011). In fact, removing carbon from forests for human use can result in a lower net contribution of GHGs to the atmosphere than if the forest were not managed (McKinley et al. 2011, Bergman et al. 2014, and Skog et al. 2014). The IPCC recognizes wood and fiber as a renewable resource that can provide lasting climate-related mitigation benefits that can increase over time with active management (IPCC 2000). Furthermore, by reducing stand density, the proposed action may also reduce the risk of more severe disturbances, such as insect and disease outbreak and severe wildfires, which may result in lower forest carbon stocks and greater GHG emissions.

Thank you for the opportunity to provide scoping comments for the Pine Plats Project. We strongly encourage the District to use the CE authority and implement the project quickly before another catastrophic wildfire season.

Sincerely,

Tom Partin

AFRC Consultant