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First name: Tom
Last name: Partin
Organization:
Title:
Comments: Attached are AFRC's comments for the Twisp Draft EA. Thank you for the opportunity to comment and for all of the hard work the Forest and District has put into this Project.

Tom Partin

AFRC Consultant

[From attached document "Twisp Draft EA Comments--Final.pdf". Note that no graphics or tables from this document are included below because of the limitations of this text editor; these are available in the attachment as described below.]

December 14, 2020

Kristin Bail, Forest Supervisor C/o Eireann Pederson

24 West Chewuch Road Winthrop, Washington 98862

Dear Kristin:

On behalf of the American Forest Resource Council (AFRC) and its members, thank you for the opportunity to provide Draft EA comments on the Twisp Restoration Project (Twisp).

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 Okanogan-Wenatchee 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 Twisp Restoration Project is located in the north-central Cascades just west of the communities of Twisp and Winthrop. The analysis area covers 77,083 acres. The primary focus of the project is to restore watershed health and resiliency by returning fire to the landscape, improving wildlife habitat, and improving watershed function. This landscape needs a more proactive approach to forest management because a century of fire suppression has dramatically altered the health and natural balance of the forest. The 2018 Crescent Fire, 2015 Twisp River

Fire and 2014 Little Bridge Creek Fire are the most recent reminders that now is the time to restore a forest that meets the needs of present and future generations. Forest conditions in the Twisp Project area need proactive management to restore the landscape to a healthy and well- functioning condition that is resilient to wildfire.

The following comments are based on earlier scoping comments that AFRC submitted on December 10, 2019, as well as staff of AFRC participating in the North Central Washington Forest Health Collaborative (NCWFHC), and the Projects and Economics subcommittees of that Collaborative. AFRC applauds the Forest for taking the time to be transparent and providing clear and concise reasoning for the actions taken in this Draft EA. The District personnel especially have been very unselfish with their time and have taken extensive steps to provide solid reasoning and clarifications of their proposed actions during recent NCWHFC subcommittee meetings. Some collaborative members and partners felt the Forest fell short of providing pertinent information during project development, especially since the Covid-19 pandemic prevented group field tours of the project. AFRC does not believe this was the case, in fact the scoping document has been out for comment for over a year, with proposed actions, maps and strategies. This gave interested parties all summer to review the project area and ask questions. Also included in the Draft EA was a very good story map outlining some of the actions to be taken.

In our scoping comments AFRC went on record strongly supporting the Twisp Restoration Project and Alternative B. The history of wildfire in the area and the dense fuels found in the project area need immediate treatment to prevent further wildfire disasters from happening. There is a high risk of damage to surrounding communities, decreased forest health within the stands of timber, and watershed degradation.

AFRC also supports the Purpose and Need for this project which includes the following five major treatment emphasis areas.

* Protect and maintain high-functioning aquatic, riparian, and hydrologic resources for Threatened and Endangered aquatic species and restore areas impacted by past management. Increase watershed resiliency to existing and anticipated disturbances.
* Modify vegetation structure, composition, and patterns to develop, maintain, or restore healthy, resilient stand structures in the project area that respond to disturbances in a resilient manner and are consistent with historic and future ranges of variability.
* Protect, develop, and/or enhance late and old forest stands for wildlife species dependent on them and reduce the risk of large-scale habitat loss to fires by increasing resilience of habitats to wildfire. Maintain and enhance remaining lynx habitat to prevent further losses and keep this feature on the landscape. Protect remaining bitterbrush habitat on high-density mule deer winter range.
* Modify the structure, composition, and patterns of forest stands within and adjacent to the wildland/urban interface (WUI) to reduce fire intensity and the risk of crown fire initiation and enable the use of more direct firefighting strategies to protect life and personal property. Reduce fire intensity along major access routes and ridges within and outside of the WUI to minimize the hazards of ingress/egress and provide effective suppression anchor points that limit fire spread during wildfires.
* Provide a transportation system that is affordable, safe, and efficient for administration, public use, and protection of National Forest System (NFS) lands while also providing high quality recreation experiences and access for forest management. Reduce the risk to Forest visitors from trees categorized as [ldquo]danger trees[rdquo] along open NFS roads.

With that background AFRC would like to offer the following comments that we feel will help support and improve the Twisp Project.

1. AFRC supports the District[rsquo]s use of [ldquo]Condition Based NEPA[rdquo] when analyzing the treatment areas. During scoping the District first analyzed all of the potential needs within the project area which included

possible treatments needed on 52,205 acres of the total 77,083 acre project area. Not all of these acres will ultimately get treated, but this approach will allow a closer examination of stand conditions and needs by District staff at the time of implementation to decide on a proposed strategy. This flexibility gives the District time to assess actual ground conditions at the time of implementation rather several years prior during the initial development and scoping process. Much can change during a three-four year timeframe and this will allow District staff to better align treatments with needs. Currently the District has analyzed treating 19,575 acres commercially, possibly as much as 30,220 acres non-commercially, and generating about 107 mmbf.

2. AFRC is pleased that the District is moving away from the earlier adopted [ldquo]Wenatchee Restoration Strategy.[rdquo] This Restoration Strategy applies outdated, unrealistic and arbitrary parameters on project design features and retards effective project implementation and results. Arbitrary guidelines such as not harvesting trees over 20 inches in diameter and limiting the scope and size of projects have prevented the Okanogan-Wenatchee National Forest from taking needed management steps to reduce wildfire threats and make other necessary resource improvements. Forests are dynamic and changing, and management tools should be just as dynamic and not be stifling for needed treatments. We support harvesting trees of any size in the Matrix and LSR if doing so meets objectives and attains desired end results.

3. AFRC would have liked the Methow Valley District to recognize the importance of the wood supply to the existing logging and sawmilling infrastructure by including the provision of timber products into the Twisp Restoration project[rsquo]s purpose & need. It is important to AFRC that this provision is recognized by the Forest Service as a valued objective on Matrix land, and not simply a byproduct as it is on LSR land. AFRC believes that the Forest Service should take pride in the fact that they provide a crucial renewable resource to the public that they serve. We understand that every treatment proposed on this project will likely be designed to meet numerous objectives, but why can[rsquo]t one of those objectives, particularly on lands designated as Matrix, be the provision of timber products?

Our members depend on a predictable and economical supply of timber products from Forest Service lands to run their businesses and to provide useful wood products to the American public. This supply is important for present day needs but also important for future needs.

This future need for timber products hinges on the types of treatments implemented by the Forest Service today. Of particular importance is how those treatments effect the long-term sustainability of the timber resources on Forest Service managed land. AFRC has voiced our concerns many times regarding the long-term sustainability of the timber supply on Forest Service land and how the current management paradigm is affecting this supply. Lands designated as Matrix are the only lands where our members can depend on a sustainable supply of timber products, as timber outputs on lands designated as reserves are merely a [ldquo]byproduct.[rdquo] Studies have shown that for each million board feet harvested in Washington State an estimated 12-15 jobs are created.

4. The table below shows the possible commercial (21,985 acres) and non-commercial (30,220 acres) harvest types and acres that the District is evaluating. As mentioned above the entire 52,205 will not receive treatment. Instead, only those acres identified during final inspection by silviculturists and other specialists as needing restoration through Condition Based NEPA will be treated. [See table on pp 4 of attached document.]

It should be pointed out that not only did the District do a [ldquo]needs analysis[rdquo] (stand exams) for the project area, but the Washington DNR did a landscape analysis and Conservation Northwest hired Ecological

Forestry to do an analysis as well. While each evaluation differed on acres treated, all three studies found immediate needs for treatment to reduce wildfire risk, and improve other resources. The DNR report mirrored much of the stand exam information collected and used by the Forest to develop their treatments, and Ecological Forestry found treatments needed on 31,250 acres. These supporting evaluations should compel the District to treat a large part of the landscape to increase the pace and scale of restoration.

5. AFRC supports the criteria set forth for commercial treatments in both the Matrix and LSR portions for the Project Area.

* AFRC supports the District using shaded fuel breaks in the Matrix along selected major access routes and ridges to help reduce fire intensity and create anchor points for suppression actions. We feel the overstory thinning treatment to 600 feet in width is needed to provide needed defense for fire suppression. AFRC suggests that these shaded fuel breaks be incorporated in the regular harvest units when practical.
* AFRC also supports Matrix Regeneration harvests in areas where insect and disease and infestations has necessitated removal of the overstory and establishing new healthier stands. While the Draft EA does not identify asking for Regional Office approval if openings larger than 40 acres are created, AFRC suggests including this option should the forest health issues dictate it.
* Proposed treatments in LSR lands address several needed management objectives. LSR risk reduction thinnings will reduce the risk of habitat loss to wildfires and insect and disease outbreaks. The LSR Owl Habitat Improvement thinning prescription will help maintain and improve late-and-old multi-layer canopy habitat in the LSR for species that depend on it, including northern spotted owls, and help retain these legacy trees on the landscape by reducing competition for limited nutrients and water.

6. The project area contains 1,326 acres of old growth designated stands. The District is planning treatments in 762 acres of this old growth in a variety of land classifications in order to keep these stands healthy and resilient. AFRC supports these treatments to reduce fire risk, improve spotted owl habitat, reduce fuel loadings in the riparian reserves, and improve fire suppression effectiveness through the construction of shaded fuel breaks. The District is requesting a Forest Plan Amendment to do this work in the old growth areas and AFRC supports this request. The two Amendments would address:

* Forest-wide S&G 5-1: No scheduled or non-scheduled timber harvest or firewood collection shall be permitted in mixed conifer old growth stands [defined in final EIS, Glossary].
* Forest-wide S&G 19-8: Treatment of natural fuels shall be prohibited in identified old growth stands.

Amending S&G 5-1 would allow non-scheduled timber harvest on up to 762 acres, while amending S&G 19-1 would allow natural fuels treatments on 866 acres of FPOG.

A review of accepted science developed since the original Forest Plan has found that both mechanical thinning and prescribed fire are needed to sustain old-growth stands because these activities reduce the potential for stand-replacing fires by promoting conditions that are more likely to experience low-intensity fire, therefore maintaining and enhancing old growth forest vegetation structure and arrangement and increasing old growth ecological sustainability to disturbances such as insects and disease, wildfire, and climate change.

7. AFRC also supports appropriate silviculture treatments in LSR designated lands based on stand-specific needs. For the desired results in these stands, one NWFP S&G would be amended to permit silviculture treatments to meet habitat restoration and risk-reduction objectives in LSRs regardless of stand age:

* Silviculture (NWFP S&G, p. C-12): There is no harvest allowed in stands over 80 years old. This amendment would allow silviculture thinning treatment in stands that are over 80 years old in late-successional reserves to restore dry and moist forests for wildlife species associated with old-forest open-canopy habitat conditions, such as the white-headed woodpecker. The thinnings in stands over 80 years of age would also allow treatments in the dense understory that does not currently provide spotted owl habitat or habitat for species associated with late-successional and old forest types.

* Thinning allowed by this amendment would contribute to resiliency across the landscape by creating healthier stands that are less susceptible to insect and disease outbreaks and stand-replacing wildfire events. In addition, thinning in stands over 80 years would help promote, protect, and maintain late successional habitat across the planning area. The planning rule substantive provisions applicable to the purpose of this amendment include:
*
* 36 CFR 219.10(a) Integrated resource management for multiple use: (1) [[hellip]], fish and wildlife species, [[hellip]], habitat and habitat connectivity, [[hellip]]. This provision relates to the purpose of this amendment because harvest in stands over 80 years is intended to maintain and improve wildlife habitat and habitat connectivity for species that use this type of habitat
* 36 CFR 219.11(c) Timber harvest for purposes other than timber production. This provision is related to the purpose this amendment because timber harvest is proposed to maintain vegetation structure and composition, not for timber production.

AFRC supports amending the S&G to allow harvest in stands over 80 years of age in the LSR areas for the reasons stated above, and for also reducing fuels across the project area. Using age as a metric to inform the management needs of any given stand is fundamentally flawed. The practice of using age, or any arbitrary metric, to determine management decisions is grounded in the assumption that all stands of any given age are structurally identical. Practicing land managers know that this assumption is erroneous, and we applaud the proposal to amend its use. Amending NWFP S&G p. C-12 would allow for harvest up to 3,912 acres in stands over 80 years old. This amendment would affect the Late Successional Reserves in the western part of the project area in the lower Twisp River drainage, and in the northwestern part of the project area in the Wolf Creek drainage. Treatments allowed by this amendment would also likely have a beneficial effect on the same substantive provisions because they would promote a more characteristic, low to moderate-severity fire behavior in LSRs that would in turn minimize the risks of wide-scale, high-severity fire that would likely adversely impact recreation opportunities such as hiking, horseback riding, camping, and other activities.

8. Another goal of this project is to protect, develop, and/or enhance late and old forest stands for wildlife dependent species and reduce the risk of large-scale habitat loss to fires by increasing resilience of habitats to wildfire. AFRC believes that part of the solution for this is to enhance the early seral species needed to support big game species such as deer and elk. Studies have found that forage is more important to big game species during the winter months than is cover. To accomplish this, areas of overstory removal or wide thinnings may be necessary to provide sunlight to establish certain grass and forbe species needed by these species. Overstory removal of conifers will also enhance the growth of bitterbrush which is so important in the winter range areas.

Further, AFRC supports Amending two Standard & Guidelines for the deer winter range as the table below suggests: [See graphic on p 7 of attached document.]

Thinning and prescribed fire treatments would have a long-term, moderate benefit to mule deer winter habitat because proposed thinning and prescribed fire treatments would increase the quality and quantity of forage areas

and the increased resilience of forested cover stands to disturbances such as wildfire.

9. Another Need of the Twisp Restoration Project is [ldquo]to modify the structure, composition, and patterns of forest stands within and adjacent to the wildland/urban interface (WUI) to reduce fire intensity and the risk of crown fire initiation and enable the use of more direct firefighting strategies to protect life and personal property. Reduce fire intensity along major access routes and ridges within and outside of the WUI to minimize the hazards of ingress/egress and provide effective suppression anchor points that limit fire spread during wildfires.[rdquo] AFRC suggests thinning to wide spacings in the WUI to 40 sq. ft. of residual basal area. This will not only reduce fuels and facilitate safe and effective fire suppression, but it will help restore the vigor of the remaining trees.

Further, as stated above, AFRC is a strong advocate of shaded fuel breaks. This could be a valuable tool along roads that provide ingress and egress to the private lands and structures within the project WUI areas. AFRC and our members, along with several members of the NCWFHC, visited the shaded fuels breaks implemented during the Wolverine Fire of 2015. This area is now included in the Upper Wenatchee Pilot Project. The group had strong support for the shaded fuel breaks and thought it was a tool that could be used across the Forest.

10. The project area includes 18,254 acres, (76%) in the Sawtooth Inventoried Roadless Area (IRA). The District is planning on performing overstory thinning on 721 acres and understory thinning using the stand improvement thin prescription on 3,282 acres of this IRA. AFRC supports these treatments as regular maintenance to keep the forests in these areas healthy and to reduce the fire risk. The District has provided sound rationale for actively managing in these IRA[rsquo]s and clearly articulated the resource values that will be enhanced.

11. AFRC supports a proposed Forest Plan Amendment that will allow for snowplowing up to 14.4 miles of a designated snowmobile route in the Twisp River drainage to provide access during winter harvest treatments.

* Forest-wide S&G 17-8: The following roads shall not be snowplowed or open to motorized wheeled traffic from December 1 to April 1 in the same year (if one is open or plowed, then the other will not be):

o Road 44 plus Road 4440 from War Creek to Roads End [north side of Twisp River, 11.7 miles] or Road 4435 plus Road 4430 plus Road 4420 through Section 18, T33N, R20E [south side of Twisp River, 14.4 miles].

This S&G allows for plowing one of the listed set of roads in any winter. At most, amending this S&G would allow for plowing up to 14.4 miles on the south side of Twisp River during the same winter that the roads on the north side were already plowed. This is needed to get sawlogs removed during the required winter logging conditions also listed in the Contract.

12. AFRC comments on each project to remind the District that the primary issues affecting the ability of our members to feasibly deliver logs to their mills are firm operating restrictions. This issue is often addressed in the Economic Subcommittee group as well. 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[rsquo]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 Okanogan-Wenatchee 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. AFRC is pleased to see that the District has allowed ground based equipment on slopes up to 45%. We also appreciate the District[rsquo]s economic analysis regarding volumes per acre. [ldquo]Units thinned with ground- based harvest systems would generally need to provide at least four thousand board feet (MBF) per acre from trees from 7-30[rdquo] dbh to be commercially viable; 6 MBF per acre for cable/tethered logging systems; and 8-10 MBF for harvest operations using helicopters.[rdquo]

13. In our scoping comments we noted that one of the Forest[rsquo]s needs is high-functioning aquatic, riparian, and hydrologic resources. We also noted that it has been well documented that thinning in riparian areas accelerates the stand[rsquo]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 Methow Valley 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:

[bull] The amount of canopy cover retained in the riparian buffer was not a strong explanatory variable to stream temperature.

[bull] 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:

[bull] 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 75:547558.

Key points of the Warren paper include:

[bull] Canopy gaps were particularly important in creating variable light within and between reaches.

[bull] 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:

[bull] 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.

[bull] 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:

[bull] 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 [ldquo]protective[rdquo] 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.

The links to the studies mentioned above are listed below for reference.

Janisch paper on stream temps: https://www.sciencedirect.com/science/article/abs/pii/S037811271100782

Dana Warren paper on light into the stream beds: https://www.researchgate.net/publication/311850456_Long-term_effects_of_riparian_forest_harvest_on_light_in_Pacific_Northwest_USA_st reams

Julie Burton Paper on headwater widths and wood recruitment: https://www.semanticscholar.org/paper/Effects-of-riparian-buffer-width-onwood-loading-in-Burton-Olson/13c41421e2b6bf5eca847c4fb557235f3411127f

Edward Rashin article on Effectiveness of timber harvest practices for controlling sediment related water quality impacts: https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1752-1688.2006.tb05303.x

14. In addition to the information promoting management in the riparian zones, AFRC would like to comment on the Aquatic Habitat Enhancement treatments proposed in this project that include placing an estimated 6,000 pieces of large woody debris > 6-inches diameter in stream channels. AFRC recognizes that this work is critical for the aquatic resources, but we are concerned on the cost of placement. Currently the Draft EA states: [ldquo]Some materials would come from felling trees directly into streams as described under the [ldquo]Aquatic Restoration Thin[rdquo] prescription. Other woody material would come from the [ldquo]Tree Tipping[rdquo] areas proposed in this project. Most of this material would be brought in from off-forest and stockpiled at specified areas, then transferred to stream reaches via helicopter to create accumulations of 2-40 logs, including engineered log jams (ELJs) that would be placed where mobile wood poses a conceivable risk to downstream values.[rdquo]

AFRC[rsquo]s concern is the cost of helicopter flying a good portion of the wood for placement. We feel that as much wood as possible should come from directly felling trees into the aquatic area. In looking at the economic analysis, the project is only positive by $545,454 and this is not a large amount for restoration work including placement by helicopter.

15. The project is undertaking an aggressive approach for dealing with unwanted and unneeded roads. The goal

is to improve the aquatics, reduce siltation and access to wildlife winter range among other resource benefits. A total 84.6 miles of roads are being proposed for decommissioning, including approximately 41.4 miles (49%) of NFS system roads and 42.9 miles (51%) of unauthorized roads. Additionally, roads would be decommissioned to trails for non-motorized recreation use or decommissioned to stock driveways to allow for stock access as part of administering range permits.

While we understand the need to do this work, AFRC would like to address a couple of key points.

1. We would like the Forest to analyze and maintain adequate access for future management opportunities and needs within the Matrix lands. We do not support the decommissioning of roads due to short term management implications. Matrix lands are lands set aside for long-term forest management and having long term access is a necessity.
2. 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[rsquo]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 quickly and directly attack nascent fires. 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 Twisp 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 making a decision 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.

16. AFRC appreciates the thorough economic analysis. Table 20 below illustrates that the project can be implemented with a positive Net Value. These numbers are based on commercial thinning treatments on 19,575 acres and producing an estimated 107 mmbf of timber. [See table on page 13 of attached document.]

AFRC would like to caution the District that the Net Value is less than 10% of the value received for potential stumpage. The District should be very vigilant in maintaining or even improving these net proceeds. We understand that multiple parties have been involved in the project development and would like to see possible retained receipts or K- V funds be put back into other resouce improvements. Those restoration dollars can be

enhanced with higher bid preminum from the timber.

Total stumpage bid prices can be increased by offeringmore volume, marking higher quality trees for harvest, removing more volume per acre, and laying out units to support lower logging prices and minimize other costs. AFRC feels this is a great opportunity to get as many resource improvments made while making needed forest health treatments.

17. The District has done a very good job of analyzing the impacts of treatments on spotted owls. The proposed actions in Alternative 2 would have a mixed, long-term moderate effect on northern spotted owl habitat. The proposed activities would not disturb any known nesting pairs of northern spotted owls. Surveys conducted according to protocol (USFWS 2012) in 2019 and 2020 resulted in no detections of northern spotted owls in or near the project area. Spot check surveys would continue near suitable nesting stands until project implementation is complete, though it is unlikely that there is currently enough nesting/roosting/foraging habitat in the project area to support a nesting pair of northern spotted owls.

The analysis shows that if spotted owls were present, the proposed thinnings would result in the short term reduction of nesting roosting, and foraging habitat. However, the thinnings will expedite tree growth to a larger size that might make the area more suitable for spotted owl habitation in the future.

18. We would like to encourage the District to consider a newly published document that considers the long-term impacts of forest thinning and forest restoration on carbon sequestration.

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 comparted 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.

Thank you for the opportunity to provide Draft EA comments on the Twisp Project. I look forward to this project being implemented.

Sincerely,

Tom Partin AFRC Consultant

921 SW Cheltenham Street

Portland, Oregon 97239