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Comments: Attached are AFRC's comments on the Buckhorn GNA Project on the Bitterroot National Forest. Please keep me informed as this project moves toward implementation.

Thank you,

Tom Partin

December 3, 2019

Bitterroot National Forest Attn: Buckhorn GNA Project 1801 N. 1st Street

Hamilton, Montana

Dear Buckhorn GNA Project Lead:

On behalf of the American Forest Resource Council (AFRC) and its members, thank you for the opportunity to comment on the Buckhorn GNA 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 Bitterroot 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 Buckhorn GNA project lies southeast of Hamilton, Montana in the headwaters of Coffee, Tenderfoot, and Fullerton Gulches within the Sapphire Mountains. The Forest is proposing to treat 1,300 acres which is all located within a designated priority landscape using a Categorical Exclusion (CE) as designated in the 2014 Farm Bill. The Project will focus on insect and disease treatments under Section 303 in Title VI of the Healthy Forest Restoration Act. Further necessitating and justifying the use of a CE is the fact that part of the treatment area is

within the Bitterroot Community Wildfire Protection Plan where high fire danger rankings are present.

The Forest proposes to treat the stands to improve stand resistance and resilience to disturbances such as fire, and would rely heavily on removing diseased and unnaturally high tree densities of shade tolerant species such as Douglas-fir and lodgepole pine. This type of treatment should lend itself well considering the area is managed for a partial tree retention and for moderate levels of timber production. Additional actions in the area includes the proposed treatments for 400 acres of adjacent Montana DNR land which will deal with the same forest health issues.

AFRC strongly supports the project and offers the following comments that we believe will support or improve your proposal.

First we are pleased that this project will be implemented using a partnership with the Montana DNRC through the Good Neighbor authority AFRC encourages both the Forest and the DNRC to look at expanding the acres for commercial harvest since the Farm Bill insect and disease CE will allow harvest up to 3,000 acres. There appears to be more private land adjacent on the south and southwest side of the project area that might fit management need and the criteria. Expanding the project area could also potentially bring in more revenues to help support future GNA projects.

The National Forests in Montana are very important for providing the raw materials that sawmills within the State need to operate. The timber products provided by the Forest Service are crucial to the health of our membership. 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. 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 importance of our members[rsquo] ability to harvest and remove these timber products from the timber sales generated off this project is paramount. We would like the Forest Service to recognize this importance by adding economic viability & support to the local infrastructure to the purpose and need of the Buckhorn GNA project.

Supporting local industry and providing useful raw materials to maintain a robust manufacturing sector should be a principal objective to any project proposed on Forest Service land, particularly those lands where active management is allowed and supported. As the Forest Service surely knows, the [ldquo]restoration[rdquo] treatments that are desired on these public lands cannot be implemented without a healthy forest products industry in place, both to complete the necessary work and to provide payments for the wood products generated to permit the service work to be completed.

The prescribed treatments call for leaving 40-80 sq. ft. of residual basal area. AFRC believes that due to potential impacts from fire to the WUI, the high preponderance of insects and disease, the Forest should use the 40 sq. ft. basal retention in most places. Thinning to this spacing will improve tree vigor and reduce fuels to a level of where they will be manageable. Also much of the area is designated for wildlife and livestock grazing. Thinning to a wider spacing will create more early seral species for deer and provide more grass for grazing.

AFRC supports the Forest seeking Regional Forester approval to harvest areas larger than 40 acres needed to address forest health. The two units, one in Douglas-fir and the other in lodgepole need these larger openings to address forest health issues.

This project would lend itself very well for the use of Designation by Prescription (DxP). Two of the larger units will be regeneration harvests not needing marking, and a good portion of the project will be thinning and reducing basal area based on the health of trees and leaving behind the fire resistant older ponderosa pine.

The primary issues affecting the ability of our members to feasibly deliver logs to their mills are firm operating restrictions and types of logging systems to be used. 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 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 Bitterroot National Forest market area with a variety of skills and equipment. Developing the 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 and cautious use of their equipment. To address this issue, we would like to see flexibility in the 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. We would like the Forest to allow ground based equipment to operate on slopes up to 45%. Allowing the use of processors and fellerbunchers throughout these units can greatly 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 viable and available option for felling and yarding on steep slopes. This equipment has shown to contribute little additional ground disturbance when compared to traditional cable systems. Please prepare your NEPA analysis documents in a manner that will facilitate this type of equipment.

AFRC supports the Forest in building one mile of new temporary road to access the areas that need treatment. The road decommissioning of temporary roads proposed in the Buckhorn GNA scoping notice likely represents a

permanent removal of these roads and likely the deferral of management of those forest stands that they provide access to. The land base covered in this project area are to be managed for a variety of forest management objectives. Removal of adequate access to these lands compromises the agency's ability to achieve these objectives and is very concerning to us.

Recommendations provided in the Road Investment Strategy (RIS)* will likely be a starting point for the District to consider road infrastructure needs. The RIS directs the agency to analyze roads for decommissioning where [ldquo]the resource risk from these roads potentially outweighs the access value and the road is very unlikely to be needed for administrative use in the future.[rdquo] The Strategy also directs the agency to analyze roads for closure where [ldquo]the resource risk from these roads potentially outweighs the access value, but the road may be needed for administrative use in the future.[rdquo]

We would like the District to carefully consider the following three factors when making a decision to decommission any road in the project area:

1. Determination of any potential resource risk related to a road segment
2. Determination of the access value provided by a road segment
3. Determination of whether the resource risk outweighs the access value (for timber management and other resource needs).

We believe that only those road segments where resource risk outweighs access value should be considered for decommissioning.

*This is in reference to the travel management document prepared by the Willamette NF. Each Forest has produced their own documents, likely not named [ldquo]Road Investment Strategy.[rdquo] A link to the Region-6 Travel Management documents is below. I'm not sure how other Regions have handled this.
<https://www.fs.usda.gov/detail/r6/landmanagement/?cid=fseprd485439>

The Project area is adjacent to Coffee, Tenderfoot, and Fullerton Gulches. 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 ultimately 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. The ACS describes the need for treatments that meet the need of multiple habitat types and we encourage Bitterroot National Forest 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 ACS 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 incorporate its findings

into your environmental analysis 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:

1.

* 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:

1.

* 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:

1.

* 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:

1.

* 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.

Benda, L.D. Litschert, S.E., Reeves, G. and R. Pabst. 2015. Thinning and in-stream wood recruitment in riparian second growth forests in coastal Oregon and the use of buffers and tree tipping as mitigation. *Journal of Forestry Research*.

Key points of the Benda paper include:

* 10-meter no-cut buffers maintained 93% of the in-stream wood in comparison to no treatment.

Sedimentation

Rashin, E., C. Clishe, A. Loch and J. Bell. 2006. Effectiveness of timber harvest practices for controlling sediment related water quality impacts. *Journal of the American Water Resources Association*. Paper No. 01162

Key points of the Rashin paper include:

* Vegetated buffers that are greater than 33 feet in width have been shown to be effective at trapping and storing sediment.

Collectively, we believe that this literature suggests that there exists a declining rate of returns for [ldquo]protective[rdquo] 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 50 feet and maximize forest health outcomes beyond this buffer.

On this project and others on the Darby Ranger District we would encourage you to read a newly published document that considers the long-term impacts of forest thinning and forest restoration on carbon sequestration.

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[ndash] 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.

Thank you for the opportunity to provide scoping comments on the Buckhorn GNA Project, and I look forward to following its implementation as it moves forward.

Sincerely,

Tom Partin

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