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Comments: Attached is a pdf document with comments on the Purposes and Need document and on the Preliminary Environmental Assessment.

Purpose and Need Document

Page 11: At the end of paragraph 5 where it reads [ldquo][hellip]potentially leading to vegetation type conversion[rdquo], add the following reference: [ldquo]Rodman, K.C., et al., 2022. The historic 2020 fire year in northern Colorado and southern Wyoming: A landscape assessment to inform post-fire forest management. https://cfri.colostate.edu/wp-content/uploads/sites/22/2023/01/NFR_2020Fires_Report.pdf

Page 11: Paragraph 6 needs to be slightly revised to reflect new relevant science. Specifically, at the end of the first sentence following [ldquo][hellip]no longer viable at the time of the fire[rdquo] insert citation to Rhoades et al. 2022, Limited seed viability in long-dead serotinous lodgepole pine trees in the Southern Rockies, USA, https://doi.org/10.1016/j.foreco.2022.120565

In the second sentence of the same paragraph following (34) insert the following: [ldquo]and recent metadata analysis shows that bark beetle outbreaks in the Colorado Rockies have not resulted in conversion to non-forest vegetation types (Rodman et al. 2022, Rocky Mountain forests are poised to recover following bark beetle outbreaks but with altered composition. Journal of Ecology DOI: 10.1111/1365-2745.13999.) The remainder of the sentence [ldquo][hellip]forest resilience [hellip]compromised[hellip](35) (36) needs to be re-written to clarify the meaning. The meaning of [ldquo]forest resilience[rdquo] is vague and should be replaced with [ldquo]conifer regeneration[rdquo] or recovery to reflect the fact that the post-fire response often dominated by aspen actually improves future forest resilience.

Page 12, top paragraph: replace citation 37 (Halofsky which is fine for the PNW but is not based on work in the southern Rockies) with : [ldquo]Rodman, K.C., et al., 2022. The historic 2020 fire year in northern Colorado and southern Wyoming: A landscape assessment to inform post-fire forest management. https://cfri.colostate.edu/wp-content/uploads/sites/22/2023/01/NFR_2020Fires_Report.pdf This Rodman et al. paper is a collaboration of academic, Forest Service and other agency scientists which assesses the five 2020 large wildfires in terms of the spatial patterns of live trees (seed sources) and the potential for natural post-fire recruitment based on seed availability and climate suitability (a proxy for reforestation suitability). This assessment was guided by the Resist-Accept-Direct (RAD) framework and is directly relevant to potential post-fire management approaches in northern Colorado.

Page 12, 2nd paragraph: first sentence, for clarity insert (i.e. lower montane zone) following [ldquo]lower elevation[rdquo].

Page 12, at the end of the second paragraph ending in (7)(8), also cite Rodman et al. 2022. [ldquo]Rodman, Kyle; Fornwalt, Paula; Chapman, Teresa; Coop, Jonathan; Edwards, Gloria; Stevens, Jens; Veblen, Thomas. 2022. SRRT: A Decision Support Tool to Inform Postfire Reforestation of Ponderosa Pine and Douglas-fir in the Southern Rocky Mountains. Res. Note RMRS-RN-95. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 12 p. https://doi. org/10.2737/RMRSRN-95. Note that later in the document, this SRRT publication is incorrectly cited as Fornwalt et al.

Page 13, second paragraph: I suggest replacing [ldquo]restoration[rdquo] with [ldquo]management[rdquo] because many dense two-tiered Doug fir stands (with or without Pipo) originated following 19th century or earlier fires.

Page 13, end of the second paragraph: cite the Rodman et al. 2022 SRRT publication.

Page 18, top line: reference 53 is not available and appears to refer to a plan to conduct research on aspen rather than actually completed research. It should be replaced with the following two citations: Nesbit et al. 2023, Tamm review: Quaking aspen[rsquo]s influence on fire occurrence, behavior, and severity. https://doi.org/10.1016/j.foreco.2022.120752. And, Bigler, C., Kulakowski, D., Veblen, T.T., 2005. Multiple disturbance interactions and drought influence fire severity in Rocky Mountain subalpine forests. Ecology 86 (11), 3018[ndash]3029. https://doi.org/10.1890/05-0011. The Nesbit review paper summarizes the Bigler study as follows. [ldquo]Another study of a single wildfire in northwest Colorado found that aspen stands were 200 times more likely to be classified as unburned than Englemann sprucesubalpine fir (Picea englemannii Parry ex Engelm. - Abies lasiocarpa [Hook.] Nutt.) stands and 8 times more likely to be classified as unburned than lodgepole pine (Pinus contorta Dougl. ex Loud.) stands (Bigler et al., 2005).[rdquo] Given the emphasis on potentially managing to increase aspen in order to buffer against fire, it is important to recognize that there is evidence that under particular circumstances past research has shown the buffering effect of aspen on fire.

Page 25, bottom paragraph: in addition to the (63) citation, also cite [ldquo]Rodman, K.C., et al., 2022. The historic 2020 fire year in northern Colorado and southern Wyoming: A landscape assessment to inform post-fire forest management. https://cfri.colostate.edu/wpcontent/uploads/sites/22/2023/01/NFR_2020Fires_Report.pdf

Page 27, Figure Caption 14: I suggest deleting the final sentence in this caption which reads [ldquo]Please note[hellip]Battaglia[hellip]details.[rdquo] The wording does not make sense: [ldquo]more open conditions[rdquo] when and compared to what? Introducing this awkwardly worded statement opens a can of worms as reflected by the critique of Battaglia et al. 2018 in Baker,W.L.; Hanson, C.T.; Williams, M.A.; DellaSala, D.A. Countering Omitted Evidence of Variable Historical Forests and Fire Regime in Western USA Dry Forests: The LowSeverity-Fire Model Rejected. Fire 2023, 6, 146. https://doi.org/10.3390/fire6040146 In the context of trying to reconstruct past tree densities as influenced by fire suppression, these authors correctly note the Battaglia et al. 2018 study [ldquo]was based on sampling 97% in logged forests. There has been no validation that the method they used can accurately reconstruct historical tree density in their region, and there especially has been no validation of their method in heavily logged forests where evidence likely has been destroyed by harvesting and associated activities.[rdquo]

Page 27, first paragraph: for clarity, re-word as [ldquo]below 9000 feet (in particular below 8000 feet in the lower montane zone), restoration[hellip][rdquo]

Page 63, Reference 64 should be corrected to read Rodman et al.

Comments on Preliminary Environmental Assessment

Page 5, bottom paragraph at [ldquo]johnstone et al. 2016) also cite [ldquo]Rodman, K.C., et al., 2022. The historic 2020 fire year in northern Colorado and southern Wyoming: A landscape assessment to inform post-fire forest management. https://cfri.colostate.edu/wpcontent/uploads/sites/22/2023/01/NFR_2020Fires_Report.pdf

Page 6, second paragraph, line 2: for clarity, after [ldquo]lower elevation[rdquo] insert (i.e. lower montane).

Page 7, top paragraph: Instead of citing Halofsky, cite: [ldquo]Rodman, K.C., et al., 2022. The historic 2020 fire

year in northern Colorado and southern Wyoming: A landscape assessment to inform post-fire forest management. https://cfri.colostate.edu/wpcontent/uploads/sites/22/2023/01/NFR_2020Fires_Report.pdf

Page 6, third paragraph: correct spelling to [ldquo]Sherriff[rdquo] twice.

Page 6, fourth paragraph: after [ldquo]type conversion[rdquo] at the end of the paragraph, cite [ldquo]Rodman, K.C., et al., 2022. The historic 2020 fire year in northern Colorado and southern Wyoming: A landscape assessment to inform post-fire forest management. https://cfri.colostate.edu/wpcontent/uploads/sites/22/2023/01/NFR_2020Fires_Report.pdf

Page 6, bottom paragraph, 4th line after Negron and Huckaby 2020, change [ldquo]forest resilience[rdquo] to [ldquo]conifer regeneration[rdquo] and revise paragraph to be consistent with new research: Rodman et al. 2022, Rocky Mountain forests are poised to recover following bark beetle outbreaks but with altered composition. Journal of Ecology DOI: 10.1111/1365-2745.13999.) i.e. bark beetle outbreaks are not resulting in conversion from forest to non-forest vegetation. And: Rhoades et al. 2022, Limited seed viability in long-dead serotinous lodgepole pine trees in the Southern Rockies, USA, https://doi.org/10.1016/j.foreco.2022.120565

Page 7, top paragraph, 4th line: replace citation of Halofsky with: Rodman et al. 2022. [ldquo]Rodman, Kyle; Fornwalt, Paula; Chapman, Teresa; Coop, Jonathan; Edwards, Gloria; Stevens, Jens; Veblen, Thomas. 2022. SRRT: A Decision Support Tool to Inform Postfire Reforestation of Ponderosa Pine and Douglas-fir in the Southern Rocky Mountains. Res. Note RMRS-RN-95. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 12 p. https://doi. org/10.2737/RMRS-RN95, and Rodman, K.C., et al., 2022. The historic 2020 fire year in northern Colorado and southern Wyoming: A landscape assessment to inform post-fire forest management. https://cfri.colostate.edu/wpcontent/uploads/sites/22/2023/01/NFR_2020Fires_Report.pdf

Page 8, second paragraph, line 2: replace [ldquo]Restoration[rdquo] with [ldquo]Management[rdquo]

Page 23, top paragraph, line 4: for clarity, re-word as [ldquo]below 9000 feet (and in particular, below 8000 feet)[rdquo]. Line 5, replace [ldquo]etc.[rdquo] with [ldquo]land-use practices[rdquo] in order to include mining, logging, and ranching (if a citation is needed it would be Veblen and Donnegan 2005).