



January 10, 2023

Dean Schlichting
McKenzie River Ranger District
Willamette National Forest
57600 McKenzie Highway
McKenzie Bridge, OR 97413

In Reply To: Calloway Project Scoping

Dear Mr. Schlichting:

American Forest Resource Council (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. AFRC represents over 50 forest product businesses and forest landowners throughout the West. Many of our members have their operations in communities adjacent to the Willamette National Forest, and the management on these lands ultimately dictates not only the viability of their businesses, but also the economic health of the communities themselves. The state of Oregon's forest sector employs approximately 61,000 Oregonians, with AFRC's membership directly and indirectly constituting a large percentage of those jobs. Rural communities, such as the ones affected by this project, are particularly sensitive to the forest product sector in that more than 50% of all manufacturing jobs are in wood manufacturing.

AFRC is pleased to see the McKenzie and Sweet Home River Ranger Districts list *providing a sustainable supply of timber* as a **need** of this project. We are similarly pleased that the Districts will accomplish this through vegetation management on lands designated as Adaptive Management Area (AMA), Matrix, and Riparian Reserve LUA. Our members depend on a predictable and economical supply of timber products off Forest Service land to run their businesses and to provide useful wood products to the American public. It is refreshing to see the Districts pursue active management across numerous land allocations and across the majority of the planning area. The consideration of active management on every acre of appropriate land, regardless of its land allocation, is important to our membership as each year's timber sale program for the Willamette National Forest is a function of the treatment of aggregate forested stands

analyzed in individual projects, such as Calloway. **Therefore, we urge you to maintain the consideration of active management on the maximum amount of acres proposed in the scoping notice in order to provide as many opportunities post-analysis.**

SUSTAINABLE FOREST MANAGEMENT

The scoping notice indicates that thinning will be the only silviculture implemented across the Calloway project, but we are concerned that this treatment may be too narrow in scope and will not meet the stated purpose and need for this project. Although thinning may be an effective tool to meet growth and vigor objectives in homogenous plantations, it is also a one-dimensional approach to thinning 8,213 acres and does little to *improve stand conditions in terms of density, diversity, and structure*. To meet this stated purpose and need, AFRC would like the Forest Service to consider developing an alternative that analyzes a more varied set of treatments by incorporating group selections and thinning across diameter classes.

Additionally, AFRC is concerned that a strict thinning paradigm is not sustainable and creates a landscape where the Willamette will eventually run out of stands to thin. The only way to mitigate this concern and manage sustainably is to alter treatments in a way that creates openings for early seral habitat and remove a portion of larger trees while permitting smaller trees to grow. In addition to improving stand conditions, implementing a broader range of silvicultural prescriptions will also help you meet your purpose and need of “providing a sustainable supply of timber products.”

RIPARIAN RESERVES

We are similarly pleased to see the McKenzie River District include *managing Riparian Reserve to control stocking* as a “need” of this project. When the Central Cascades AMA (CCAMA) was established during the passage of the Northwest Forest Plan, objectives for the AMA included “intensive research on ecosystem and landscape processes and its application to forest management in experiments and demonstrations at the stand and watershed level; **approaches for integrating forest and stream management objectives** and on implications of natural disturbance regimes” (ROD p. D-12). We believe that this verbiage was intentional and suggests that riparian reserves in the CCAMA are meant to be managed (i.e. thinned) in a similar manner as adjacent upland areas.

Furthermore, the forest health benefits that you expect to attain through upland thinning treatments can also be achieved in riparian areas with similar active management prescriptions. We urge the Forest to strive toward maximizing the acres of riparian reserve treated to meet those objectives. It has been well documented that thinning in dense, uniform forest stands accelerates the stand’s trajectory to produce large conifer trees, vertical diversity, and tree-species diversity (Garman, Steven L.; Cissel, John H.; Mayo, James H. 2003.).

The tradeoffs that the Forest 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 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:

- 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.

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 “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 to establish no-cut buffers along streams no larger than 40 feet and maximize forest health outcomes beyond this buffer.

Having spent a considerable amount of time visiting Forest Service timber sale projects, we are aware that the stream layers incorporated into much of the Forest’s planning documents often do not reflect the actual location of real streams in the woods. We ask that the Forest take a close look in the field to determine whether mapped streams are accurate.

FUEL BREAKS

We are pleased to see the Forest include roadside hazard treatment as a purpose and need for the Calloway project. Apart from relying on the Forest to provide usable forest products, many of our members are also adjacent landowners to the Willamette National Forest and are similarly concerned with the Forest’s ability to maintain contingency lines along their own roadways during wildfires. This concern compounds when private roads are used to carry out firing operations to attack fires burning on National Forest lands. Public roadways that are properly maintained as fuel breaks are essential for the Forest to protect their land based, the land base of their neighbors, and the populated communities adjacent to Forest Service lands.

Often the Forest will impose unnecessary upper diameter limits when performing fuel reduction work which limits treatment to understory ladder fuel only. This practice ignores the tendency of fires to spread horizontally where crown connectivity is high. If these roadways are going to be truly “strategic”, the Forest should prioritize prescriptions that treat both vertical and horizontal fuels, regardless of tree size. To this end, **we recommend that the Forest utilize the 2020 NRCS Conservation Practice Specification for Fuel Breaks in Forestland which specifies for roadside hazard treatments:**

Apply roadside fuel breaks [*sic*] along county roads or private roads at an effective minimum width of 2 ½ times the height of the average codominant tree or brush species vegetation or a **minimum of 200 feet**. Add 10 feet to the width for every 10 percent increase in slope (e.g., for a 50% slope 200 ft + 50 ft = 250 feet total width), on level ground. Ideally, roadside fuel break widths are installed evenly on each side of the road.” (Pg. 5)

Reduce or modify the existing fuel load (live vegetation and debris) to diminish the risk and/or rate of the spread of fire crossing the strip or block of land. **Vegetation treatments shall focus on treating/removing fuels in all vegetative layers including tree crowns, understory trees and brush**, and dead and down surface fuels or live ground cover. **Focus on substantial vegetative removal** and debris clean-up. (Pg. 5)

CARBON SEQUESTRATION

If the Forest Service identifies carbon sequestration and impacts to climate change as a key issue on this project, we would like you to consider some of the literature cited and outlined below:

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.

For those stands proposed for treatment, please consider 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 (Gustavasson 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.

Gustavsson, L., Madlener, R., Hoen, H.-F., Jungmeier, G., Karjalainen, T., Klöhn, S., ... 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.

ROAD DECOMMISSIONING

Your scoping notice indicates that the forest is proposing to decommission up to 44.6 miles of existing roads within the Calloway project. **When determining whether a road should be decommissioned, AFRC recommends that the Forest limit their road selection to roads that are no longer needed for resource management and are at risk of failure or are contributing sediment to streams, consistent with valid existing rights.** The land base covered in the project area is to be managed for a variety of forest management objectives. Removal of adequate access to these lands would compromise the agency's ability to achieve these objectives.

AFRC believes that a significant factor contributing to increased fire activity in the region is the decreasing road access to our federal lands. This factor is often overshadowed by both climate change and fuels accumulation when the topic of wildfire is discussed in public forums. However, we believe that a deteriorating road infrastructure has also significantly contributed to recent spikes in wildfires. This deterioration has been a result of both reduced funding for road maintenance and the federal agency's subsequent direction to reduce their overall road networks to align with this reduced funding. The outcome is a forested landscape that is increasingly inaccessible to fire suppression agencies due to road decommissioning and/or road abandonment. This inaccessibility complicates and delays the ability of firefighters to quickly and directly attack nascent fires. On the other hand, an intact and well-maintained road system would facilitate a scenario where firefighters can rapidly access fires and initiate direct attack in a more safe and effective manner.

If the Forest Service proposes to decommission, abandon or obliterate road segments from the Calloway planning area we would like to see the analysis consider potential adverse impacts to fire suppression efforts due to the reduced access caused by the reduction in the road network. We believe that this road network reduction would decrease access to wildland areas and hamper opportunities for firefighters to quickly respond and suppress fires. On the other hand, additional and improved roads will enable firefighters quicker and safer access to suppress any fires that are ignited.

ECONOMICS AND OPERATIONS

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 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 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 McKenzie River and Sweet Home market area with a variety of skills and equipment. Developing an EA 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 EA 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. 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.

Another factor contributing to timber sale economic viability is rock source for required and/or optional road work. Costs associated with hauling rock long distances has been escalating in recent years and often represents a significant cost in timber sale implementation for our members. In fact, this spike in cost has recently been identified by several purchasers as a primary contributor to sales going no-bid. **The value-added by providing a local rock source should be analyzed in the ensuing EA.**

Constructing forest roads is essential if active management is desired, and we are glad that the Forest Service is proposing the roads that are needed to access and treat as much as the project area as possible in an economically feasible way. Proper road design and layout should pose little to no negative impacts on water quality or slope stability. **Consistent and steady operation time**

throughout the year is important for our members not only to supply a steady source of timber for their mills, but also to keep their employees working. These two values are intangible and hard to quantify as dollar figures in a graph or table, but they are important factors to consider. The ability to yard and haul timber in the winter months will often make the difference between a sale selling and not, and we hope that the Districts are working to accommodate this.

AFRC is happy to be involved in the planning, environmental assessment (EA), and decision-making process for Calloway Project.

Sincerely,



Corey Bingaman
Western Oregon Field Coordinator
American Forest Resource Council