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Organization:
Title:
Comments: Mid-Swan Project

Dear Mr. Krueger,

I've attached my comments for the Mid-Swan Project DEIS below. Please let me know if you have any follow up questions or thoughts, and thank you for the consideration.

Dear Mr. Krueger,

Thank you for the opportunity to comment on this Project. As a citizen living and working in the Swan Valley, my health is linked to the health of this land, and I appreciate the chance to share my praises, concerns, and questions with the project's general approach and specific treatments. I do not support Alternative B, and I am leaning towards support for Alternative C, pending extensive modifications. My general comments speak to issues in both alternatives, and my site-specific comments speak primarily to Alternative C. All comments are my own and do not reflect the views of any organization or collaborative I am a part of.

General Comments

1. Skepticism over the project scope and plan of execution (including Public Comment timeline).

I totally agree that large-scale landscapes are worth conserving and coherently managing, but the temporal and spatial control authorized in this project remains overwhelming. So much could change over the course of 15 years that a single NEPA document cannot foresee, and it seems contrary to adaptive management to preempt those possibilities by endorsing such an omnibus suite of management objectives. I am concerned that generalities will overshadow details, including the grounding definition for biodiversity, which is not only about "the variety and variability of native plants and animals" (p. 5) but also the variety of life across the genetic, species, and ecosystem scales, and the processes, functions, and structures required for that life to thrive. While this DEIS has made great improvements in the synthesis and presentation of its work since the Scoping Period, I remain concerned that the extent and number of project deliverables will lead to confounding on-the-ground impacts that lack nuance, collaboration, and care.

The timing and timeline of the Comment Period does not seem commensurate with the immensity of work proposed, and I am also concerned that the distractions posed by the Covid-19 pandemic and this incredibly divisive election season will diminish the quality and quantity of comments that could help this work to succeed.

Please note these overarching concerns are not a reflection of the Mid-Swan Project Team or Swan Lake Ranger District in particular, but a reflection of the instability we face in the current political situation and a rapidly changing climate.

2. Deep concern over road issues.

Roads are the most compounding, comprehensive threat to the Mid-Swan landscape, and the ecological cost of new road construction is contrary to the professed goals for biodiversity in this project. No amount of forest management in the name biodiversity will compensate for the harm that its new roads cause.

As I was during Scoping, I remain opposed to new road construction (permanent or temporary), and this is the

primary reason why I find the additions in Alternative B to be unacceptable. In rejecting the alternative of no road additions, the DEIS suggests that "without additional access, the project would not be able to meet its purpose and need" (p. 87). This statement is baffling. If this project was truly serious about restoring and maintaining biodiversity, I would expect to read about how we can bring the existing road network to an absolute minimum and cease considerations of new construction in our over-roaded landscape. I do support stormproofing and the removal of all human-caused fish passage barriers, but decommissioning a road is not valid rationale for building a new one, and the many "connector" roads proposed are likely to increase motorized abuse of our landscape. The existing road network in the Swan Valley is enormous, and there are already problems with unenforced, illegal trespassing. Snowmobiles and ATVs have detrimental impacts on wildlife disturbance, and there are many other threats roads pose, including but not limited to: invasive plant enhancement, poaching, sedimentation, soil compaction, fire risk, etc. There is only one road proposed road in this entire project that could be valid: #185 on Map B-16, whose context and contingencies I discuss at length in Site-Specific Comment #2. Other than this very minor possible exception, I urge the project to prioritize all opportunities to reduce the existing road network, and refuse to consider new construction.

3. Concern over the scope and pace of forest management, in general.

I am very concerned with the possibility of landscape homogenization and overharvest in the name of an idealized fire-adapted forest community. The language of "replacing" or "converting" one forest community to an entirely different one seems impractical at best, ecologically detrimental at worst. I also do not endorse the project-specific amendments to the Forest Plan for management in lynx habitat outside the WUI, where fire (not mechanized treatment) is needed to create the mosaic of habitat that lynx require. I fear there are many top-down pressures from the Trump administration that are intensifying mechanized commercial "fuels reduction" in the guise of fire adaptation, but the best available science increasingly shows that this view is short-sighted and wrong. Wildfire was, is, and always will be the chief architect of our resilient forest, and stewardship around human infrastructure with smarter/reduced private land development in the Wildland Urban Interface are the keys to safeguard human lives and livelihoods.

Despite the rejection on p. 88, I ardently believe that prescribed fire should be prioritized over mechanical and commercial treatments. Prescribed fire should be far more influential in the forest management of Alternative C, especially through broadcast or small pile burning to reduce unnatural soil/microclimate sterilization. Simply put, commercial, mechanized forestry on public land will not be leading solution for fire resiliency or enhanced biodiversity, and I am disappointed that there is not more acknowledgement of this fact in this DEIS, both in theory and practice. For one of many sources I'd recommend in this regard, see:

Bradley, C.M, C.T. Hanson, and D.A. DellaSala. 2016. Does increased forest protection correspond to higher fire severity in frequent-fire forests of the western United States? Ecosphere. https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/ecs2.1492

4. Concern over the scope and pace of forest management, in the riparian management zones (RMZ), and especially in riparian corridors designated for Wild & Scenic protections.

One of the primary reasons that I object to Alternative B is its intensified activities in the RMZ. I do not have confidence in the need for, or validity of, commercial, heavy-equipment-based forestry activities in the RMZ, and I definitely do not support any RMZ management activities in river corridors eligible for Wild & Scenic protections. I support Alternative C's deferral, though I am concerned with the intensification of the RMZ roads that Alternative C still includes.

I do admit that fire may offer some benefits in the outer RMZ, but this remains a contentious practice without widely accepted and locally adapted evidence. If the project wants to prove the efficacy of RMZ management, I encourage it to work in the outer RMZ, with only prescribed burning, and only as a small-scale experimental

analysis. Conducting these experimental RMZ burns in sites with differing fire regimes might enhance understanding of this treatment in the Mid-Swan. This experimental RMZ work would ideally be conducted early in the project, allowing for extensive monitoring across the project's 15 years to gauge impacts.

Also, please do not underestimate how successful beaver recovery can advance goals for a more resilient RMZ. Just as the Crazy Horse Fire of 2003 (just south of the Mid-Swan Landscape) proved how beaver habitat can provide wet refugia with a mosaic of burning impacts, research is now showing that beavers are a key ally maintaining diverse riparian health in fire-adapted landscapes - and they do it for free, without the added consequences of roads, soil compaction, sedimentation, etc. that anthropogenic riparian forestry would deliver. I like the acknowledgement on pg. 185 that, although 1,280acres are proposed for beaver restoration, the benefits of their presence could extend beyond our intent: "Since these beavers [ie. those restored through complementary project pursuits] would self-restore this habitat, the Forest Service would have little control over the spatial rate and location of these changes." This type of self-sustaining, process-based natural solution is exactly what we should champion in the RMZs, and I advise this recent paper as a guiding resource:

Fairfax, E. and A. Whittle. 2020. Smokey the Beaver: beaver-dammed riparian corridors stay green during wildfire throughout the western USA. Ecological Applications. https://esajournals.onlinelibrary.wiley.com/doi/abs/10.1002/eap.2225

Wheaton, J. 2020. Examples of LTPBR for Post-Fire Recovery. Utah State University Restoration Consortium. https://lowtechpbr.restoration.usu.edu/resources/casestudies/firecasestudies.html#toc-post-fire-ltpbr-case-studies

5. Concern over the scope and pace of forest management, in designated wilderness (DW), recommended wilderness (RW), inventoried roadless areas (IRA).

I was surprised to find increased treatments of all kinds in IRAs, RW, and DW in this DEIS. I believe RW and IRAs should be managed in the same manner as DW, which makes the methods and extent of treatments proposed in Alternative B unacceptable. I definitely do not support mechanized and motorized transport via helicopter for any of these classifications.

I am concerned with and uncommitted to prescribed fire (by hand or aerial ignition) and whitebark pine plantings in DWs, RW, and IRA chiefly because I value wilderness as one of the world's few places where we can learn from nature with deliberate efforts to diminish human control. While I do not want to see the untrammeled value of these landscapes compromised, I do recognize that trammeling inherent in fire suppression and climate change, and I am gravely concerned with natural ecosystems processes in wilderness, as well as with planetary biodiversity loss of species such as whitebark pine.

Due to the lack of applied evidence on whitebark pine restoration and prescribed burning in the Mid-Swan area, extensive monitoring to ground-truth the actual status of modeled tree communities is essential. At that point I propose prioritization of whitebark pine and fire restoration practices outside DW, RW, and IRAs, but close to the whitebark communities that are determined in greatest need, so that nearby Clark's Nutcrackers and fires spreading upslope from below can naturally expand whitebark potential in DW, RW, and IRAs without direct human manipulation. I would support a prescribed fire ignited outside IRAs, RW, and DW and allowed to burn within these protected areas, and I believe some of the more northerly whitebark pine restoration sites this DEIS has identified offer compelling places to start (ie. those Woodward, Soup, NF Lost and South Fork Lost on Map B-57). By using ground-ignited prescribed fire and direct planting from locally-sourced whitebarks, this will provide a productive simulation impacts on wilderness condition. This might help determine to what extent future (non-Mid-Swan) projects involving whitebark pine plantings or prescribed burns in DW, RW, or IRAs could offer benefits to the natural qualities of wilderness that are worth the costs to the untrammeled qualities. I also propose increased planning and allowance for the reversal of wildlife suppression policies, so that when the right time comes, lightning ignitions can restore wilderness areas (See Question #2 below).

6. Concern over the scope and pace of forest management, in old-growth settings. I endorse Alternative C's refusal to meddle with old growth habitat, and I am very discouraged to find the notion in Alternative B that old-growth alteration would be considered prior to on-the-ground awareness and mapping of habitat extent. The microclimates, thermal refugia, and moisture gradients that old-growth habitats provide are poorly understood, and I don't think it's right to assume that we can "protect" these rare communities by pruning away the very wildness that makes them so diverse and distinct. Forest types do not create old forest structure in equal ways, and I would like to see more nuance between management strategies that reflect the differences across natural communities (ie. How could old growth larch trees be managed differently from an old growth cedar grove?) No matter what, I do not support the 0.8 miles of roads through stands with old forest structure that is proposed for Alternative C on p. 114.

7. Strong support for proposed activities in beaver restoration. I applaud all intentions described on p.70, though I would advise against calling it "artificial" beaver habitat, which may convey the wrong message. Given the BDAs' most important potential role - to be a short-lived enticement for natural beaver populations to expand, which is accurately described here - I might say "Building Starter Beaver Habitat" or "Mimicking Beaver Activity." I also applaud the efforts to avoid heavy machinery and road building in all aspects of the proposed beaver restoration activities.

In the Implementation Guide (IG) on pg. A-12, I would add surveys and/or monitoring of existing beaver populations as part of the "information needed to refine the project." This can help to evaluate where BDAs will have their greatest impact, and learning from beaver dispersals will be a valuable, necessary contribution to the project. Also, as efforts are made to gauge "suitable distance from private land or forest culverts," please actively reach out to the landowners in question - private land supports some excellent beaver habitat in the Mid-Swan landscape, and alerting residents of the beneficial roles of beaver activity and restoration should be an important educational outcome of this effort. Some landowners might even be willing to help beaver expand onto their properties, offering a refuge from public lands trapping. In considering the planting of aspen, cottonwood, and willow, please also note that some experimental research in how to cope with areas heavily infested by reed canary grass may be necessary for success.

I wholly endorse AQ25 in the IG, and in regards to its implied concerns for bull trout (and in AQ22), I urge the implementation team to stay in touch with Lisa Eby (Professor of Aquatic Ecology, University of Montana) and her doctoral candidate Andrew Lahr, who are in the midst of important work looking at that impacts of beavers and BDAs on native trout in western Montana (potentially completed within the next 3-5 years). There is existing research that affirms how beavers have supported diverse salmonids for millennia, but this emerging study will provide relevant, updated context addressing local concerns. And to that end, when considering sites for BDA installation, I would advise against categorical exclusion of bull trout or westslope cutthroat trout streams, especially in historic beaver strongholds such as those found throughout the Cold Creek drainage.

In addition to following general guidance from the Beaver Restoration Guidebook, another important resource available is the Low-Tech Process-Based Restoration of Riverscapes Design Manual, available for free download at: http://lowtechpbr.restoration.usu.edu/ I recommend you seek consultation or directly contract Amy Chadwick (Senior Ecologist, Great West Engineering) for design and/or installation guidance, as she is Montana's leading BDA practitioner with years of valuable experience. Building BDAs is also a human-scale, achievable, and empowering restoration technique, so please also consider soliciting community support and working with Swan Valley Connections as you implement this practice.

I would also suggest collaboration with Montana Fish, Wildlife & Parks' (FWP) Nongame Wildlife Biologist Torrey Ritter (Region 2) to explore the possibility for beaver trapping closures in BDA project sites. I strongly believe this policy would help to incentivize natural recolonization and, as part of monitoring efforts, help to gauge project impacts. Torrey should also be consulted if the project does seek to relocate live beavers as a

complementary effort.

8. Support for DEIS commitments to monitoring and citizen-science contributions.

I am pleased by the opportunities described for collaborative monitoring and citizen-science described in the IG. It is absolutely essential to ground-truth all models used for prescriptions in this project, as well as to conduct robust consultations with stakeholders and experts, especially where the resource objectives transcend boundaries. The USFS' Citizen Science Competitive Funding Program will provide ideal scaffolding for this approach. Please do be aware, however, that such collaborative programming requires time, skill, and energy as well as funds, and that it would be advisable to dedicate qualified staff within the Swan Lake Ranger District who can fully support such coordination.

Site-Specific Comments

Map Note: The small numbering and layering of dashed lines on bright colors is sometimes confusing. If I am focusing chiefly on Alternative C due to my rejection of Alternative B, but if I have neglected to comment on a new road addition, please assume that I am not in support of that road.

1. Map B-4. Given the incredible shortness of length, what treatment could be so important for a new road to be built (#186) in Alternative C, to an existing decommissioned road? I do not agree with this placement, and I hope it is eliminated from consideration. (Map B-4)

2. Map B-16. I support decommissioning roads wherever possible, but I give particular endorsement to the decommission of the road through Condon Botanical Area (S18) and those in S11, S13, and S19. I completely disagree with the need for the new connector road proposed (#153) between the roads in S18 and S19. These sections support high quality wildlife habitat dense with wetlands and low-gradient streams, and the costs of new roads here outweigh the non-existent benefits of forest management along the north road through S19. The extension of new road (#151) between S18 and S13 should also be removed for similar reasons. Farther north on this map, the proposed new road construction (#165 and 167) is directly adjacent to Alder Creek. These roads are not worth the detrimental riparian impacts that will result.

I would like to see a closer inset of the plan in the southeast corner of S11, where it appears there is some road construction (#185) to compensate for the decommissioned spur road that currently accesses private property. This is the only new road in the entire project that could be worth considering, largely because the existing network is causing chronic, severe losses to functional, diverse wetland and riparian habitat. This is admittedly an agonizingly difficult situation, and though I fully endorse the decommission proposed, I need more exact assurance that the new spur road will not cause more harm than good. I believe the best outcome for this situation would be for the Forest Service to purchase the inholding (which is currently for sale) so that no landowner access necessitates further roading in this sensitive wetland area. Please take this suggestion seriously, either as a direct buyer or receiving land manager from a willing land trust or other conservation partner, because that isolated inholding seriously deserves cohesive protection with adjacent lands in perpetuity, which would provide enormous significance complementing beaver restoration goals.

3. Map B-11 and B-12. If I am reading the map correctly, the new roads proposed in Alternative B for S5 and S6 are appalling. The Jim Creek drainage is an important bull trout stream that was only recently removed from the DEQ list of Impaired Streams, and there is some profound old growth* western red cedar habitat in these areas. In either alternative, I am especially concerned with any further road intensification in this particular area, and the entire Jim and Cold Creek watersheds of the Mid-Swan landscape.

4. Map B-19. Elk Creek is the most vital bull trout watershed in the Mid-Swan landscape, and the small roads proposed (#98, #96, #157, #169) have no place in this landscape. Their adjacency to tributaries is problematic,

and I hope they are removed from consideration.

5. Map B-32. In S7, if the decommission proposed occurs, how will the new road proposed (#182) be accessed? It seems to cut perpendicular to the existing road, which seems like a prescription to maximize harm to this landscape.

Questions

1. Regarding the Public Engagement Opportunities (2.1) described in A-3 and A-4 of the IG, how will the public be assured that their comments are heard and addressed throughout the entirety of the project? If "it will be considered informal in that there are no regulations requiring comment during Mid-Swan implementation," and if "it needs to be clearly understood that public engagement is not intended to 're-scope' or re-analyze potential environmental effects," what form of comment solicitation and incorporation should the public expect? What type of comments will the implementation team see as substantial and relevant?

2. I am pleased by the inclusion of prescribed fire throughout the project, and it would like to see it prioritized as I described in General Comment #3. But given the purpose and need of this DEIS, I also believe this project should more explicitly describe a plan for the increased allowance of wildfire, which I see as the greatest restoration possible on our landscape. Will suppression of lightning-caused fires that do not endanger homes remain the status quo? Would wildfire be allowed to burn as a proxy for prescribed treatments or mechanical forest management?

Thank you again for the invitation to participate, and for considering these comments. Please contact me if you have any questions or needs for clarification. I look forward to continued involvement in pursuing a diverse, resilient landscape together.