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Comments: November 9, 2023 Joe Rausch, District Ranger Cle Elum Ranger District, Okanogan-Wenatchee National Forest 803 W 2nd St, Cle Elum, WA 98922 Re.: Notice of Proposed Action re: Upper Swauk Restoration Project Dear Ranger Rausch, On behalf of Conservation Northwest (CNW), please accept these comments on the Upper Swauk Restoration Project Notice of Proposed Action. We write in support of the proposed action's intent to reduce the risk of forest loss to severe wildfire, restore late seral habitats for threatened and endangered species, and the integration of aquatic restoration while addressing recreation needs. Thank you for this integrated resource restoration effort. In these comments we share some concerns about heavy thinning impacts, offer questions for consideration, and suggestions that may better protect, connect, and restore habitat for wildlife and ecosystem resilience in the Upper Swauk project area. 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 represent over 17,000 members and supporters dedicated to conservation and recovery action in our state. Our success is owed in large part to our practical allegiance to science and policy, and commitment to collaboratively work with managers, scientists, user groups, industry and other stakeholders to develop and implement durable restoration plans and projects; this includes our service on several forest collaborative groups across the state. We support efforts on the Okanogan-Wenatchee National Forest (OWNF) to restore ecological resiliency, watershed function and habitat conditions for wildlife populations at landscape scales. We also recognize the value of tribal and public access for cultural and recreational opportunities, and the importance of providing jobs and associated economic benefits to communities. We care deeply about this landscape, its vast wild places, connected habitat, and wildlife and human populations that it sustains.

OPPORTUNITY TO COMMENT While we appreciate that issues raised in response to the Notice of Proposed Action "will be considered and addressed in the EA" (NOPA p.12), the NOPA itself has substantially less detail than an Environmental Assessment making it difficult or impossible for interested stakeholders to adequately assess cumulative effects. For example, the cumulative watershed effects evaluation regarding sediment delivery, streamflow, and water temperature is still underway (NOPA p. 54). Northern Spotted Owl habitat types and territorial circles were not identified in the NOPA maps. Ongoing data collection, analysis, and USFWS/NFMS consultation increases the likelihood that there will be substantive new information to comment on. For these reasons, we believe another comment period is necessary after the draft EA is completed.

LANDSCAPE PRESCRIPTION The 2020 DNR Upper Swauk Planning Area Landscape Evaluation Summary suggests a treatment goal of 14,000-22,000 acres.¹ When combined, the NOPA treatment objectives - 7,879 acres non-commercial + 9,023 acres commercial (both with prescribed fire) + 8,584 acres prescribed fire only + 6,913 acres shaded fuel breaks (1000ft wide x 57 miles long) - equate to 32,399 treatment acres. While we recognize that not all 32,399 acres will end up being treated, we would be remiss if we didn't note that potential treatment acres in the NOPA far exceed that which the landscape analysis suggests would move the project area toward a more resilient state (14,000-22,000 acres), especially with the potential loss of thousands of acres of denser LSR habitat through heavy thinning/regeneration cuts, and shaded fuel breaks. Also of note, Sec. 40806 of the Infrastructure Investments and Jobs and Act states that "treatments of vegetation in linear fuel breaks covered by the categorical exclusion[hellip] may not contain treatment units in excess of 3,000 acres."² If the project area is a treatment unit, it will need to greatly reduce the acreage (width and/or miles) of prescribed shaded fuel break. We recognize that the western portion of the project area represents some of the highest fire risk in eastern Washington (DNR Landscape Evaluation). We also note that this forest has valuable wildlife habitat that many eastern Washington forests do not have, i.e. some of the drainages receive more rainfall than many eastside forests and are quite productive. There are limited eastern Washington landscapes where old, denser, wildlife-friendly forests can grow relatively well, and we want to protect and promote these climate and fire refugia wherever possible. We have great concern regarding a "free thinning" method of tree harvest, particularly if units will not be marked by Forest Service staff in advance (the NOPA does not indicate how sales will be prepared). A machine operator - who has limited view from the cab - should not be "free thinning"

according to unit prescription (designation by prescription). Thinning from below ("low thinning") mimics "the effect of natural mortality... [caused by] low to moderate severity fire while reducing ladder fuel" (NOPA p. 14), and will effectively reduce fire risk while achieving old tree, spatial pattern, and species objectives. "Crown thinning" and "free thinning" are overly focused on the elimination of "undesirable" trees and forest characteristics that we think are, in fact, desirable. For example, large diseased trees with mistletoe or forked tops and dense understory should still exist throughout the landscape, adding heterogeneity at sparser intervals. We greatly value the use of prescribed fire within this project in thinned and un-thinned stands and suggest that, in consultation with the USFWS, prescribed burning may take the place of certain thinning treatments that are under consideration within the project area, particularly in units near NSO circles (the EA should include a map of NSO habitat types and territorial circles).

TREATMENT OBJECTIVES AND THINNING TREATMENTS Overall, the treatment objectives read as overly sanitizing, i.e. clearing out everything that is undesirable within the project area (dense stands, "unhealthy" trees identified by insect and disease damage, and moist-forest species). However, many of these "undesirable" characteristics are features that benefit wildlife, and contribute to landscape heterogeneity and, therefore, resilience. The NOPA seems to recognize this: "Trees with mistletoe, deformed living trees, and pockets of deciduous trees and shrubs contribute to fine scale diversity and provide important habitat structure for wildlife. Wherever feasible these features would be retained with an emphasis on the inner portions of RRs. Retention of snags and down wood would be emphasized to meet or exceed required levels for Late Successional and RRs (Swauk Pine Restoration Project Final EA 201; Table 7)" (NOPA p. 18). However, as we query below, the treatment prescriptions themselves paint a different picture (NOPA p. 14-22).

Non-commercial thinning of trees between 11" - (presumably) 25" dbh (in Maintenance units) where shade tolerant species act as ladder fuel, in management-created openings, or in areas with insect or disease damage, including standing dead and dying trees. This prescription leaves large snags and potential snags (damaged trees) vulnerable to cutting, regardless of the Wenatchee National Forest LSRA required levels of snag and down wood retention. The NOPA recognizes snags and down wood will be negatively affected by the project treatments and by cumulative impacts such as danger tree mitigation along highway 97. Research suggests a good snag target of >5 snags (of the largest diameter class available)/acre to maintain nesting persistence by white-headed woodpeckers.³ When spatial heterogeneity of large trees is scarce, we recommend providing for spatial heterogeneity by retaining certain intermediate-sized trees and patches of smaller understory trees.

Non-commercial and dry-forest commercial TPA as low as 10, and canopy cover as low as 10%. If 17 TPA equates to 50ft x 50ft spacing between trees, we would suggest that 10 TPA is a regenerative harvest, and not a "thinning" treatment. Furthermore, the NOPA expects additional post-harvest mortality (2-3 TPA) with the application of prescribed fire (p. 24). The decrease of trees in these openings due to windthrow is also of concern. The few trees remaining in a stand would be considered legacy trees and barely what we would like to see left as snags/wildlife trees. We would suggest that harvest could be more aggressive (30-45 TPA) in some older stands, but non-commercial thinning (10-18" dbh) should be leaving 30-70 TPA on dry sites, and 40-80 TPA on moist sites. As written, the NOPA does not speak to the need for more early seral habitat on the landscape, and we're concerned that regenerative harvest in the uplands will remove too much wildlife habitat, especially for sensitive species such as White-headed woodpecker where research suggests a mean tree density of nest stands at 74 TPA with 80% of stands having a live tree density of at least 50 TPA.⁴ The project uses heavy thinning to mimic historic, fire-maintained, ponderosa pine forest density. However, trees at lower densities (25-35 trees/acre) were much larger historically (>20" dbh) compared to those of today that range from 12-15" dbh. Thus, to a White-headed woodpecker those are not equivalent and today they would need more trees per acre post-harvest in order to meet their foraging needs because they primarily forage on live trees throughout the year. To "restore the amount and patch size of open-canopy old forest habitat for white-headed woodpecker" (NOPA p. 10), a better TPA target when tree diameters are small (e.g., <18" dbh) would be 50-60 trees/acre and retention trees should be of the largest diameter class available.⁵

10% canopy cover is non-habitat for late seral species. The 2011 NSO Revised Recovery Plan defines dispersal habitat as forest stands with average tree diameters >11" dbh and conifer overstory trees with closed canopies (>40% canopy closure in moist forests and >30% in dry forests) (p. G-1). The Forest Service standard range-wide definition of dispersal habitat for NSO is 40-59% canopy cover (amongst other metrics).⁶ We are concerned that canopy cover as low as 10% across upwards of 8,000 acres of Dry Dense Forest type (DNR Landscape

Evaluation) would result in an over-abundance of non-habitat for late seral species, which would also create connectivity challenges as these species move throughout the landscape. There is a better balance to be found between reducing fire risk and maintaining LSR - so much has burned already, the remaining late seral habitat needs to be managed conservatively and with some risk tolerance. The NOPA would benefit from linking its commercial and non-commercial prescriptions to specific focal species and to findings from terrestrial and aquatic landscape evaluations. For example, what is the size, number, and location of NSO habitat patches? In the future, we can expect fewer, increasingly fragmented small patches of NSO habitat to persist on the landscape, and the diversity of those patch types (patch richness) to decrease over time. How do the treatment prescriptions (patch size and spatial patterning) account for these expected changes to NSO habitat connectivity? How will the non-commercial and commercial treatment prescriptions in the NOPA better connect NSO dispersal and NRF (nesting, roosting, foraging) habitat? It is difficult to determine effects on focal species without more detailed prescriptions, especially regarding patch size and spatial patterning. The DNR Landscape Evaluation suggests that "when consistent with the Northwest Forest Plan, lighter, variable density thinning in mid-sized stands can accelerate habitat development." In the moist-cold forest type, med-large dense structure class should remain at nearly 50% of the post-treatment proportions "to meet habitat, wood production, and other objectives." To promote NSO recovery and the sustainability of other late seral species, it is imperative that we maintain large, dense forest structure on this landscape. As recommended by the DNR Landscape Evaluation, we trust that the large dense forest sustainability layer was used to help select treatment locations - sustainable locations for closed-canopy wildlife include the eastern end of the planning area, central portion north-facing slopes, and northeastern valley bottom areas - but without NSO maps in the NOPA, it is difficult to comment on potential effects. Complex patches retained primarily within inner Riparian Reserves only, upper slopes to be left more open. [bull] There is little guidance re: complex patches other than, historically, they existed in "localized areas" and, post-treatment, they will be retained at 10% in units on lower slopes and primarily in inner Riparian Reserves. It seems unlikely that complex patches only or primarily occurred in the inner portions of RR, historically, and we would encourage a prescription that ensures a greater proportion of complex patches occurring in a mosaic pattern across the landscape. [bull] To restore in-stand spatial patterns, more guidance on complex patch size and location, and how this desired spacing will be accomplished is needed. This will also help daylight needed connectivity outcomes. Commercial removal of all grand fir and lodgepole pine, regardless of size (and, presumably, age). [bull] The DNR Landscape Evaluation notes that moist forests "historically had mixed-severity fires every 30-100 years... were composed of fire-resistant (western larch, and Douglas-fir) and fire-intolerant (grand fir) trees." We are concerned that the wholesale removal of grand fir and lodgepole pine in all forest types will decrease forest heterogeneity and, therefore, wildlife habitat for a variety of species and their prey such as northern goshawk, pileated woodpecker, flying squirrel, and snowshoe hare. These soft-wood tree species provide nesting and foraging habitat, rot, and needed forest decadence. Furthermore, eastern Washington forests are deficient in large trees >20" dbh and while a large grand fir may not be preferable, it is a good place-hold while more fire-tolerant species come back online. Lodgepole pine is likely to have always persisted in cool, dry locations on the landscape and there should be some places where they continue to persist; even a few dog-hair tree thickets can provide unique cover habitat for wildlife. Commercial removal of encroaching conifers <25" dbh within 30' of a 25" ponderosa pine, western larch, or Douglas-fir tree. [bull] If a 24" dbh Douglas-fir tree exists 15' from a 25" dbh ponderosa pine, will it be removed? How close do trees need to be to be considered a clump and retained as such? Large, and especially large and old trees, often grow up with roots and canopies acclimated to the close proximity of their neighboring tree, and large and old trees (like Douglas-fir) have thick, fire resilient bark along with self-masting lower branches to limit risk to nearby ponderosa pines. Large, old trees have an outsized ecological role to play in long-term forest health (i.e. carbon sequestration, hydrologic redistribution, wildlife habitat, mycorrhizal importance, etc.), exist in low quantities on the OWNF, and take a long time to grow. Their preservation on the landscape is critically important. Commercial openings or canopy gaps in dry and moist forest types up to 2 acres in size to address severe mistletoe infestations and insect damage. [bull] Given the expected cumulative loss of snags throughout the project area over the next several years and their importance for a multitude of species in this region, we are concerned about prescriptions that effectively sanitize damaged trees and pockets of mortality. We'd like to see some of these features maintained in stands to increase landscape heterogeneity and note that mistletoe can be pruned to

avoid the take of these trees. If a mistletoe infestation is severe, we recommend killing and retaining the large diameter infected trees (>20" dbh) to increase snag levels.[bull]The EA would benefit from explaining how canopy gap sizes were chosen in the different forest types. Most of the project area exists in the Cold and Early Forest Snow Class where the relative snow storage duration ranges from 1 day longer in the forest to an average of 10 days longer in the open. In these places, relative snow storage magnitude is larger in canopy openings, but duration can switch from longer in openings to longer under forest cover. Additionally, the secondary influence of clear skies in these regions during the melting season enhances the importance of canopy shading.7[bull]To restore in-stand spatial patterns, as with patch sizes, more guidance on canopy gap location and how desired spacing will be accomplished is needed.Fifty-seven miles of 1000 ft wide shaded fuel breaks, with no tree size or age limit, equates to 6,913 project acres thinned to 10-30% canopy cover (40-60% in Riparian Reserves).[bull]This represents a significant loss of large trees, snags, and late seral habitat within the project area. Inside the WUI, <60% canopy cover in Riparian Reserves degrades the health and function of these fish bearing streams.[bull]Fuel breaks do not match the intent of mimicking natural disturbance on the landscape. Ecologically, they create unnatural linear features across the landscape that can impact wildlife movement patterns and create edge effect and modify the presence and abundance of certain wildlife species.8 The changing climate is creating drier fuels and longer fire seasons. This increases the potential for extreme fire behavior where embers can travel long distances during high fire growth periods and render shaded fuel breaks ineffective at stopping or slowing fire spread. Shaded fuel breaks can also have the opposite effect as intended by acting as "wicks" for fire spread, if not maintained routinely to remove ingrowth.9 Additionally, current research suggests that shaded fuel breaks along ridgetops might not be as effective as previously thought.10 Compared to ecologically-based landscape level thinning and prescribed burning treatments, which strategically reduce surface and ladder fuels and create gaps and openings within forested stands at a broad scale, shaded fuel breaks have limited effect on reducing fire severity or spread. One of the main intentions of shaded fuel breaks is to provide control and anchor points for the management of wildfire. However, the best anchor and control points are where thinning and prescribed burning have been completed and where maintenance burning is performed.11 The broad scale of landscape treatments provides additional options for firefighters instead of constraining them to a predetermined location that may not be the most beneficial for the current weather and fire activity.[bull]As noted earlier, Sec. 40806 of the Infrastructure Investments and Jobs and Act states that "treatments of vegetation in linear fuel breaks covered by the categorical exclusion[hellip] may not contain treatment units in excess of 3,000 acres."12 If the project area is a "treatment unit," it will need to greatly reduce the acreage (width and/or miles) of prescribed shaded fuel break. When considering the extensive thinning and prescribed burn treatments proposed in this project and recent nearby fire footprints, we support smaller-width fuel breaks around WUI areas only. We also suggest retaining large disease/deformed trees within these fuels breaks since, by nature, these are heavier thinned areas with less spread of disease.RELATED TO RIPARIAN AND AQUATIC RESTORATIONWe appreciate the equipment restrictions within Riparian Reserves, the maintenance of canopy cover at or greater than 60%, the retention of large trees, deciduous trees and shrubs, snags and logs >20" dbh, and the extensive Project Design Criteria related to water quality, hydrology and fisheries. WQ9 (NOPA p. 88) needs clarification re: drivable equipment in non-commercial Riparian Reserve units.The NOPA states that "in intermittent streams, or streams where it is not practical or is cost-prohibitive to utilize trees harvested from RRs for aquatic restoration activities, the adjacent inner RRs will be assessed for large wood, and if necessary, hand falling will be prescribed to add large and coarse wood to stream channels and floodplains" (p. 25), but struggle to reconcile this with the NWFP which states under the Riparian Reserves section "Do not use mitigation or planned restoration as a substitute for preventing habitat degradation" (NWFP C-37). Harvest in Riparian Reserves is only acceptable if the treatment is needed to attain Aquatic Conservation Strategy objectives (NWFP C-32). A properly functioning Riparian Reserve that provides adequate shade, large woody debris recruitment, habitat connectivity, and refugia for aquatic species will be at least 80% intact (NMFS and USFWS Matrices). Riparian vegetation is also key to maintaining atmospheric humidity which is a limiting factor for Douglas-fir health.13 Trees can only be taken from Riparian Reserves and relocated for in-stream needs elsewhere when ACS objectives are achieved in the harvested Riparian Reserve. In other words, the health of the Riparian Reserve takes precedence over the need for in-stream wood which can be sourced from locations outside Riparian Reserves, including landings, trees taken for hazard mitigation, etc. We also want to

emphasize that the intensity of rootwad harvest (preferred for instream work) must remain low to keep detrimental soil disturbance below 20% in an activity area (NOPA p. 37). We appreciate the 43 fish passage barriers identified and prioritized for improvement within the project area. We also appreciate the 35 miles of system and user-created roads identified for decommissioning, and the 18.3 miles identified for storage (ML2 to ML1) and believe this will benefit aquatic health and increase terrestrial security habitat. However, high road densities in proximity to stream channels will remain, causing sediment delivery to streams, and ongoing cumulative effects (project treatment activities, mining activities, sheep grazing, and annual road work) will continue to compete with meaningful improvements (NOPA p. 61-62). To help compensate for ongoing aquatic impacts, in consultation with local user groups, we would advocate for additional road decommissioning and closures (some seasonal).

MONITORING Nothing is said about monitoring in the NOPA. The EA would benefit from the inclusion or summation of implementation, effectiveness, and validation monitoring recommendations from each specialist. While a more detailed monitoring plan could be drafted collaboratively, the EA would benefit by having a monitoring section that includes:

- what are you already planning to do
- what else needs to be done and how it might be prioritized
- where the gaps are in capacity and funding
- which monitoring activities the ID Team will be a part of
- how the sale administrator will be involved in monitoring activities

We are excited to see more forest health work being completed in the Swauk watershed. The right treatments in the right locations will more quickly restore the ecological processes necessary for long-term resilience, better preparing these forests to withstand the impacts of climate change and future fire events. Thank you for considering our comments as you draft the EA.

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