



Erin Uloth
District Ranger
Mt Baker Ranger District
810 State Route 20
Sedro-Woolley, WA, 98294

VIA email: comments-pacificnorthwest-mtbaker-snoqualmie-mtbaker@usda.gov

RE: North Fork Nooksack Vegetation Management Project Scoping Comments

Dear Ms. Uloth:

On behalf of its members, the American Forest Resource Council (AFRC) submits the following scoping comments on the proposed North Fork Nooksack Vegetation Management Project.

AFRC represents the forest products industry throughout Oregon, Washington, Idaho, Montana, and California. AFRC's members include over 50 forest product businesses and forest landowners. AFRC's mission 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 adjacent to the Mount Baker Snoqualmie National Forest (MBSNF), 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 forest products sector in Washington State continues to provide around 40,000 direct and about 100,000 indirect jobs. Many of these jobs are found in rural communities like those in the surrounding areas of the Mount Baker Ranger District and the MBSNF. In addition to the wages paid, the taxes and other monetary transactions generated by these businesses and family-wage jobs, contribute to the infrastructure and well-being of the local communities. AFRC submits these comments on behalf of its members.

Lack of supply of raw materials to fill manufacturing demands for wood products continues to be an issue in Washington. Several mills have closed in the past few years. Vegetation management projects, both current and future, on the MBSNF, can help contribute to the wood supply in Washington that many mills depend on to continue operation and

employment of their workforce. The economic activity created through these treatments contributes to the greater community well-being.

Purpose & Need

AFRC generally supports the “Need” statement for this project though as we will discuss later in this letter have concerns over some of the proposed methods of accomplishing the “need.” We would prefer to see a stronger and more prominent statement regarding the economic contribution this project can provide to the local natural resource logging and milling infrastructure as well as the overall economic benefit to the region. While we understand that the Forest has multiple objectives to meet in this planning area, much of the proposed non-commercial harvest activities will require substantial economic capital. Highlighting in the “need” statement the importance of the economic benefits of this project can go a long way to assuring the Forest accomplishes its non-commercial activities. All while supporting the local labor force engaged in natural resource management, including but not limited to foresters, road builders, loggers, truckers, milling infrastructure, and the multitude of jobs that support this infrastructure.

We support the “need” statement related to Riparian Reserves. In the review of many projects, we have found that these land allocations are often overlooked for treatment needs. Too, many Forests choose to walk away from the Riparian Reserve area without treatment of the structurally simple stands located along the streams found in the planning area. Please see our further discussion on this topic below.

Maintaining access to the MBSNF is critical for a variety of needs and uses as expressed in the “Need” statement. A well-maintained transportation system, including structurally sound bridges, is key to meeting many if not all the “needs” identified in this proposed project. As mentioned in the scoping document, access for vegetation management, recreation, tribal treaty rights, and administrative uses are all critical needs to the Forest and stakeholder community. A suitable transportation system can also benefit the stated need for “restoration of this landscape to a condition that would be resilient to major disturbances such as droughts, insect outbreaks, and fires.” As the forest continues to develop and change over time, ongoing access for management to address impacts from drought, insect outbreaks, and fires (especially suppression needs) will be critical to maintaining many of the habitat types this project proposes to improve.

Lastly, active management in Late Successional Reserves (LSRs) has both the benefit of accelerating habitat development of “old forest” characteristics, while providing an economic benefit today through providing wood fiber to the marketplace. As we will address later in this letter, we do have concerns over the amount of proposed non-commercial treatment in LSR stands.

Proposed Treatments

General Comments:

The Scoping notice identifies on page 3 that Commercial thinning will occur in both LSR MAs and Matrix land allocations. However, on page 4, there is no disclosure of the number of Matrix acres proposed for Commercial thinning. The notice identifies 1,798 acres of Commercial thinning “within LSR.” And identifies up to 1,881 acres of Stand regeneration “in Matrix.” AFRC would like further details of where and how Commercial thinning will be applied in Matrix acres. We would assume Commercial thinning in Matrix acres would occur where Riparian Reserves overlay Matrix acres, but this is not clear in the documentation. We would ask for additional clarity on when and under what circumstances, commercial thinning would be applied to Matrix acres in place of regeneration harvest.

Stand Improvement through Non-Commercial Thinning:

AFRC has significant concerns with the use and scale of proposed non-commercial thinning in this proposal. Non-commercial treatments of this type tend to be expensive to conduct. With nearly 36% of the proposed treatment acres in a non-commercial form, this would seem to create a high level of economic risk to the viability of the project. Especially, given the amount and scale of anticipated road work.

For the huckleberry treatments proposed in MA 19, we would encourage the Forest to review the Huckleberry Management documents produced by the Gifford Pinchot National Forest (GPNF) in cooperation with the Pinchot Partners Collaborative. The Pinchot Partners and the GPNF have a long history of developing huckleberry enhancement projects that also provide commercial timber to the marketplace. We assume the goal for this MA is no longer long-term timber production but rather ongoing huckleberry production. Under this scenario reforestation for timber production would not make sense. As stated in the scoping letter this is now a vegetation management regime in this MA, not timber production. It is not clear why this would require a “drop and leave” prescription. Removal of the trees would also help to lessen fuel loading and increase accessibility to berry pickers. Should the Forest consider prescribed fire to benefit huckleberry production in this MA in the future, efforts to reduce fuel loading, such as removal of the felled trees from the site, can provide an increased level of safety when conducting these treatments.

We strongly encourage the Forest to re-evaluate opportunities in MA 19 to develop a revenue-producing strategy of providing wood fiber to the marketplace, to help assure the ecological treatments to enhance huckleberry production can occur. This would help achieve not only the stated “need” of economic benefits but also the ecological and recreational benefits related to huckleberries. **Please consider developing an action alternative that analyzes the effects of harvest in place of “drop and leave.” Such an alternative would provide the decision-maker with a broader spectrum of options to achieving the same desired end results.**

Stand Regeneration:

AFRC is pleased to see the MBS proposing the use of stand regeneration on Matrix Lands in this proposed project. Lands designated as Matrix are the only lands where our members can depend on a sustainable supply of timber products, as timber outputs on lands designated as reserves are merely a “byproduct”. A management regime that only thins mid-seral forest stands is ultimately **unsustainable**. The long-term sustainability of our member's operations, associated support businesses, and the communities they live and work in require a long-term sustained yield of timber products. Maximizing the stand regeneration acres in this project will help to assure that long-term view. Harvesting, planting, growing, and harvesting again is the circle of sustainability that will provide wood products to a wood product demanding public, promote the success of rural communities, and assure there is a forest products infrastructure that contributes to the ongoing management of Forest Service lands that supports multiple uses.

We believe strengthening the “contribution to the local economy” statement in the “Purpose and Need” by highlighting the forest products aspect of that contribution would be beneficial. Supporting the local forest products industry and providing useful raw materials to maintain a robust forest products manufacturing sector should be a principal objective to any project proposed on Forest Service land, particularly those lands designated as Matrix. The “restoration” 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.

At this phase of the project, it is unclear which or how many stands proposed for regeneration harvest have been surveyed to determine if they have reached the culmination of mean annual increment (CMAI), meaning a point at which a stand’s growth has reached its maximum annual increment and starts to decline (Society of American Foresters 2008). We would encourage the Forest not to limit regeneration treatment acres due to stands not being at CMAI. While it is generally accepted by the Forest Service that regeneration harvest should occur at CMAI, there are exceptions when other resource goals are intended to be met. The desire to enhance and increase the acres of early seral habitat within the planning area is an additional resource goal beyond purely maximizing volume production per acre, as is the case when adhering to CMAI as a determination for regeneration harvest. Assuring all commercial size stands within the Matrix allocation are treated will help the Forest meet its resource goals of early seral habitat development, while also providing a revenue source for the variety of non-

commercial goals within the planning area. Delaying regeneration harvest either through deferral of management or thinning within Matrix and then returning when stands reach CMAI, will reduce the acres available for reaching the stated goal of increasing the amount of early seral habitat in the project area. We encourage the Forest to follow through with its stated need of creating early seral habitat, which may be lacking in the project area.

Commercial Thinning:

AFRC is glad to see the Mount Baker Ranger District proposing vegetation management on their Late Successional Reserve (LSR) lands 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. This supply is important for present-day needs but also important for needs in the future. This future need for timber products hinges on the types of treatments implemented by the Forest Service today. Of particular importance is how those treatments impact the long-term sustainability of the timber resources on Forest Service managed land. Ongoing management within LSRs to assure they are progressing towards a complex old forest characteristic is important to consider. The generally accepted “rule” is to stop management at age 80 within LSRs. We would strongly encourage the Forest to assure that any stands within LSRs that are near, or over, age 80 are treated to assure acceleration to desired future conditions. Regional Ecosystem Office guidance does not preclude a Forest from proposing and seeking the ability to treat over 80 age stands in the LSR. Should any stands near, or over, age 80 need management, please consider opportunities to enhance the stand characteristics through commercial management. As we all know, the “restoration” 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. Treating structurally simple stands in LSR allocations, regardless of age, can help meet the economic goals of this project and support a vibrant forest products industry today and in the future.

Riparian Reserve Management

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 its 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 Mount Baker Ranger 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 on 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), the 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 the 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.

Road Decommissioning

The scoping notice does not disclose any proposed system road decommissioning associated with this project. We assume that any temporary roads planned for the project area will be decommissioned as is typically required during these types of projects. Should decommissioning of Forest System roads become a part of this proposal we would encourage the Forest to first consider ML-1 closure. This has the potential of minimizing or eliminating resource risks while preserving the opportunity to use the road in the future should management needs require it.

Absent the ability to use ML-1 status we would like the District to carefully consider the following three factors when deciding to decommission any permanent 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, that cannot be mitigated through other means, outweighs access value should be considered for decommissioning.

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 its timber products through economically viable sales. This viability is tied to both the volume and type of timber products sold and the way 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.

One of the primary issues affecting the ability of our members to feasibly deliver logs to their mills is inflexible 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 the 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 Mount Baker Ranger District 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 availability of certain operators. Thus, potentially requiring purchasers to find operators outside the local area to log a sale. This could result in increased operational costs of the project.

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 operate within 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. In portions of the proposal area where cable harvest might be required, providing for opportunities to use certain ground equipment such as feller bunchers and processors in the units can make cable yarding more efficient. Allowing the use of processors and feller bunchers throughout these units can greatly increase its economic viability, and in some cases decrease disturbance by decreasing the number of cable corridors, reduce damage to the residual stand and provide a more even distribution of woody debris following harvest. The Mount Baker Snoqualmie NF has been a leader in including tethered assist logging equipment in its vegetation management analysis. 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.

As you develop this project further, we would also ask that you please consider these additional items that can positively or negatively impact the viability of this project.

- Removal of low volumes per acre in thinning operations can lead to harvest costs outweighing the value of the timber removed, particularly as the logging systems costs increase (ground vs. cable vs. helicopter).

- Wider spacing of the residual stems in thinning can aid in both operational efficiency and the safety of crews working on the ground, cable, and helicopter logging systems.
- Consider opportunities to include hardwood removals where appropriate. These can be in Riparian Reserves or as part of a road daylighting project to improve road surfacing conditions. This is an important forest product critical to maintaining the local infrastructure of hardwood processors.
- Selection of the appropriate harvest systems for the economic need of specific units.
- Maximizing opportunities for mechanical harvesting and yarding can enhance economic viability.
- Seasonal timing restrictions, particularly in the case of helicopter operations, can create economic challenges to a successful project. Expanding operating windows to the maximum as practically allowed, including options for winter operations, should be evaluated. Using outcome-based constraints as compared to prescriptive constraints.
- Recognize that helicopter logging will most likely be more expensive than the value of the forest products it generates. Therefore, only employ this logging system where absolutely necessary. One option is if a skip and gap prescription system is to be employed in a watershed, consider making the potential helicopter units the “skip” areas. We also encourage the Forest to assure that identified helicopter areas cannot be logged with any other harvest system.
- Designing the project to allow for winter operation can enhance the viability of the project, as opportunities for winter operation can be relatively limited throughout the region.
- Selection of prescriptions and residual stem spacing appropriate for the type of harvesting.
 - Downhill yarding in a thinning will be less expensive and should have less residual stem damage with a wider spacing.
 - Maximizing volume per acre removal for helicopter units can lower the harvesting cost/mbf. This can also reduce the need to return for additional removals in the near term when volume per acre may not be substantial enough to support helicopter operations.
- Fixed “move-in costs” spread over a smaller volume could mean the difference between success and failure of a project from an economic viewpoint.
- Small units requiring yarding with low volumes per acre removals become very costly very quickly. Every time a yarder is moved or lines are moved it takes a

minimum of 3 to 4 hours. Those hours are not producing any volume, but the costs are still adding up.

The above list, as well as the comments above, is not all-inclusive of what is required for an economically successful project, keeping these concepts in mind can help to minimize risks of a project not being successful.

Pit Development

Another factor contributing to timber sale economic viability is a 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, high road costs have recently been identified by several purchasers as a primary contributor to sales going no-bid. **Quarry development (new or existing) on USFS land near the Nooksack Vegetation Management project should be considered.** The value of having a good rock source close to future timber sales should be strongly considered by the Mount Baker Ranger District.

Carbon Literature

We would like to encourage the Forest 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 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.

It should also be noted that the Washington State Legislature in the 2020 legislative session passed two bills highlighting the importance of active forest management in Washington state in efforts to address atmospheric carbon issues. *E2SHB 2528 "Recognizing the contributions of the state's forest products sector as part of the state's global climate response"* and *section 4 of E2SHB 2311* both identify and place active forest management as a tool in the states carbon policy efforts. Additionally, both bills recognize the importance of carbon storage in manufactured forest products.

EA vs. EIS

AFRC supports the use of an environmental impact statement (EIS) rather than an environmental assessment (EA) for this project. While the proposed treatments are well within the limits prescribed by the Northwest Forest Plan, we would encourage the Forest to conduct an EIS for this project. We do not believe as scoped, this project has a significant impact on the environment and the proposed project area is within the traditional scale where an EA is used. However, we feel the Forest would be better served to conduct an EIS for this project.

Thank you for the opportunity to comment on this project. We look forward to participating in the further development of this proposal. Should you have any questions regarding the above comments or would like additional information, please contact me at 360-352-3910 or mcomisky@amforest.org.

Sincerely,

A handwritten signature in blue ink that reads "Matt Comisky". The signature is fluid and cursive, with the first name "Matt" and last name "Comisky" clearly legible.

Matt Comisky
Washington State Manager
American Forest Resource Council