



VIA Email: FS-comments-pacificnorthwest-colville-newport@usda.gov

November 12, 2021

Carin Vadala, District Ranger
Newport/Sullivan Lake Ranger District
315 North Warren
Newport, WA 99156

Dear Carin:

On behalf of the American Forest Resource Council (AFRC) and its members, thank you for the opportunity to provide Draft EA comments on the Sweet-Ione 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 Colville 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 comments below are based on information found in the Draft EA and from input AFRC submitted during the pre-scoping period on January 30, 2019, and during the formal scoping period on July 18, 2019.

The Sweet-Ione Integrated Resources project is approximately two miles west of Ione, Washington in Pend Oreille County and covers approximately 20,600 acres within the Sullivan Lake Ranger District. It is bounded by Cedar Creek Road to the north, Hanks Butte Road near the southern project boundary, and Smackout Pass Road bisects the area northwest to southeast. Ownership within the project area is primarily Forest Service (FS) with 19,025 acres, Washington Department of Natural Resources (DNR) with 445 acres, and Private-Other with 1,130 acres.

AFRC previously commented that we support the purpose for the project that includes treatments for those portions of the forest that have departed from healthy, resilient conditions with some areas being overstocked and dense with a lack of a diverse understory. In addition, some roads are susceptible to slumping, and culverts are undersized and contributing to potential road failure. In other areas, forest health habitat and watershed conditions are healthy and properly functioning. Furthermore, the Forest is trying to meet the goals of the Pend Oreille County Community Wildfire Protection Plan (CWPP) which is included in the project area.

AFRC supports the diverse needs and proposed actions described in the EA which include:

- Moving forest stands toward their historical range of variability for structure, patch size, and tree species composition.
- Reducing the potential for high-severity wildfires in the wildland-urban interface areas, providing protection for communities and diversity within stands.
- Improving aquatic and riparian habitat condition.
- Improving habitat conditions for big game and federally protected species such as grizzly bears and wolverines.
- Supporting local jobs and labor income within the counties surrounding the forest through a predictable and sustained flow of timber and forest products to support economic benefits and sustainability within the capability of the ecosystem.
- Providing a system of safe and sustainable authorized roads and bridges that provides public and administrative access where suitable and supports forest management objectives, commensurate with maintenance levels, levels of use, and available funding.

The needs of this project are all aligned with the Colville National Forest Land Management (Forest Plan, 2018). The Forest has done a good job of identifying needs found in the 2018 Forest Plan and proposing actions to address those needs.

While AFRC supports the identified Purpose and Need for this project, we offer the following comments that we believe might improve the Project.

1. AFRC is disappointed that the total number of acres being commercially treated in the Draft EA was reduced from the acres identified in scoping. While the District added an additional 4 units (87-90) totaling 365 acres of commercial treatments, an overall reduction of 1,235 acres was made, from a variety of units, due to considerations for late structural stage stands, wildlife, aquatic vegetation, hardwood component, and others.

In our scoping comments we emphasized that AFRC members depend on timber from the Colville National Forest for their resource needs. 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. AFRC members take a variety of log types and sizes. The Sweet-Ione Integrated Resource Project has a diverse group of age classes and timber types that should be managed to provide the variety of wood needed by AFRC member sawmills. A reduction of 1,235 acres of commercial harvest will have a significant impact on the industry and communities around the Colville National Forest. As pointed out in Section 3.5 of the Draft: *“As many as 7.7 to 13.2 direct jobs are created per MMBF per year and 32.3 to 36.82 indirect jobs per MMBF per year.”*

2. AFRC does not believe that the District is moving stands within the Sweet-Ione Project to their Historic Range of Variability quick enough. The chart below indicates this.

Vegetation Type		Early	Mid Open	Mid Closed	Late Open	Late Closed
Douglas-fir dry	Current (%)	6	2	77	0	14
	Post-Harvest (%)	6	26	53	2	13
	Historic (%)	6-16	2-8	4-13	38-78	1-32
Northern Rocky Mountain Mixed Conifer	Current (%)	4	3	80	0	13
	Post-Harvest (%)	4	25	57	1	13
	Historic (%)	9-25	1-3	18-30	4-6	44-60
Western Redcedar / Western Hemlock	Current (%)	4	3	72	0	21
	Post-Harvest (%)	4	18	57	0	21
	Historic (%)	4-24	0	7-27	0	55-83
Subalpine fir / Lodgepole pine	Current (%)	8	18	74	0	1
	Post-Harvest (%)	8	23	68	0	1
	Historic (%)	45-65	0	33-53	0	3
Spruce / Subalpine fir	Current (%)	1	3	93	0	3
	Post-Harvest (%)	1	60	35	0	3
	Historic (%)	14-46	0	13-41	0	29-57

AFRC would like to point out that the majority of the stands are in the mid-sized closed canopy category. In every instance the District is reducing the percentage in this size class, but not nearly to the extent needed. For example, for the Douglas-fir dry vegetation type, the mid-closed makes up 77% of this type. Following treatment it will be reduced to 53% but this is far above the historic 4-13%. The only way to remedy this is to treat many more acres with a focus on the mid-closed vegetation types of ALL species.

3. AFRC believes the Forest should strive to create more defensible space within the WUI, and we don't believe you are achieving the goals of the Pend Oreille County Community Wildfire Protection Plan (CWPP). Again, the chart below illustrates this.

Wildland Urban Interface (WUI) and Historical Infrastructure

Table 11. Acres of Defensible Zones within Wildland Urban Interface - Currently and Following Treatments

Resource Element	Resource Indicator	Measure	Existing Condition	Proposed Action
Wildland Urban Interface (WUI) and Historical Infrastructure	Defensible zones such as fuel breaks near structures and private property, strategic fuel treatments.	Acres treated within identified WUI	0 known acres of defensible space/ targeted WUI treatment identified	8000 acres of harvest and fuels treatment within CWPP designated WUI

The Draft EA is only treating 8,000 acres within the CWPP which is 39%. As pointed out in the Draft EA:

“As WUI continues to expand further into previously undeveloped areas, the previous, current, and future vegetation treatments result in the continued maintenance of these areas would become crucial to firefighting success over the next 20-30 years.”

Since the Forest acknowledges that the WUI will be increasing, it only makes sense to treat more of those acres now knowing that more acres will need treatment in the future.

AFRC also supports the use of shaded fuel breaks along major roads that provide ingress and egress within the WUI. When laying out these shaded fuel breaks, they should be at least 200 feet on each side of the road and thinned to 40 sq. ft. of basal area to be an effective fuels break or fire retainment line.

4. AFRC supports components of the proposed road work which consists of building 8 miles of new temporary roads with restoration after use and closing 3.5 miles of open roads. However, we are concerned with the amount of decommissioning (9 miles) and obliteration (8 miles) that is being planned. We realize the Forest is trying to attain its goal of two miles of roads per square mile of land, but in this case it may not be practical. That goal should be flexible based on the specific needs of each planning area and each square mile of land and not a “one size fits all” approach.

We would like to remind the Forest that an intact road system is critical to the management of Forest Service land, particularly for the provision of timber products in the general timber designated lands. 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 land base covered in the Sweet-Ione Project area is 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. Roads proposed for decommissioning should be assessed to determine if objectives

could be met instead by road closure using barriers or blockage of the road entrances. AFRC does not support obliteration or recontouring roads that may be needed for future access or whose resource risks can be mitigated through storage rather than full decommissioning because of the high cost involved. The project is already very uneconomical.

Furthermore, there are alternative methods to mitigating potential resource damage caused by poorly designed or poorly maintained roads aside from full decommissioning. Removing or replacing ineffective culverts, installing waterbars, and blocking access are all activities that can mitigate resource damage while maintaining useful roads on the landscape for future use. Please consider these methods as an alternative to full decommissioning.

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 attack fires quickly and directly. 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 Sweet-Ione project 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 fire fighters quicker and safer access to suppress any fires that are ignited.

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

- Determination of any potential resource risk related to a road segment.
- Determination of the access value provided by a road segment.
- 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.

5. Since 7,815 acres of the Project will be tractor logged and 65 acres will be skyline logged the Project should be economically feasible. However, 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 Colville National Forest market area with a variety of skills and equipment. Developing an EA 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 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 may be planned for cable harvest, there may be opportunities to use certain ground equipment such as fellerbunchers and processors in the units to make cable yarding more efficient. While we appreciate the language allowing ground skidding to occur on slopes over 35% if approved, 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. It would be helpful if NEPA analysis documents were prepared in a manner that will facilitate this type of equipment. By possibly allowing skidding up to 45% and the use of tethered logging, it may lessen the need to bring in a skyline machine for 65 acres.

Finally, AFRC would like the Forest to examine the days that operations and haul are shut down due to hunting seasons and other outdoor recreation. The logging community has a limited operating time at best, and further reductions such as these only makes surviving in the logging business that much more difficult.

6. In our scoping comments we encouraged the Forest to use silvicultural treatments that will thin stands to wider spacings for increased residual tree vigor, reduced fuels loading, and improved habitat for wildlife. During recent AFRC field trips to look at stands following harvest on the Colville, it was often the consensus among the group that more trees should have been removed. AFRC suggests thinning the residual stand to a 40 sq.ft. basal area factor which would reduce the fuels loading, especially in the CWPP and allow for good tree vigor on the remaining trees.

The table below shows the actual targets for basal area:

Table 9. Forest Health and Wildfire Resiliency Resource Indicators and Measures for the Proposed Action for Commercial Thinning

Measure	Existing Condition	Proposed Action
Basal Area (BA)	Avg: 187 ft ² Range: 123-254 ft ²	Target Avg.: 60-80 ft ²
Trees per acre (TPA)	Avg: 197 Range: 140 – 290	Target: 40-100

AFRC does not believe the Forest is achieving the goal of promoting maximum growth and tree vigor with the targets in the proposed action. We also don't believe adequate fuels reduction and threats from wildfire will be adequately reduced a leaving this much basal area.

7. One objective of the project is to improve watershed condition class by improving aquatic and riparian habitat conditions (e.g., support native aquatic and riparian dependent plant and animal species, distribution of conditions is similar to reference condition watersheds, hydrologic connectivity, and sediment regime is within the natural range of variation). AFRC believes that it is imperative to treat overstocked Riparian Habitat Conservation Areas (RHCAs). These areas have been some of the most severely burned during the wildfires in recent years.

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 Newport/Sullivan Lake 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.

8. We continue to support the use of Designation by Prescription (DxP) for this project. At a recent purchasers meeting, Forest personnel asked if industry favors the use of DxP and the answer was overwhelmingly positive. This would be an excellent project for DXP inclusion.
9. In reviewing the Draft EA, we did not see any analysis on carbon sequestration or the impacts on the carbon cycle this Project would have. Since this has been a focus of some groups who have challenged restoration projects in the past, we suggest you add some substance to this section. Some very pertinent information is listed below.

We would like to encourage the 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 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.

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.

AFRC strongly believes that in the absence of commercial thinning, the forest where this proposed action would take place would thin naturally from mortality-inducing natural disturbances and other processes resulting in dead trees that would decay over time, emitting carbon to the atmosphere. Conversely, the wood and fiber removed from the forest in this proposed action would be transferred to the wood products sector for a variety of uses, each of which has different effects on carbon (Skog et al. 2014). Carbon can be stored in wood products for a variable length of time, depending on the commodity produced. It can also be burned to produce heat or electrical energy or converted to liquid transportation fuels and chemicals that would otherwise come from fossil fuels. In addition, a substitution effect occurs when wood products are used in place of other products that emit more GHGs in manufacturing, such as concrete and steel (Gustavsson et al. 2006, Lippke et al. 2011, and McKinley et al. 2011). In fact, removing carbon from forests for human use can result in a lower net contribution of GHGs to the atmosphere than if the forest were not managed (McKinley et al. 2011, Bergman et al. 2014, and Skog et al. 2014). The IPCC recognizes wood and fiber as a renewable resource that can provide lasting climate-related mitigation benefits that can increase over time with active management (IPCC 2000). Furthermore, by reducing stand density, the proposed action may also reduce the risk of more severe disturbances, such

as insect and disease outbreak and severe wildfires, which may result in lower forest carbon stocks and greater GHG emissions.

Thank you for the opportunity to provide Draft EA comments for the Sweet-Ione Project. I look forward to following this Project as it moves to implementation in the coming years.

Sincerely,

A handwritten signature in dark ink, appearing to read "Tom Partin". The signature is fluid and cursive, with a long horizontal stroke extending from the end.

Tom Partin
AFRC Consultant

[Redacted]
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