January 23, 2020

Joanie Schmidgall
Sweet Home District Planner
4431 Highway 20
Sweet Home, OR 97386

In Reply To: QMS Scoping

Dear Ms. Schmidgall:

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 Sweet Home Ranger District, 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 glad to see the Sweet Home Ranger District proposing vegetation management on lands designated as Matrix, LSR and Riparian Reserve that will likely provide useful timber products to our membership. 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. In recent years the Willamette National Forest has been the leader in proposing and implementing diverse silvicultural treatments that move beyond the one-dimensional practice of exclusive thinning that has dominated the Forest Service's forest management paradigm over the past twenty years. This includes various forms of regeneration harvest in the Matrix land allocation that place an emphasis on the Forest Service's requirement to manage its timber resources in a sustainable manner. AFRC has clamored for many years that the past management regime of exclusive thinning is ultimately unsustainable in the Douglas-fir forests present on the Willamette National Forest. **Some level of regeneration harvest is necessary for a sustainable timber program and we thank the Sweet Home Ranger District for proposing treatments that will address that sustainability.** Implementing the types of sustainable forestry treatments discussed above starts with how the Forest Service frames each individual vegetation management project. In recent years it has been a struggle to convince the Forest Service that sustainable timber management is both a worthy goal aligned with the agency's mission and a goal that is in the public interest. We are glad to see the Sweet Home Ranger District recognize this objective in the QMS project scoping notice. We urge the District to implement the treatments proposed in the scoping notice that meet this objective such as gap creation and shelterwood harvest.

The treatments on the QMS project will also likely provide short-term products for the local industry and we want to ensure that this provision is an important consideration for the decision maker as the project progresses. As we will discuss later in this letter the importance of our members' 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 to the purpose and need** of the QMS 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 designated as Matrix.

Despite our appreciation for including some regeneration harvest in this project, it is important to note the scale at which it is occurring. The scoping notice indicates 180 acres of shelterwood. This represents roughly 2% of the acres proposed for treatment, and 0.2% of the entire project area managed by the Forest Service (75,179 acres). **AFRC would like the Sweet Home District to take a hard look at the project area and consider additional acres for regeneration harvest as a way to better meet the purpose and need.** We are familiar with the array of restrictions that limit active management on Forest Service land; but we also would like to see if the District could increase the level of regeneration harvest over the current 0.2% of the project 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 is a function of the treatment of aggregate forested stands across the landscape. Based on the scoping notice, it appears that the District is proposing treatment, excluding "skips", on roughly 8% of the project area. This percentage is typical of many Forest Service vegetation management projects and although AFRC would like to see the agency treat a higher proportion of the landscape, we understand the multiple directives and land management restrictions in place that make doing so difficult. Given the relatively small scale at which this project is proposed to be implemented on, we urge the District to look for ways to maximize treatment where it ***is*** proposed and to avoid deferring units or setting aside portions of units for what is often referred to as "skips" **(please consider the fact that 68,789 acres of the project area will essentially be "skipped").** The scoping notice indicates that 1,500 acres of skips are proposed, while only 170 acres of gaps and 630 acres of DTRs are proposed. We would like the District to consider striving toward a more even ratio of openings:skips within thinning units. Currently this ratio sits at 2:1 in favor of skips. **We would like the District to strive toward a more even ratio by either 1.) reducing the level of skips; or 2.) increasing the level of openings (gaps and DTRs).** Skips within the watershed are plentiful, what is not plentiful are openings. If the District truly wants to diversify the proposed stands, then it should focus on creating openings in the forest and minimizing untreated areas within the 6,390 acres of proposed treatment.

We also urge the District to consider a range of thinning intensities when developing prescriptions to create diversity across the landscape and to provide additional timber products where appropriate. We recommend the District review the following PNW paper if you have not already:

Garman, Steven L.; Cissel, John H.; Mayo, James H. 2003. Accelerating Development of Late-Successional Conditions in Young Managed Douglas-fir Stands: A Simulation Study. Gen. Tech. Rep. PNW-GTR-557. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

This study suggests that heavy thinning promoted rapid development of large boles, vertical diversity, and tree-species diversity, but required artificial creation of dead wood. Treatments that retained more than 40 percent of the overstory delayed attainment of late-successional conditions by 10 to 30 years but resulted in higher levels of most late-successional attributes at the end of a rotation. We would like the Forest Service to consider these two studies and to weigh these tradeoffs and consider a variety of thinning intensities to achieve desired outcomes.

We understand that portions of the project area, specifically those lands designated as LSR, are overlaid by the critical habitat layer (CHU) for the northern spotted owl. This CHU designation does not preclude vegetation management treatments that have adverse impacts to NSOs and/or their habitat, and in fact encourages land managers to consider implementation of forest management practices recommended by the Revised Recovery Plan (USDI FWS 2011) to restore ecological process where they have been disrupted or suppressed, and application of ecological forestry management practices **(including regeneration harvest**) within critical habitat to reduce the potential for adverse impacts associated with commercial timber harvest when such harvest is planned within or adjacent to critical habitat.

The Final Critical Habitat Rule recognizes the need and the appropriateness of such treatments throughout the document:

- **We recognize that ecological restoration is not the management goal on all NWFP land use allocations (*e.g.* matrix) within designated critical habitat, and we provide a discussion of options land managers could consider to tailor traditional forest management activities on these lands to be consistent with conservation of current and future NSO habitat (pg. 27).**
- **On Matrix lands under the NWFP where land managers have a range of management goals, the Service anticipates that not all forest management projects in critical habitat will be focused on the development or conservation of northern spotted owl habitat (pg. 283).**
- **Targeted variable-retention harvest could be considered where the conservation of complex early seral forest habitat is a management goal (pg. 284).**

As the second bullet point suggests, is important to note that the **CHU is not defacto LSR**. Nor does the CHU suggest that the entire unit be maintained in some level of spotted owl habitat. These are important distinctions to make and may drive the silvicultural prescriptions on the QMS stands.

In addition to the effects to NSO habitat, this project may also have short-term effects to the NSO (based on the presence of actual owls) due to the assumption that any type of forest management activity, including those that maintain habitat types, will have a negative impact on owls and their prey. This assumption is typically based on a few scientific pieces of literature published over the past decade. We would like the Sweet Home District to consider a recently published study conducted by NCASI when assessing treatment areas and their potential affects to owls:

Larry L. Irwin, Dennis F. Rock, Suzanne C. Rock, Craig Loehle, Paul Van Deusen. 2015. Forest ecosystem restoration: Initial response of spotted owls to partial harvesting

Among other findings, this study concluded that partial-harvest forestry, primarily commercial thinning, has the potential to improve foraging habitats for spotted owls.

One of the most significant barriers to active management of federal forests in the Oregon Cascade Range are the survey & manage requirements for the Red Tree Vole (RTV) as described in the Northwest Forest Plan. The intent of these requirements in the 1994 plan was to provide for an interim assurance of protection for this species, which little was know of back in 1994, until further knowledge of its range and density were realized. Since 1994 the ubiquitous nature of the RTV has become evident, yet management direction has remained the same. Until the Forest Service updates its survey & manage requirements for the RTV to better align with current habitat trends, the designation of a "high priority site" is the only means by which the Forest Service can comply with the 1994 direction and still actively manage its Matrix land base. **We would like the Sweet Home District to pursue this site designation in order to permit sustainable timber management on those lands designated as Matrix with the QMS project area.** One such designation has been established on the Rogue River-Siskiyou National Forest on a project called Upper Briggs. We urge you to review this and consider proceeding in a likewise manner for QMS.

AFRC is glad to see that the Forest Service is taking a proactive approach to treating riparian reserves. After visiting several stands proposed for treatment it's clear that the undesired forest conditions that exist in the uplands also exist in the riparian reserves. These undesired conditions include dense forest stands lacking structure and complexity.

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 the Sweet Home 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 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:

- 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.

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

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 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. 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 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.

An intact road system is critical to the management of Forest Service land, particularly for the provision of timber products. Without an adequate road system, the Forest Service will be unable to offer and sell timber products to the local industry in an economical manner. The road decommissioning proposed in the QMS scooping 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 the QMS 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 *"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."* The Strategy also directs the agency to analyze roads for closure where *"the resource risk from these roads potentially outweighs the access value, but the road may be needed for administrative use in the future."*

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.

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. **Quarry development (new or existing) on USFS land within or in close proximity to the QMS project should be considered if available.** The value of having a good rock source close to future timber sales should be strongly considered by the Sweet Home District.

We would like to encourage the Sweet Home District to consider several 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 comparted 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.

AFRC is happy to be involved in the planning, environmental assessment (EA), and decision-making process for the QMS EA. Should you have any questions regarding the above comments, please contact me at 541-525-6113 or ageissler@amforest.org.

Sincerely,

Andy Geissler
Federal Timber Program Director
American Forest Resource Council