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Re.: Comments on draft Environmental Assessment for the Twisp Restoration Project #56554  
SENT VIA EMAIL

December 18, 2020

Dear Supervisor Bail:

On behalf of Conservation Northwest, please accept these comments on the draft Environmental Assessment (EA) for the Twisp Restoration Project. Conservation Northwest has a 30-year history of successfully leveraging funding and public support to protect, connect, and restore habitat and wildlife in the Pacific Northwest. We support efforts across the Okanogan-Wenatchee National Forest that restore forest and watershed resiliency where lacking, and ecological processes that maintain quality fish and wildlife habitat.

Our success is owed in large part to our commitment to collaboratively work with managers, scientists, user groups, industry, recreationalists and other stakeholders to develop and implement durable restoration plans and projects; this includes our service on several forest health collaborative groups across the state. In this regard, we were very disappointed to see the district abandon the model of early and often collaboration and community engagement that was so successful in the Mission Restoration Project and Mt Hull Restoration Project. Only in an open and transparent process can honest and critical questions be raised and resources harnessed to better inform the analysis and build understanding. We recommend the district return to the model of early and often collaboration and engagement, including through the additional environmental review and modifications to the Twisp Restoration Project.

Thank you for extending the comment period for the Twisp Restoration Project. With a project area that is over 77,000 acres in size; a time horizon of 30 years; the need for 5 Forest Plan amendments; proposed tree cutting in special areas such as: Riparian Reserves, Late-Successional Reserves, Inventoried Roadless Areas, and Forest Plan Old Growth; and a condition based approach that is not site specific, there was a lot to evaluate. Admittedly, the scale and scope of this project with the uncertainties involved strongly suggests an EIS might be necessary.

Your staff has been very helpful in answering many of our questions and providing GIS data to help with our understanding during the comment period. We have also provided your staff with recent updated landscape assessment information (post Crescent wildfire) completed by our consultant Sean Jeronimo and hope it will be useful in making changes between the draft and final EA. We also encourage incorporation of the recent Washington Department of Natural Resources landscape assessment information for this same area as well.

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Overall, Conservation Northwest supports scientifically-rigorous efforts that protect, connect and restore habitats key to our unique wildlife across the landscape and at the forest stand level. We have been supporters of the Okanogan Wenatchee Restoration Strategy and while the scale of the propose action appears appropriate, we had difficulty finding clear links between the results of the landscape evaluations, the proposed actions, and the effects analysis. This leaves many questions and uncertainty about why certain restoration actions are needed and how or whether the proposed action will result in improved conditions. We'd like to work with you towards this end.

In addition, on-the-ground experience has shown topographic position (such as lower gradient valley bottoms) and aspect are significant factors in determining stand composition and capacity within the project area. However, the proposed treatments and prescriptions do not appear to take these factors into account. Instead, the prescriptions are general in nature and use trees per acre ranges without reference to basal area objectives based on site productivity for the various conditions that exist within the project area. This broad brush approach in the EA, particularly for condition-based management, does not provide sufficient information to evaluate direct, indirect, and cumulative effects, or for a "hard look" under NEPA.

We will try to address our comments by the needs identified for the project. They are: 1) Hydrologic Function; 2) Vegetation composition and structure; 3) Wildlife Habitat; 4) Access and Wildfire Hazard in the Wildland Urban Interface; 5) Roads and Trails.

**Hydrologic Function:** We incorporate by reference the points raised in the North Central Washington Forest Health Collaborative (NCWFHC) letter with respect to aquatics. In addition, specific to riparian reserves and locally sourced large wood for aquatic restoration, we have the following comments. The stated objective within riparian reserves (RR) is to diversify tree species composition and forest structure in the RR but it is not clear what the current condition is and how it is departed from the desired condition based on landscape and stand level metrics. The analysis needs an indicator for riparian condition to show how treatments are restoring diversity and structure in RR. It is important to establish whether and why riparian treatments are needed at all, including specifically why treatments are needed to meet Aquatic Conservation Strategy objectives. This is particularly the case in low gradient valley bottom areas where fires tend to be less frequent and stand replacing when they occur.

While under the heading of vegetation treatments, these treatments should be under the heading of Aquatic Habitat Enhancement since that is the only reason to consider activities within the RR. Locally sourced large wood from areas such as landings and new and temporary road construction areas is desirable. However, the current proposal to acquire them from Forest Plan Old Growth (FPOG), Late-Successional Reserves (LSR), and areas (identified by the DNR modeling) that can sustain large dense multistoried forest is not ecologically defensible based on current landscape metrics for old forests and large and old trees, and should not occur.

**Vegetation Composition and Structure:** In the Purpose and Need section, an overall purpose for the project should include the need to develop more resilient landscapes and sustainable habitat conditions. In addition, the current stated need of: “A higher percentage of densely stocked stands with multiple canopy layers or closed canopies in the dry forest type, with a high proportion of young shade-tolerant tree species such as Douglas- fir and subalpine fir” is overly broad. This need varies considerably depending on the subwatershed and should be more clearly described by subwatershed, forest type, and reference condition, in order to evaluate environmental effects and outcomes. As currently presented, there is not a clear link between what the landscape evaluation results show is in need of restoration, the actions being proposed to restore the landscape, and how the restoration actions will improve landscape and habitat resiliency.

The landscape evaluation is a diagnostic tool that allows managers to assess current ecosystem conditions by identifying the primary departures from historic reference conditions (HRV) and potential future conditions (FRV). Using the landscape evaluation metrics to quantify the ecological need and the land allocations to inform where within the reference conditions to manage for the desired conditions is a primary function of the landscape evaluation (as detailed in the Forest Restoration Strategy). For example, in Dry Forest and in the LSR spotted owl habitat could be managed towards the upper end of the HRV/FRV range while Dry Forest in the Matrix and WUI could be managed using the full HRV/FRV range. However, this type of discussion is absent in the draft EA, but is needed to ensure restoration, resiliency and sustainability and other desired outcomes.

Our specific concerns under this heading include the redefinition of large and very large trees from the restoration strategy. In Appendix A of the Twisp Restoration Project (TRP), It states: “In this project, “small” trees are defined as < 15.9” dbh, “medium” trees are 16” - 24.9” dbh, and “large” trees are ≥ 25” dbh. These definitions are based on the tree size classes identified in the Ecosystem Management Decision Support (EMDS) landscape analysis completed for this project (Downing 2019).” This makes it sound as though these were outputs from the EMDS analysis specific to the TRP when they are PI protocols used for EMDS modeling for Twisp and other landscape analyses. Using PI protocols rather than stand exam data for the project area for tree class parameters is flawed. There is no scientific or policy basis for re-defining large trees, in conflict with Restoration Strategy, especially given their scarcity in the region. The analysis should return to size diameters consistent with large and very large trees identified in the Restoration Strategy for >20” and >25” respectively.

This also has bearing on what is considered a small tree in inventoried roadless areas. The current 15” definition for a small tree exceeds the intent of the Roadless Rule and the analysis fails to provide site specific stand exam data to justify the need to exceed the more common 7-10” DBH size class for small trees. It is important to ensure the proposal aligns with the Roadless Rule.

In addition all old trees greater than 150 years and defined by old tree characteristics by species should be retained on site, including within aspen stands. This old and large tree component has been identified as departed from comparable historic and desired future ranges and is one of the structural components which takes the longest time to return to the landscape. Because large and old trees take the longest time to produce on the landscape, cutting large fire resistant large trees like Ponderosa pine and Douglas-fir should be limited and the exception rather than the rule. Specific rationale for their remove should be provided.

Dwarf mistletoe is ubiquitous within the project area and is best managed at the stand and landscape level rather than individual tree level. It is unclear why the DMR  $\leq 2$  was selected since this is a relatively light infection level. While growth and yield begins to be affected at this infection level, tree survival is not. Several prescriptions call for removing large trees when infected with dwarf mistletoe (DMT) with a Hawksworth rating 2 or higher. DMT can form structures important for wildlife and is rarely a serious forest health concern outside of its negative impact on timber grade and volume growth. The relative ecological value of maintaining large-tree structure (20-30+” dbh) is very high compared to sanitizing stands of DMT in their small-tree component. DMT should be a stand-level, not a tree-level, management consideration: amelioration efforts should be made when it is clear that DMT is negatively impacting or will negatively impact the stand’s health and ecological functioning. Removing canopy trees with mistletoe from reserves is not warranted.

While strategically placed commercial fire salvage can reduce fuel loading and fire hazard, the ecological need and fire risk reduction associated with the proposed commercial firewood salvage has not been demonstrated. The limited additional commercial firewood that would be made available is not worth the environmental cost of damage to post fire impacted soils and the abundant regeneration that has established from local site-adapted seed sources since the fire. Loss of the established Douglas-fir and Ponderosa pine regeneration during logging operations cannot be easily replaced by planting. Commercial firewood permits also have limited contractual controls which are critical for minimizing damage to regeneration and soils. The fuel loads from tree breakage, tops, limbs, and non-preferred firewood species that will be left on site could actually increase fire hazard. Salvage logging activities should be removed from the proposal.

In this dry landscape, areas that can sustainably support large dense multistoried stands are limited and should be managed to promote this structural class into the future. Rather than thin or harvest these areas, emphasis should be given to treat around them to reduce the risk to these stands. DNR has produced a modeling tool that identifies these areas and it seems to correlate well with existing FPOG, RR, and LSR. Some site specific adjustments may be necessary, but in general, thinning in these areas should be removed from the proposal and emphasis given to treating the areas around them.

With respect to the proposed Forest Plan amendment related to LSR harvest in stands greater than 80 years, consider adding the following wording: “In dry and mesic forests east of the Cascade Range in Washington, fire exclusion and past timber harvest have dramatically altered the tree species composition and forest structure compared to the historical conditions found in these forests. As a result, many of these stands, include an understory of trees that are

generally 70-90 years old with a remnant overstory of older trees that were not harvested in previous logging operations. Many of these stands average over 80 years of age, but do not contain old growth characteristics, such as large old trees and large snags. In many cases, the trees that are 70-90 years old are densely populated, suppressed, small in size (4-8 inches in diameter), and growing in difficult site conditions. These stands are highly susceptible to forest insects, diseases, and high severity fires. Treatments in these stands are generally focused on reducing the density of the smaller trees, maintaining the largest trees, and reducing fuels to restore native fire regimes. When stands such as these are left untreated and there is a wildfire, these stands tend to burn at high severity and all age classes are often killed, including the large trees, resulting in a stand replacement fire, and these large trees can take centuries to replace.”

When phasing treatments, consider treating the Little Bridge/Thompson Ridge/Wolf Creek area first. The only municipal watershed is at risk in this area and the Pine Forest subdivision has been working to make their homes fire safe. This area also appears to have the greatest landscape departures as well. Recent thinning around the communication site at McClure and on private timberlands may reduce the urgency in treating the Lower Twisp/Alder Creek area.

The condition-based approach is by nature not site specific and therefore requires a higher degree of definition for monitoring to be successful. Adaptive management is also an important component so lessons learned can be incorporated in future actions. The current proposal takes a broad brush in identifying the conditions for treatment and do not take into consideration or identify the sub-watershed (spatial) objectives, monitoring metrics, feedback loops for adaptive management, or variations due to aspect and geographic position. Within the TRP area, the stand characteristics and ability to support certain stand densities between dry north aspects (often dominated by Douglas-fir) and dry south aspects (more open and dominated by Ponderosa pine) is significant and stand objectives and prescriptions should reflect this variation.

Finally, the parameters for when ground-based logging would be used over cable logging is unclear because the slopes where tethered logging could be allowed has some overlap with cable logging. The effects from the two logging systems are different and how they were accounted for in the effects analysis is unclear. Placing timber volume minimums for commercial treatments in the EA also seems out of place given the uncertainties of the timber market and new technologies. We recommend removing minimum timber volume/acre as a criteria. Helicopter logging does not appear economical from the economic analysis presented in the EA and supporting documents. Similar to other economically infeasible systems such as balloon logging, helicopter logging should be removed from consideration.

**Wildlife Habitat:** The draft EA states: “Existing limited stands of LOS (Late and Old forest Structure) are vulnerable to an increased likelihood of uncharacteristically severe wildfire behavior.” This need varies considerably depending on the forest type, subwatershed, and type of old forest. This could be more clearly articulated by describing different “old forest” habitats in relation to their reference conditions (see Table 1 below). The need to reduce the risk of uncharacteristic fire needs to be addressed within the landscape context and not at the individual stand level. The best option in LOS in many cases may be to treat around rather than within the stands. This discussion is lacking within the wildlife and fire section.

Table 1. Key Findings for Wildlife Habitats relative to reference conditions from the Landscape Evaluations

12 Code HUC	Open Canopy-Older Forest (Whiteheaded Woodpecker)	Closed Canopy-Older Forest (Spotted Owl)
Upper Twisp River	Habitats within reference conditions (HRV/FRV)	Habitats in reference conditions (HRV/FRV)
Middle Twisp	Habitat amount near reference conditions (FRV)	Habitat above reference conditions (HRV/FRV), Reduce habitat amounts to more sustainable levels, create fewer but larger patches in most sustainable locations
Lower Twisp River	Habitat lower end of reference conditions (FRV), considerable increase habitat amounts and create larger patches	Habitat amounts at high end of reference conditions (HRV/FRV), reduce to more sustainable levels, retain in the most sustainable locations
Little Bridge Creek	Habitat within reference conditions (HRV/FRV)	Habitat within reference conditions (HRV/FRV), retain in most sustainable locations

It is unclear what the objective of the LSR Owl Habitat thin treatment is and how it aligns with Late-Successional Reserve management directives. The need to treat owl habitat varies considerably by subwatershed. In some cases it could be reduced to more sustainable levels (e.g., Middle Twisp River) while in other situations it could be increased (e.g., Little Bridge Creek). In the LSR, owl habitat could be managed at the upper end of the reference conditions to meet the emphasis of this land allocation. Also, wildlife species that rely on other types of old forest (e.g., white-headed woodpecker) should be specifically addressed in the proposed action, again by forest type and subwatershed where the landscape evaluation shows the greatest need (e.g., Lower Twisp River). A better integration between the vegetation treatment and wildlife habitat treatments would create a more integrated proposal. The primary emphasis of the restoration in the LSR should be about wildlife habitat, specifically old forest habitats. Thus these treatments should go under the Wildlife Habitat Enhancement heading. An amendment to the NWFP to allow firewood cutting is not warranted.

The wildlife indicators appear appropriate. We suggest for some species, relate how treatments move habitat towards or within reference conditions (e.g., white-headed woodpecker, spotted owls, marten) as a means of addressing habitat sustainability. This type of clarity helps us understand the need for treatment better.

**Access and Wildfire Hazard in the Wildland Urban Interface (WUI):** This is a complex and emotional issue and one that should be considered at the landscape level. As fires such as Crescent, Little Bridge, and Twisp River have move the landscape toward more natural conditions, the access and wildfire hazards should change as well. For instance, the Upper Twisp sub-watershed has recently burned in the Crescent fire and the unburned sections are in wilderness and drier south aspects where canopy closure and density are much more open due to moisture limiting conditions. Consequently, given the existing condition and the values at risk, the possible need for fuelbreaks and access is less than the Lower Twisp and Little Bridge sub-watersheds which are in the WUI. However, the proposed treatments do not appear to reflect this. In fact, updated mortality maps indicate many of the proposed treatments within the Crescent fire footprint are unnecessary due to mortality with stand initiation conditions. We understand this will be corrected between draft and final and use this example to illustrate the need to tailor the needs at a sub-watershed scale rather than a one size-fits-all approach.

The intent behind landscape treatments is that post restoration, fires will burn more characteristically and the need for shaded fuelbreaks becomes mostly unnecessary. There are large acreages proposed for stand improvement and understory re-initiation that is not associated with addressing any landscape departures but appear to address surface fuel loading and ladder fuels. If these are fire hazard reduction treatments, they should be stated as such and emphasis given to treatments in the WUI and adjacent to LOS. Given the health concerns associated with smoke from prescribed fire and the large acreages identified for treatment, options for removing some of the smaller diameter trees for biochar and biomass should be considered where feasible.

Many of the shaded fuelbreaks are within existing units identified for thinning and prescribed fire. The extra reduction in canopy closure associated with the fuelbreak prescription is not warranted in the LSR. Even within Matrix, shaded fuelbreaks within treated areas do not seem warranted and are contrary to restoration objectives. There may be justification to connect treatment areas with shaded fuelbreaks but the analysis is insufficient to make that determination. It should be noted that risk and hazard are not synonymous and that while hazard is an easier metric to measure, often times risk or the likelihood of a catastrophic fire occurring within a certain period is more germane. In general, the analysis fails to provide a compelling need for the shaded fuelbreaks, especially in the Upper Twisp sub-watershed.

We support the use of broad area landscape burns and their effect on changing the stand structure on steep ground should be estimated and disclosed. The acreages proposed are ambitious given recent accomplishments. Consequently, some method of prioritization should be included. In addition, the proposed dozer lines to facilitate landscape burns lack requirements to protect large and old trees and should contain better clarity on how long they will be left prior to rehabilitation.

**Roads and Trails:** We are concerned about the proposed temporary road construction within the Inventoried Roadless Area. This appears outside the intent of the Roadless Rule. We applaud the decommissioning of roads that are no longer necessary for the management of the forest and contributing sediment to streams that host listed fish species. Because new roads lead to off road vehicle use on skid trails and avoidance behavior by some wildlife species, we believe closing all new roads following post-harvest activities is desirable, and proposals for new road miles should be scaled back as much as possible, with many more unauthorized roads decommissioned.

While the trail proposal seems to address some resource damage concerns, the ATV decision seems to be outside the scope of a restoration project and it may be better to make a stand-alone decision on ATV use following a mixed-use analysis which is currently lacking. The paved/durable surface section of the Twisp River road also sees some very high speeds and safety is a concern as well as off-road damage to the environment. Remove new ATV routes from the proposal.

To maintain the winter recreational use, restricting haul to one side of the drainage at a time may resolve this concern raised by the public.

Thank you for the opportunity to comment on this draft Environmental Assessment and for your consideration of our comments and suggestions. We look forward to engaging with the district between the draft and final EA to address these concerns.

Sincerely,

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