VIA Link: https://www.fs.usda.gov/project/?project=63102

March 28, 2024

Buddie Carroll, District Ranger
Palouse District
Nez Perce-Clearwater Forests
1700 Highway 6
Potlatch, ID 83855

Dear Buddie:

On behalf of the American Forest Resource Council (AFRC) and its members, thank you for the opportunity to comment on the Longleaf 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 Nez Perce-Clearwater 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 Longleaf Vegetation Management Project Area consists of 8,709 acres located in Clearwater and Latah Counties on the Palouse Ranger District. The project is southeast of Bovill, Idaho and lies within the Long Meadow Creek and Lower Elk Creek sub-watershed.

AFRC supports the purpose of the Project, which is intended to reduce the risk from, and extent of, insect and disease agents within the project area and to move the forest toward the desired future conditions. We also support the Need for the Project which includes:

- There is a need to address forest health issues in the area and change the forested vegetation in the Longleaf project area.
- There is a need to reduce hazardous fuels in the project area.

- There is a need to stabilize the transportation system for future management access.

While AFRC supports the Purpose and Need for the Project including the commercial harvest of 1,812 acres, we offer the following suggestions that we hope will enhance or supplement your document.

1. The existing Forest Plan gives clear direction for the management of this area. The entire Longleaf project area is within Management Area (MA), E1 – Timber Production. In this Management Area, the forest plan calls for providing optimum, sustained production of wood products. Timber production is to be cost effective and provide adequate protection of soil and water quality. The Forest Plan emphasizes restoration of western white pine within this management area.

   With this in mind, AFRC would have liked to have seen more acres treated under this Project. Currently only 21% of the project area is being commercially treated. Treating more acres makes the planning cost more efficient and would provide more timber that is needed for the local sawmill industry that depends on the timber generated from projects like Longleaf.

   The National Forests in Idaho are very important for providing the raw materials that local sawmills need to operate. The timber products provided by the Forest Service are crucial to the health of our membership. Without the raw material sold by the Forest Service these mills would be unable to produce the amount of wood products that the citizens of this country demand. Specifically, studies in Idaho have shown that 18 direct and indirect jobs are created for every one million board feet of timber harvested. Without this material, our members would 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.

2. AFRC supports the District using regeneration harvesting on 1,605 acres to treat the forest health problems in the area. The methods of regeneration harvests include clearcutting, seed-tree, and shelterwood treatments. Regeneration harvest is proposed as the most appropriate management approach to restore early seral species (western white pine, western larch, and ponderosa pine) to the landscape. We also support creating 12 openings larger than 40 acres which will require Regional Forester approval. We believe that a sustainable management paradigm must include treatments that regenerate mature forest stands in addition to intermediate thinning treatments. We encourage the Forest Service to highlight this concept in the ensuing EA to illustrate why regeneration treatments are a necessary component in the Forest's vegetation program. We are also

supportive of the treatments proposed to improve resiliency to fire, including those located in the wildland urban interface (WUI).

3. AFRC supports the Road Activities being planned in the table below with some requests for better clarification and suggestions for long-term road management goals.

Road Activity	Approximate Miles
Road Maintenance	45
Road Decommissioning (Unauthorized Route)	3.7
Road Decommissioning (NFSR)	1.7
NSFR Road Construction (Unauthorized Routes)*	1.3
Access through easements or special use authorization*	7.3
Temporary road construction (Over Unauthorized Routes)	27 (1.1)

While AFRC supports most of the road work outlined, 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 Longleaf scoping notice likely represents a ***permanent*** removal of these roads and likely the deferral of management of those forest stands that they provide access to. The land base covered in the Longleaf 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.

We would like the District to carefully consider the following three factors when deciding 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.

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 nascent 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 Longleaf 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 to have quicker and safer access to suppress any fires that are ignited.

AFRC believes that the Forest Service has often oversimplified its analysis regarding fire risk as "the likelihood, susceptibility, and intensity for wildfire and adverse effects to human values. By generating residual activity fuels, timber management activities would have the potential to add to the current fire risk if not adequately treated." Finally, it is often described that "Timber harvest prescriptions that remove greater basal area from stands leave more surface fuels. This increase in surface fuels has the potential to result in higher rates of spread and greater flame lengths in the event of a wildfire, increasing the risk to firefighters and public safety." We believe the Forest Service is conflating the terms fire "intensity" and fire "severity."

Keely, John E. 2009. Fire intensity, fire severity, and burn severity: a brief review and suggested usage. *International Journal of Wildland Fire, 18*, 116-126.

The paper cited above provides an in-depth consideration of the terms fire intensity and severity. Among other things, the author concluded that "Fire intensity is the energy output from fire and should not be used to describe fire effects. Fire severity and burn severity have been used interchangeably and operationally have generally emphasized degrees of organic matter loss or decomposition both aboveground and belowground"; and that "empirical studies have defined fire severity operationally as the loss of or change in organic matter aboveground and belowground." We understand the author to be describing fire intensity as the energy and heat output from a fire and fire severity as the degree to which fuels burn. For example, a young stand of trees may burn at a high severity but a low intensity while an 80-year-old forest stand may burn at a high intensity but moderate severity.

Given these findings, we believe the Forest Service is oversimplifying fire conditions when they claim that a regeneration harvest will "increased risk to firefighters and public safety" simply due to an increase of surface fuels that could lead to increase fire ***severity***. The Forest Service needs to recognize that when a mature forest stand is regened,

potential for high fire ***intensity*** typically decreases. This decrease in fire intensity is what poses a real threat to firefighters and public safety. Suppressing a fire in a grass field that burns at high severity is far safer for firefighters than suppressing a fire in a dense stand of 80-year-old Douglas-fir that burns at high intensity. Simply classifying high severity fire as "high fire risk" is terribly misleading and inaccurate. The Forest Service must also consider fire intensity when assessing fire risk. Doing so would clarify that while fire severity increases following regeneration harvest, fire intensity typically decreases. Such an assessment should neutralize overall fire risk.

4. As you begin to recon units and consider logging systems, we would like to remind the District that 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 Nez Perce-Clearwater National Forest 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.

   The effectiveness of harvesting and yarding low volume per acre on steep slopes is a significant obstacle to implementation. Tethered-assist logging is becoming a more economical, safe, and available method of yarding on steep slopes throughout the region. The weight displacement provided by tethering allows tracked equipment to operate on steep ground with limited soil displacement or compaction. Standard psi levels for that tracked equipment are transferred to the tethering uphill. Other Forests in the Region

have permitted this equipment to be used on Forest Service thinning stands on slopes up to 70 percent. We urge the District to consider allowing this equipment to be used where appropriate on the Longleaf Project to mitigate implementation obstacles.

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 limited operating time at best, and further reductions such as these only makes surviving in the logging business that much more difficult.

5. AFRC is pleased to see the assessment in the document on Carbon and Climate Effects. The document states *that "A complete and quantitative assessment of forest carbon stocks and the factors that influence carbon trends (management activities, disturbances, and environmental factors) for the Nez Perce – Clearwater National Forests."* We strongly believe that the minor, short-term emissions associated with timber harvest and other associated treatments are dwarfed by the long-term benefits associated with such treatments.

   We urge the District to clearly outline how the proposed treatments, while possibly emitting carbon in the near term, would ultimately benefit climate change mitigation goals by 1.) reducing the likelihood of carbon emissions through wildfire; 2.) increasing the rate of carbon sequestration by reducing competition to residual trees; and 3.) storing carbon in long lasting wood products that would otherwise be at risk of loss through wildfire. Carbon loss through high intensity wildfire has become a leading cause of our national forests transitioning from carbon sinks to carbon sources. Active management to reduce such a transition would not only reduce carbon loss but accelerate carbon sequestration. And ultimately, any timber products harvested to further these two objectives has been shown to have long lasting carbon storage potential.

   We would like Forest to consider the points below from a technical report by the Climate Change Vulnerability Assessment and Adaptation Project (SWOAP) in Southwest Oregon.

   - Wood harvested from the forest, especially timber used for durable structures, can be reservoirs of long-term carbon storage (Bergman et al. 2014).
   - Forests and their products embody a closed-loop system in which emissions associated with harvests and product use are eventually recovered as forests regrow.
   - Although products may be retired in solid waste disposal sites, they decompose quite slowly, causing carbon to continue to be stored for many decades.
   - Products derived from the harvest of timber from national forests reduce carbon emissions by substituting for more energy-intensive materials including concrete, steel, and plastics.

   Please see the graph below from the IPCC (2007) that captures the ability of forests to "stack" carbon sequestration and storage through continual harvests. **Please consider adopting this graph into the Longleaf project analysis.**

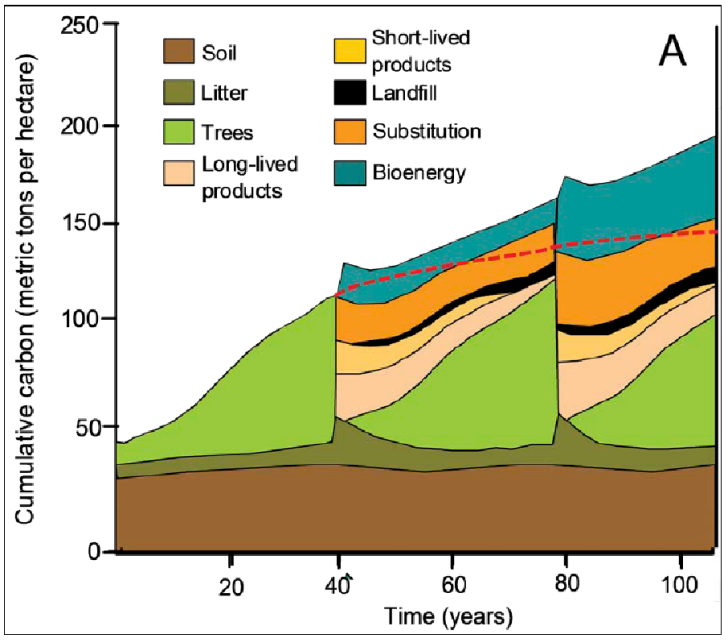

Figure 8.7—Carbon balance from a hypothetical forest management project in which the forest is harvested roughly every 40 years from land that started with low forest carbon stocks. This figure accounts for forest regrowth and carbon stored in wood products in use and landfills as well as the prevented release of fossil fuel carbon (also counted as stored carbon) via product substitution and biomass energy. It illustrates how forests can continue to accrue carbon over time with forest management. Figure is from McKinley et al. (2011) and adapted from IPCC (2007).

We believe that this graph encapsulates the forest management paradigm that would be most effective at maximizing carbon sequestration on a per-acre basis by "stacking" storage in wood products and regrowth of newly planted trees.

We appreciate that the Forest incorporated much of the literature we provided during scoping related to carbon and climate. Please consider a few additional relevant documents outlined below.

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 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 (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.

6. AFRC is pleased to see that management in the Riparian Areas is an option in the Longleaf Project. Under the action alternative, the INFISH -Amended buffer will be used which does allow activity within the riparian areas.

   AFRC would like to provide some additional information that points out that 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. 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.

   The tradeoffs that the Forest Service will likely be considering in the 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.

Dry Forests

Messier, Michael S., Shatford, Jeff P.A., and Hibbs, David E. 2011. Fire Exclusion effects on riparian forest dynamics in southwestern Oregon. *Forest Ecology and Management*. 264 (2012) 60-71.

Key points of the Messier paper include:

- Fire exclusion has altered the structure, composition, and successional trajectory of riparian forests in fire-prone landscapes.
- Fire exclusion has been associated with increase in tree density and recruitment of shade-tolerate species that may replace large diameter, more decay-resistant Douglas-fir trees.
- A hands-off management regime for these riparian forests will have ecologically undesirable consequences.

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.

Thank you for the opportunity to provide Draft EA comments for the Longleaf Project. We look forward to its implementation in the near future.

Sincerely,

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