VIA Website: https://www.fs.usda.gov/project/?project=61090

December 3, 2021

Character Fire Salvage Project
Coeur d'Alene River Ranger District
2502 East Sherman Avenue
Coeur d'Alene, ID 83814

Dear Project Leader:

On behalf of the American Forest Resource Council (AFRC) and its members, thank you for the opportunity to provide comments on the Character Fire Salvage and Restoration 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 Idaho Panhandle 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 Character Fire Complex began in Shoshone County, Idaho as two separate fires: the Prichard Fire and the Deceitful Fire (which had already incorporated the Cinnabar Creek Fire). The fires were first detected on July 7 and affected a total of approximately 12,400 acres on the Coeur d'Alene River Ranger District. Fires in the Character Complex burned with varying severity, leaving a mosaic of burn patterns that ranged from unburned timber stands, rock outcrops, and riparian areas, to areas where tree crowns were completely consumed. As is often the case with ground fires some forest stands may still appear green because the tree crowns were not burned. However, in many of those stands, the trees are now dead as their roots were damaged due to the intense heat generated by the wildfire as it consumed the extremely dry fuels on the forest floor. Adding urgency to getting these dead trees removed is the fact that most of the existing timber stands in the project area are comprised of primarily western hemlock and grand fir tree species which are easily damaged and/or killed by low to moderate severity fires

due to thin bark and shallow roots, low rates of survival are expected throughout the fire area. The Forest is looking back at the Grizzly fire which burnt in 2015 and had the same type of vegetation. They have found continued mortality from trees that had their roots scorched but were not salvaged. This would point out the need to do a heavy salvage of trees that had their roots burnt to capture the value of those trees now and remove the impending danger.

AFRC supports the three Purpose and Needs for the Project which includes:

- Recover economic value of forest products in a timely manner to contribute to employment and income in local communities and avoid loss of commodity value.
- Reduce hazards threatening human health and safety.
- Re-establish forested conditions and/or facilitate recovery to meet management objectives outlined in the Forest Plan.

While AFRC supports the Purpose and Need for the Project and the overall goals of salvage, we offer the following comments which we believe will support and enhance the Project.

1. AFRC is pleased to see the Forest recognizes that the timing of the salvage harvest, fuels reduction, and hazard tree removal is critical and should begin in the summer of 2022 and be completed within two years with tree planting continuing into the future for approximately five years. Fuels and hazard tree removal would be ongoing for approximately ten years or more. We also support the removal of dead and dying trees from approximately 3,200 acres through commercial salvage logging, all within the fire perimeter. This represents approximately 26 percent of the total fire area within the Character Complex fire perimeter.

   This timeframe should be adequate for capturing the economic value of the burnt trees and providing sawlogs (20-30 mmbf) to the local industry that depends on the Idaho Panhandle National Forest for their raw materials. The National Forests in Idaho are very important for providing the raw materials that sawmills within the State 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 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.

2. We support the Forest conducting salvage in Management Area 2b which are river segments that have been classified as eligible for "Recreation" designation under the Wild and Scenic Rivers System described in the Forest Plan. The Forest Plan states that "Timber harvest is allowed to maintain or restore the values for which the recreation river was identified. Since much of the recreational value was destroyed, timber harvest should be allowed to help restore those values.

3. The viability of a timber sale 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. Currently the Forest is planning about 20% of the area to be ground based skidded and 80% would be skidded using cable or tethered logging systems.

AFRC would like to remind the Forest that 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 Coeur d'Alene 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. 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.

4. The proposed salvage activities would result in the creation of 16 openings which would exceed 40 acres in size. AFRC supports creating these larger openings, and where natural catastrophic events such as fire, windstorms, or insect and disease attacks have occurred, the 40-acre maximum may be exceeded without 60-day public review and Regional Forester approval, provided the public is notified in the environmental analysis. With the publishing of this scoping document, AFRC believes the Forest has met the criteria for treating units over 40 acres in size.

5. AFRC further supports salvaging the 835 acres in stands or portions of stands that no longer meet old growth criteria due to excessive mortality from the fires. These stands no

longer meet the definition of old growth, as they do not contain enough live trees per acre that are both old enough and large enough, and/or do not contain enough total live basal area per acre to meet the minimum old growth criteria as defined by Green et al. (2011).

6. AFRC is pleased to see that following salvage logging and fuel reduction activities, tree planting would occur in all of the areas where salvage harvest occurs and in portions of the fire area that burned with high severity and are lacking onsite or nearby sources of western larch, ponderosa pine and/or white pine seed. Reforesting the land is important to establish new stands of timber for future generations.

7. Currently, it is estimated that approximately 10 miles of temporary road construction would be needed; however, roads in the area are still being assessed, and additional miles of temporary road construction may be identified during project development. AFRC supports the construction of those temporary roads. We also support actions that at the completion of their intended use, temporary roads would be decompacted, recontoured to the approximate shape of the surrounding terrain, and seeded or covered with debris to prevent erosion and unauthorized use, and to accelerate hydrologic and vegetative recovery.

8. **Standard utilization specifications used on green Forest Service timber sales will not likely be appropriate for the salvage sales generated from this EA**. Due to the damaged nature of the timber products being proposed for harvest, there will be an unusually high level of uncertainty by the Forest Service and prospective purchasers of the actual value of those products on the stump prior to harvest. This uncertainly is exacerbated by the fact that additional time for wood deterioration will elapse between the time of purchase and the time of harvest. Therefore, the Forest Service should be developing minimum removal requirements and utilization specifications that align with this uncertainly. Purchasers will recover as much value from these damaged products as possible. Required them to recover value that is not available will reduce the likelihood that these sales will successfully sell.

It is important that the Forest Service consider all available scientific literature related to both action and inaction following wildfire to enable the decision-maker the ability to assess the tradeoffs of a.) conducting timber salvage; and b.) not conducting timber salvage. We would like the Forest Service to review the literature cited below and incorporate its findings into your environmental analysis.

Hydrology

Cole RP, Bladon, KD, Wagenbrenner, JW, Coe Drew B.R. Hillslope sediment production after wildfire and post-fire forest management in northern California. *Hydrological Processes.* 2020;1-18

Key points/findings of the Cole paper include:

- Sediment yields two years following the fire event were highest in areas that did ***not*** include timber salvage.

- Sediment yields were lower on areas that were salvaged.
- Post-fire management resulted in lower rates of erosion and sediment delivery.

Niemeyer RJ, Bladon KD, Woodsmith, RD. Long-term hydrological recovery after wildfire and post-fire forest management in the interior Pacific Northwest. *Hydrological Processes.* 2020;1-16.

Key points/findings of the Niemeyer paper include:

- Spikes in streamflow and runoff recovered more quickly on timber salvaged areas than on areas not salvaged.
- Post fire land management strategies, including timber salvage, may have increased the rate of hydrologic recovery in the long term when compared to unmanaged areas.

Robichaud PR, Lewis SA, Brown RE, Bone ED, Brooks ES. Evaluating post-wildfire logging-slash cover treatment to reduce hillslope erosion after salvage logging using ground measurements and remote sensing. *Hydrological Processes.* 2020;1–15.

Key points/findings of the Robichaud paper include:

- Logging slash applied at a rate to achieve a mean ground cover >60% was found to be an effective treatment to reduce post-salvage runoff and soil erosion.

Reforestation

Sessions, J, Bettinger P, Buckman R, Newton M, Hamann J. Hastening the return of complex forests following fire; the consequences of delay. *Journal of Forestry.* April/May 2004, pp 38-45.

Key points/findings of the Sessions paper include:

- Timber salvage can assist in the hastening of complex mature conifer forests on burnt landscapes.
- Delays in effective timber salvage could destine much of the most intensely burned areas to cycles of shrubs, hardwoods, and recurring fires for many decades.

Hazardous Fuels

Peterson, David W, Dodson, Erich K, Harrod, Richy J. Post-fire logging reduces surface woody fuels up to four decades following wildfire. *Forest Ecology and Management.* 338 (2015) 84-91.

Key points/findings of the Peterson paper include:

- Post fire logging can significantly reduce future surface woody fuel levels in forests regenerating following wildfires.

9. Copied below is a figure that illustrates a potential failure zone for danger trees *from "A Guide to Identifying, Assessing, and Managing Hazard Trees in Developed Recreational Sites of the Northern Rocky Mountains and the Intermountain West."* This Guide should

be used for designation of danger trees following wildfire, especially along National Forest Roads.

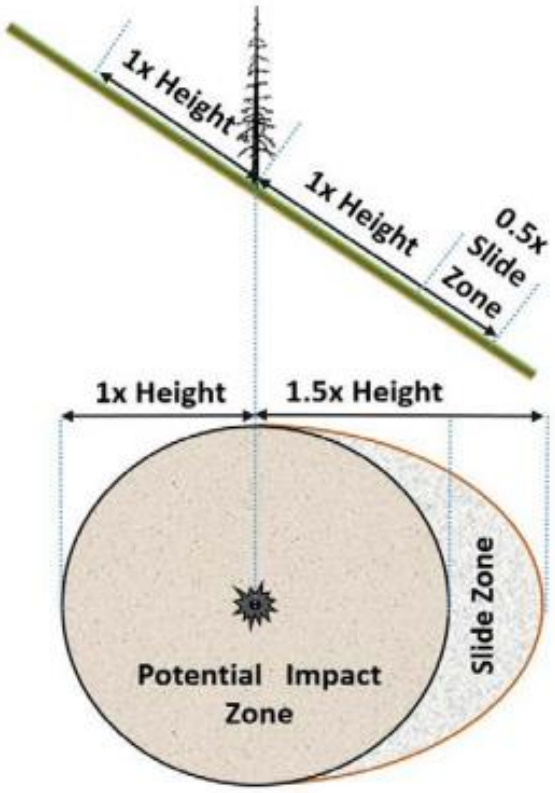

Figure 2. The Potential Impact Zone (PIZ) for a whole tree on a slope is calculated as a circle with a radius equal to the height of the tree plus a "slide zone" to account for a tree's sliding, rolling, or bouncing. Here, maximum PIZ with slide zone is shown as 1.5 times tree height, but larger or smaller slide zones may be appropriate (see text).

Adequate documentation of the Guide for Danger-Tree Identification is advisable given the ongoing challenges by special interest groups against hazard tree removal. Recent court rulings have indicated some confusion regarding the use of the Guide to identify hazard trees that have potential to impact roads. In particular, there have been questions regarding whether a specific tree poses an "imminent" hazard. Therefore, we recommend that you highlight and outline certain components of your guidelines in the final Decision-Memo/Notice including:

- Sloping ground, whole straight tree as hazard: On sloping ground, the Potential Impact Zone (PIZ) may be extended downhill from the tree to a distance (the "slide zone") the evaluator deems necessary to protect people or property from a tree sliding, rolling or bouncing if it fails (Fig. 2). The evaluator needs to use judgement and account for steepness of slope, topographic features, and neighboring trees, but the PIZ is often extended to 1.5 times tree height of the downhill side for trees on moderately steep slopes.

- Thorough explanation of tree falling dynamics on level ground, including the effects of wind events, force of breakage, and how fallen trees may impact other nearby trees (causing broken tops, etc.)
- Thorough explanation of tree falling dynamics on sloped ground, including the likelihood of downslope trees falling uphill, and upslope trees falling downhill thus needing a 11/2 tree height safety zone.
- Emphasis on how the Danger Tree Guidelines identify both the "Tree Failure Potential" and the "Potential Impact Zone." Specifically note that any given tree has a Failure Zone and describes how that failure zone is determined.

10. AFRC is concerned about the impacts dead trees that are not salvaged might have on the amount of CO2 released into the atmosphere. Little study has been done to analyze what gasses are released into the atmosphere from the dead trees left on the landscape following a major fire like the South Yaak fire.

    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 timber salvage the dead trees remaining on the landscape 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.

Thank you for the opportunity to provide comments for the Character Fire Salvage Project. I look forward to following this Project as it moves to implementation in the coming months.

Sincerely,

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