VIA: https://www.fs.usda.gov/project/?project=61355

May 6, 2023

Karen Hardwick, Project Team Leader
Nez Perce-Clearwater National Forest
1008 Highway 64
Kamiah, ID 83536

Dear Karen:

On behalf of the American Forest Resource Council (AFRC) and its members, thank you for the opportunity to comment on the Twentymile 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 Twentymile project area is located in Idaho County, in northern Idaho, approximately 16 miles southwest of Elk City, 15 miles northwest of the township of Orogrande, and 12 miles south of Newsome. The project area encompasses nearly 15,000 acres of National Forest System lands within the Red River Ranger District. The Twentymile landscape is within the 1.8 million acres that were identified on the Nez Perce-Clearwater as one of the 11 key landscapes announced as part of *Expanding Efforts to Deliver on the Wildfire Crisis Strategy* announced by Secretary of Agriculture Tom Vilsack in January 2023.

The urgency for treatment is supported by the project areas high susceptibility to crown fire due to significant hazardous fuel loads. In addition, existing forested stands within the project area are mature or overmature, making them more susceptible to insect and disease outbreaks. Insect and disease outbreaks contribute to a high rate of tree mortality, which creates considerable fuel

and increases the susceptibility of stands to catastrophic fire. The Project is being designed to restore desired stand conditions that exhibit a variety of density, age, species, and structural conditions to provide a diversity of vegetation and wildlife habitat. Additionally, there would be an increased contribution of fire-adapted species to increase stand resilience to wildfire. Proposed treatments include timber harvest on approximately 2,209 acres using ground-based and aerial-based logging systems, prescribed burning on approximately 6,807 acres, and activity fuels treatment on approximately 1,513 acres. To meet the desired future conditions, the proposed treatments would create eleven openings greater than 40 acres in size and would require approval from the Regional Forester and 60-day public notice.

AFRC supports the Purpose and Need Goals for Action which includes:

- Improve Forest Health.
- Improve project area infrastructure by changing access management to provide for a secondary means of egress for the public from the Sourdough or Tenmile Creek area in the case of a large fire and by maintaining roads for quicker ingress and egress for firefighters and the public.

AFRC also supports the Forest requesting approval from the Secretary of Agriculture to implement the Twentymile project as an Emergency Action Determination project. The project lies within one of the 250 identified High Risk Firesheds. The reason for requesting this emergency authority is to mitigate the harm to life and property adjacent to NFS land; to control insects or disease; remove hazardous fuels; and protect and restore water resources and infrastructure. AFRC understands and supports that should the Secretary of Agriculture grant an Emergency Action Determination; this project will not be subject to the pre-decisional objection review process.

While AFRC strongly supports the Project we offer the following comments that we believe may strengthen and improve the Project.

1. While AFRC is pleased to see that 2,209 acres are planned for commercial treatments, this is only 15% of the Project area. Since the Project area is in such poor forest health, we ask that Sundance Consulting Inc. reassess the area to see if more acres could be managed commercially during this entry. The project area has incidences of dwarf mistletoe and has also been infested with mountain pine beetle. In addition, the lodgepole pine stands (and many of the grand fir/mixed conifer stands) are near or at the end of their natural life cycle. Lodgepole pine, in particular, is a short-lived pine with stands beginning to decline in 80 to 100 years in northern Idaho and central Oregon. The project area has been subject to insect and disease outbreaks resulting in additional dead and down material. Lodgepole pine stands in the upper end of the Twentymile drainage has had high mortality rates and decreased canopy densities. With this type of disturbance, understory vegetation has increased in the form of ladder fuels, which contributes to hazardous fuel loads. A wildfire in the project area could expand quickly and move east toward Elk City or jump across Highway 14 and move toward Newsome town site. The current vegetation and fuel conditions limit fire suppression strategies and tactics.

Additionally, 7,704 acres or 51% of the Project area is in Management Area 12. The goals of this management area are to manage for timber production and other multiple uses on a sustained yield basis, develop equal distribution of age classes to optimize sustained timber production, manage at levels and intensities consistent with the schedules described in the plan to provide for other multiple uses and resources, and manage for road-based natural recreation. Insect and disease amounts should be minor or endemic amounts only. These stands should be actively growing at an optimal rate and not in a declining state. They are fully stocked, but not overstocked, with desirable tree species that are matched to the natural habitat types in the area.

While the Purpose and Need for the Project focuses on forest health and fuels reduction, we suggest that the Forest include another Purpose and Need to provide timber products for the local sawmills in the area that depend on sawlogs from the Nez Perce-Clearwater National Forest for their operations. 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 25 direct and indirect jobs are created for every one million board feet of timber harvested (see table 3-40 below).

Table 3-40 Economic results per million board feet of timber harvested.

Direct and Indirect Economic Impacts	Economic Results
Forest product Industry Jobs Sustained[a]	25 jobs per 1.0 MMBF[c]
Revenue to Communities Through Wages and Salaries[b]	$667,000 per 1.0 MMBF
Revenue to Communities Through Sales of Good and Services	$3,850,000 per 1.0 MMBF

a Source: University of Idaho, CNR, "Economic Contributions of Idaho's Forest Products Industry 2020."
b Source: Cook, et al. "Idaho's Forest Products Industry Current Conditions and 2016 Forecast."
c Million Board Feet (MMBF)

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. While AFRC understands and supports the need to provide a secondary means of egress for the public in case of a large fire, we also encourage the Forest Service to consider shaded fuel breaks along some of the major ingress and egress roads. These shaded fuel breaks should extend to at least 200 feet on each side of the road for not only fuel breaks, but also to improve forest health.

3. AFRC supports the creation of eleven openings greater than 40 acres in size to meet the desired future conditions. We also support the Forest requesting approval from the Regional Forester and 60-day public notice. We would like to go on notice of supporting these larger openings.

4. In a discussion of logging systems, the Forest states: "A combination of ground-based and aerial logging systems would be used with this alternative. This alternative emphasizes ground-based systems for lowest economic costs. The Proposed Action would utilize both tractor and skyline logging systems." We would like the Forest to recognize that one of the primary issues affecting the ability of our members to feasibly deliver logs to their mills is 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 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 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 feller-bunchers 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. Please prepare your NEPA analysis documents in a manner that will facilitate flexibility in the use of various types of equipment. AFRC believes that with some of the lighter touch logging methods as mentioned above, the impacts could even be less than those analyzed. Please allow ground-based equipment to operate on slopes over 45% where and when possible.

   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. The Road Management Plan calls for approximately 10 miles of temporary roads to be constructed to facilitate timber harvest. These roads would be decommissioned no later than 3 years after the date on which the project is completed. The location and length of temporary roads may vary from this description and from the Proposed Action maps, but actions would focus on using any existing templates if available.

   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 Twentymile 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 are to be decommissioned because of the high cost involved. This work could make the Project 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 Twentymile 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.

6. AFRC is concerned that the Forest will not be able to complete the 6,807 acres of prescribed burning that is being planned. First, the burns seasons have gotten shorter with extreme fire danger starting sooner in the year and lasting well into fall. The window of opportunity for this burning just isn't there. Secondly, the airshed has restrictions on when and how much fire can occur on a given day. Finally, AFRC worries about the possible mortality that could happen when a prescribed fire gets out of control. AFRC requests the Forest make some plan for potential burnt tree salvage in this Project by including some up-front analysis or programmatic plan.

7. AFRC believes that the use of Designation by Prescription might be a good option for designating the trees to be harvested and those to be retained especially in commercial thinning, seed tree, and shelterwood harvests. The goal of the Project is to remove shade tolerant species such as grand fir, western red cedar, and western hemlock and shift towards more western larch, western white pine, and ponderosa pine. Prescriptions can be written to accomplish this.

8. AFRC believes the Forest has done a good job of evaluating potential impacts to federally listed or Endangered Species and old growth. The analysis on Grizzly bear, Canada Lynx, wolverine, and white barked pine have shown not to be hindrances to management. The minimum 5% old growth and retained old growth would be maintained in each Old Growth Assessment Area. As allowed by the Forest Plan, some old growth in MA 20 may be subject to prescribed burning; however, burning would be low to moderate intensity.

9. The Forest addresses the carbon and Greenhouse Gas issue by stating: "The proposed project affects a relatively small amount of forest land and carbon on the Nez Perce-Clearwater Forest and might temporarily contribute an extremely small quantity of GHG emissions relative to national and global emissions. The proposed action will not convert forest land to other non- forest uses, thus allowing any carbon initially emitted from the proposed action to have a temporary influence on atmospheric GHG concentrations."

We would like the Forest to supplement their carbon discussion in the EA by considering 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 Twentymile project analysis.**

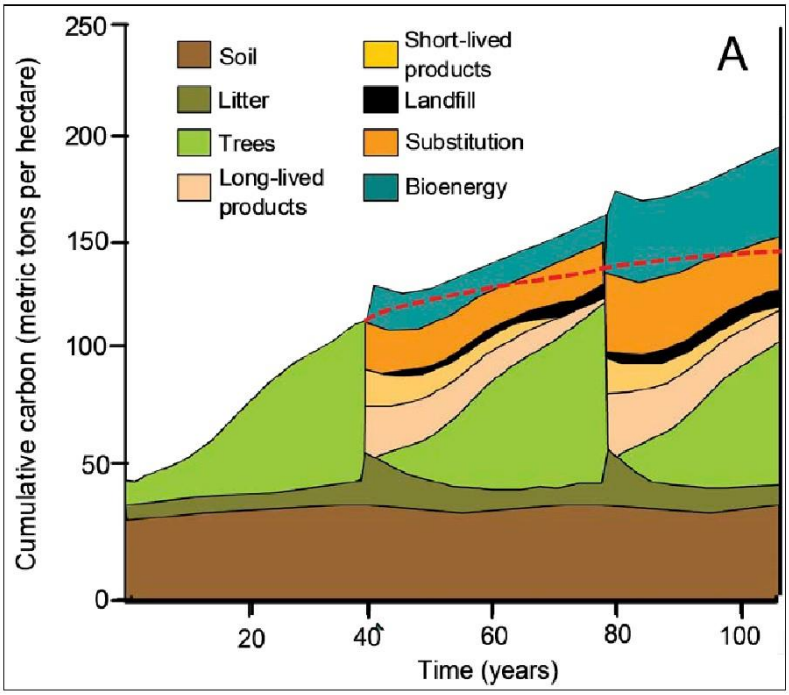

Figure 8.7—Carbon balance from a hypothetical forest management project in which the forest is harvested roughly every 40 years from land that started with low forest carbon stocks. This figure accounts for forest regrowth and carbon stored in wood products in use and landfills as well as the prevented 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 would like to encourage the Field Office 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 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.

10. Riparian systems cover approximately 141 acres of the Project area. These lands consist of floodplains of streams and the wetlands associated with springs, lakes, and ponds. Forest Plan goals are to manage riparian areas to maintain and enhance their value for wildlife, fishery and aquatic habitat, and water quality. Within the riparian areas, planned ignitions, when within prescription, will be allowed to burn to enhance resource values.

    We would like to remind the Forest 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 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.

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 scoping comments on the Twentymile Project. We look forward to its rapid implementation.

Sincerely,

Tom Partin
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