

Data Submitted (UTC 11): 10/12/2022 6:00:00 AM

First name: Michael

Last name: Remke

Organization:

Title:

Comments: To whom it may concern,

Thank you for the opportunity to comment on the Integrated - Junction-Falls Integrated

Resource Management (J-FIRM) Project. I have several general comments regarding the scoping documents and continual planning of this project.

I have outlined my comments to mirror your scoping documents where I first comment on the stated needs for the proposal, then I discuss comments pertinent to specific geographic areas and the proposed actions.

1. Needs for the Proposal.

a. The Falls Creek Archaeological Area portion of the forest plan highlights numerous desired conditions relating to archeological and cultural values of the site (see 3.16.1, 3.16.2, 3.16.5 of the forest plan). It would be great if tribal consultation could be elevated to also include opportunities for tribal management of the resources on these lands. Numerous studies have demonstrated ceremonial and cultural use of forested landscapes in the SW and empowering tribes could be an opportunity to enhance modern connection to land while also achieving desired conditions (Roos, 2020; Roos et al., 2021).

b. Communities and RMRI

i. It is a misnomer to suggest that management of fuels in wildlands can provide wildfire protection to adjacent communities in urban areas or the

wildland-urban interface (Syphard et al., 2011). It should instead be perceived that wildland development in fire prone ecosystems comes with inherited risk of wildland fire and targeted treatments can help improve the decision space during incidents but does not guarantee wildfire protection or home defense (Kramer et al., 2021; Radeloff et al., 2018). While the forest service is the management entity for public lands and forests, thinking outside the box on adapting to fire can include investing money to community ingress, egress, home hardening, and public education.

ii. Personal and small-scale forest product use can be complimented with cultural use of wood products and can be enhanced to a community forest model where community prescriptions for wood products are managed. My hope is the opportunity for collective decision making in managing forests directly adjacent to communities to help restore our relationships with forests.

iii. Being sensitive and responsive to tribes can be modified to being proactive to empower cultural engagement with natural resources on ancestral tribal land

c. Clean Water

i. More discussion on the definition of beneficial use could provide better hydrologic context to the 'needs' of this project

ii. Reducing recreation impacts and sedimentation to wetlands, riparian areas and groundwater dependent ecosystems seems reasonable, however, making sure that thinning and other activities do not also increase sedimentation is equally important. Additionally, beaver-mimicry

and other tools to capture sediment, in the event of a wildfire, can improve water retention and quality pre-and post fire while also helping to create areas of forest that are resistant to fire and can be additional tools in the proposed action list (Fairfax & Whittle, 2020)

d. Forests and Wildlife

i. Additional research on forest resiliency to insects and disease in the face of climate change could be considered, especially in mixed conifer forests (Remke et al. , 2021).

e. Recreation

i. The recreation needs can be incorporated in additional resource management objectives. Can trails be utilized as burn units?

f. Junction Creek

i. Prescribed fire - I appreciate seeing the use of the fuel break created during the 416 Fire as opportunities for prescribed fire. I think expanding the language here to open to managed fire for resource benefit could be beneficial as fire is a tool to help achieve more resilient forests and is likely to occur more frequently during times of drought (Baker, 2022; Stephens et al., 2018).

ii. Vegetation Thinning -

1. Group selection and improvement cutting may help in diversifying forest structure, however, given the management history of previous logging I hope large tree retention is prioritized as large and old trees provide important ecological function including providing bird habitat and are the most fire-resistant trees in the forest and are often rare in areas preciously logged (Brown et al.,

2019; Fern[acute]ndez-Tschieder et al., 2020; Lydersen et al., 2013).

2. Condition based management is an excellent approach, especially in the adaptive management framework where collaborative stakeholders have opportunity to engage with management actions in different conditions. Other EAs have used sanitation style approaches when beetles are present and I encourage more progressive thinking that allows for opportunities to view natural processes, including beetles and disease, as opportunities to passively achieve desired conditions since drought resistance and beetle resistance are traits that can be difficult to select for in management activities (Six et al., 2018; Steel et al., 2021). Since. Mitigating disturbance can be difficult given climate change, thus seeking opportunities to accept change or direct change can be useful. (Schoorman et al., 2020).

3. The 700 acres designated as hand thinning with helicopter removal should be closely evaluated for economic impacts. The Roadless areas adjacent to communities feels like opportunities to promote living with wildfire and achieve desired conditions through planned on unplanned managed fire that burns at mixed severity (DellaSala et al., 2015; Higuera et al., 2019; Malone et al., 2018; McWethy et al., 2019).

iii. Permitted Winter Grooming

1. I hope there is careful analysis on the potential impact of motorized winter recreation use (including the use of grooming equipment) on winter habitat use by ungulates in this region. There are numerous guidelines to assess potential recreation

impacts and I would like to see discussion on wildlife monitoring

(Harris et al., 2014).

iv. Spring Re-developments

1. I would like to see additional considerations to assess the reasons

behind sedimentation in reservoirs and spring damage. Slopes

with sedimentation issues can be repaired using hand built

structures designed to capture sediment and slow down water.

These structures could be built utilizing local wood products and

hand crews where appropriate.

g. Falls Creek/Hidden Valley Geographic Area

i. Fire Mitigation

1. Broadcast burning is a useful tool in this vegetation type.

2. Mastication of Gambel oak in areas surrounding historical

properties seems like a tact that could be further analyzed.

Masticated fuels can burn with long residence times and can have

unsightly appearances after mastication work is completed. AN

alternative could be to hand thin and maintain oak in areas

adjacent to these structures. Hand thinning of oak could allow for

the use of oak to make creative based and artistic wood product,

provide fuel wood, and allow for the intentional maintenance of a

more natural vegetation feel around structures relative to

mastication.

Thank you for taking the time to consider these comments and I look forward to on going

discussion of the management of these public lands adjacent to our community.

Works Cited

- Baker, W. L. (2022). Is Climate Change Restoring Historical Fire Regimes across Temperate Landscapes of the San Juan Mountains, Colorado, USA? *Land*, 11(10), 1615.
<https://doi.org/10.3390/land11101615>
- Brown, P. M., Gannon, B., Battaglia, M. A., Fornwalt, P. J., Huckaby, L. S., Cheng, A. S., & Baggett, L. S. (2019). Identifying Old Trees To Inform Ecological Restoration in Montane Forests of the Central Rocky Mountains, Usa. *Tree-Ring Research*, 75(1), 34.
<https://doi.org/10.3959/1536-1098-75.1.34>
- DellaSala, D. A., Hanson, C. T., Baker, W. L., Hutto, R. L., Halsey, R. W., Odion, D. C., Berry, L. E., Abrams, R. W., Heneberg, P., & Sitters, H. (2015). Flight of the Phoenix: Coexisting with Mixed-Severity Fires. In *The Ecological Importance of Mixed-Severity Fires: Nature's Phoenix* (1st ed., Issue December 2017). Elsevier Inc. <https://doi.org/10.1016/B978-0-12-802749-3.00013-X>
- Fairfax, E., & Whittle, A. (2020). Smokey the Beaver: beaver-dammed riparian corridors stay green during wildfire throughout the western United States. *Ecological Applications*, 30(8), 1-8. <https://doi.org/10.1002/eap.2225>
- Fernández-Tschieder, E., Binkley, D., & Bauerle, W. (2020). Production ecology and reverse growth dominance in an old-growth ponderosa pine forest. *Forest Ecology and Management*, 460(November 2019), 117891.
<https://doi.org/10.1016/j.foreco.2020.117891>
- Harris, G., Nielson, R. M., Rinaldi, T., & Lohuis, T. (n.d.). Effects of winter recreation on northern ungulates with focus on moose (*Alces alces*) and snowmobiles.
<https://doi.org/10.1007/s10344-013-0749-0>
- Higuera, P. E., Metcalf, A. L., Miller, C., Buma, B., McWethy, D. B., Metcalf, E. C., Ratajczak, Z., Nelson, C. R., Chaffin, B. C., Stedman, R. C., McCaffrey, S., Schoennagel, T., Harvey, B. J.,

Hood, S. M., Schultz, C. A., Black, A. E., Campbell, D., Haggerty, J. H., Keane, R. E., [hellip]

Virapongse, A. (2019). Integrating subjective and objective dimensions of resilience in fire-prone landscapes. *BioScience*, 69(5), 379-388. <https://doi.org/10.1093/biosci/biz030>

Kramer, H. A., Butsic, V., Mockrin, M. H., Ramirez-Reyes, C., Alexandre, P. M., & Radeloff, V. C. (2021). Post-wildfire rebuilding and new development in California indicates minimal adaptation to fire risk. *Land Use Policy*, 107(April), 105502.

<https://doi.org/10.1016/j.landusepol.2021.105502>

Lydersen, J. M., North, M. P., Knapp, E. E., & Collins, B. M. (2013). Quantifying spatial patterns of tree groups and gaps in mixed-conifer forests: Reference conditions and long-term changes following fire suppression and logging. *Forest Ecology and Management*, 304, 370-382. <https://doi.org/10.1016/j.foreco.2013.05.023>

Malone, S. L., Fornwalt, P. J., Battaglia, M. A., Chambers, M. E., Iniguez, J. M., & Sieg, C. H. (2018). Mixed-severity fire fosters heterogeneous spatial patterns of conifer regeneration in a dry conifer forest. *Forests*, 9(1). <https://doi.org/10.3390/f9010045>

McWethy, D. B., Schoennagel, T., Higuera, P. E., Krawchuk, M., Harvey, B. J., Metcalf, E. C., Schultz, C., Miller, C., Metcalf, A. L., Buma, B., Virapongse, A., Kulig, J. C., Stedman, R. C., Ratajczak, Z., Nelson, C. R., & Kolden, C. (2019). Rethinking resilience to wildfire. *Nature Sustainability*, 2(9), 797-804. <https://doi.org/10.1038/s41893-019-0353-8>

Radeloff, V. C., Helmers, D. P., Anu Kramer, H., Mockrin, M. H., Alexandre, P. M., Bar-Massada, A., Butsic, V., Hawbaker, T. J., Martinuzzi, S., Syphard, A. D., & Stewart, S. I. (2018). Rapid growth of the US wildland-urban interface raises wildfire risk. *Proceedings of the National Academy of Sciences of the United States of America*, 115(13), 3314-3319. <https://doi.org/10.1073/pnas.1718850115>

Remke, A., & Mountain, R. (2021). The Status of Our Knowledge and Management Implications Mixed Conifer Forests in the San Juan Mountain Region of Colorado , USA?: December 2021.

December.

Roos, C. I. (2020). Scale in the study of Indigenous burning. *Nature Sustainability*, 3(11), 898-899. <https://doi.org/10.1038/s41893-020-0579-5>

Roos, C. I., Swetnam, T. W., Ferguson, T. J., Liebmann, M. J., Loehman, R. A., Welch, J. R., Margolis, E. Q., Guiterman, C. H., Hockaday, W. C., Aiuvalasit, M. J., Battillo, J., Farella, J., &

Kiahtipes, C. A. (2021). Native American fire management at an ancient wildland-urban interface in the Southwest United States. *Proceedings of the National Academy of Sciences of the United States of America*, 118(4). <https://doi.org/10.1073/pnas.2018733118>

Schuurman, G. W., Hoffman, C. H., Cole, D. N., Lawrence, D. J., Morton, J. M., Magness, D. R.,

Cravens, A. E., Covington, S., O'Malley, R., & Fisichelli, N. A. (2020). Resist-Accept-Direct (RAD) - A Framework for the 21st-century Natural Resource Manager. 20.

<https://irma.nps.gov/DataStore/DownloadFile/654543>

Six, D. L., Vergobbi, C., & Cutter, M. (2018). Are survivors different? Genetic-based selection of trees by mountain pine beetle during a climate change-driven outbreak in a high-elevation pine forest. *Frontiers in Plant Science*, 9(July), 1-11.

<https://doi.org/10.3389/fpls.2018.00993>

Steel, Z. L., Goodwin, M. J., Meyer, M. D., Fricker, G. A., Zald, H. S. J., Hurteau, M. D., & North,

M. P. (2021). Do forest fuel reduction treatments confer resistance to beetle infestation

and drought mortality? *Ecosphere*, 12(1). <https://doi.org/10.1002/ecs2.3344>

Stephens, S. L., Collins, B. M., Fettig, C. J., Finney, M. A., Hoffman, C. M., Knapp, E. E., North, M.

P., Safford, H., & Wayman, R. B. (2018). Drought, Tree Mortality, and Wildfire in Forests

Adapted to Frequent Fire. *BioScience*, 68(2), 77-88. <https://doi.org/10.1093/biosci/bix146>

Syphard, A. D., Keeley, J. E., & Brennan, T. J. (2011). Factors affecting fuel break effectiveness in the control of large fires on the Los Padres National Forest, California. *International Journal of Wildland Fire*, 20(6), 764-775. <https://doi.org/10.1071/WF10065>