Wilderness Workshop
Center for Biological Diversity

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Submitted via project web-page:
https://cara.ecosystem-management.org/Public//CommentInput?Project=57654

RE: Yellowjacket Project EA

Dear Mr. Keetch:

Thank you for the opportunity to comment on the proposed Yellowjacket Project on the Blanco Ranger District of the White River National Forest (WRNF). These comments are submitted on behalf of Wilderness Workshop and the Center for Biological Diversity.

Wilderness Workshop (WW) is a non-profit, membership-based organization with a mission of protecting and conserving the wilderness and natural landscapes of the WRNF, and adjacent public lands. WW is based in Carbondale, Colorado, and engages in research, education, legal advocacy and grassroots organizing to protect the ecological integrity of surrounding public lands. WW was founded in 1967 and has over 700 members. WW has a long history of engagement with the U.S. Forest Service's management of public lands on the WRNF.

The Center for Biological Diversity (The Center) is a 501(c)(3) nonprofit organization based in Tucson, Arizona, with offices across the country including in Crested Butte and Denver, Colorado, and with more than one million supporters and online activists. The Center is dedicated to protecting and restoring imperiled species and natural ecosystems. The Center uses science, policy, and law to advocate for the conservation and recovery of species on the brink of extinction and the habitats they need to survive. The Center has and continues to actively advocate for increased protections for species and their habitats across Colorado.

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I. INTRODUCTION

As a primary matter, thank you for committing to undertake an Environmental Assessment (EA) to consider the potential impacts of this project. As discussed below, there are several issues that deserve meaningful environmental analysis. In fact, potential impacts of the proposed action on resources and values in and around the project area may necessitate more thorough analysis in an Environmental Impact Statement (EIS).

The project area overlaps with many sensitive resources that must be considered prior to approving any vegetation treatments or timber cutting or other activities associated with the proposed action. Attached to these comments is a screen undertaken by Rocky Mountain Wild highlighting some of the sensitive values within the project area that must be considered in any impact analysis the Forest Service (USFS or FS) prepares. See Appendix 1.

Specifically, the attached screen highlights that the project area overlaps important habitat for numerous wildlife species, including:

- Canada Lynx (denning and winter habitat, LAU, potential habitat)
- Greater Sage Grouse (historic habitat)
- Colorado Cutthroat Trout
- Northern Goshawk
- Bald Eagle (winter range, winter concentration, and summer forage)
- Columbian Sharp-tailed grouse (production area and overall range)
- Black bear (fall concentration, overall range, and summer concentration)
- Brazilian Free-tailed Bat
- Northern Leopard Frog
- Greater Sandhill Crane

The project area also overlaps important big game habitat including elk migration, production, winter range, severe winter range, winter concentration, overall range, summer concentration, and summer range; a Mule deer migration corridor, as well as overall range, summer range, and winter range; and a Moose concentration area, overall range, priority habitat, summer range, and winter range.

Importantly with respect to big game, the project area is entirely within a priority migration corridor for elk and mule deer identified by Colorado Parks and Wildlife (CPW) in the agency's Colorado Action Plan. The Colorado Action Plan was developed in response to Interior Secretarial Order 3362, *Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors,* which directs Department of the Interior (DOI) bureaus to work with the states "to enhance and improve the quality of big-game winter range and migration corridor habitat on Federal lands." In implementing this Order, DOI requested that state wildlife agencies identify their top priority elk, mule deer, and/or pronghorn winter ranges and migration corridors and to describe these in state action plans. The Colorado Action Plan identifies threats to big game populations and priority landscapes that are critical to protecting big game species. The Colorado Action Plan is further discussed in Section V. of these comments below.

In addition to these wildlife values, the project area overlaps sensitive biological communities identified and prioritized for protection by the Colorado Natural Heritage Program, including:

- Montane Riparian Forests
- Thinkleaf Alder/Mesic Forb Riparian Shrubland
- Aldrich Lakes Potential Conservation Area (PCA)[1]

[1] Colorado Natural Heritage Program, Level 4 Potential Conservation Area (PCA) Report: Aldrich Lakes, https://cnhp.colostate.edu/download/documents/pca/L4_PCA-Aldrich%20Lakes_11-27-2019.pdf (last visited Apr. 17, 2020) (surrounds numerous small lakes, ponds and wet meadows with Gambel oak and a few aspens that provide breeding habitat for Greater Sandhill Crane).

- Fawn Creek PCA[2]
- Aspen Wetlands Forest
- Drummonds Willow/Mesic Forb
- Montane Riparian Willow Carr

The project area also overlaps three citizen-proposed and inventoried roadless areas: Big Beaver Basin, Fawn Creek, and Milk Creek. Citizen inventories for these areas and comments submitted to the USFS in 2011 regarding the Colorado Roadless Area inventory, as well as a map of the citizen inventoried roadless areas, are attached here as appendices.[3] These appendices detail important values that must be considered and protected by the USFS, including in areas that are roadless but outside of the inventory the USFS adopted for the Colorado Roadless Rule. We urge the Forest Service to include in any environmental analysis maps of these roadless areas and overlap with the cutting units and proposed road construction so that the public and decisionmaker can understand the juxtaposition, and the harm that roadbuilding and clearcutting may have on roadless values.[4] We will provide the USFS with geospatial data of the citizen-proposed roadless areas.[5]

As discussed below, the USFS must comply with NEPA, including taking a hard look at potential impacts the proposed action may have on sensitive resources listed here and considering reasonable alternatives to the proposed action that may better protect resources. USFS must also ensure compliance with other laws, including the NHPA, as well as applicable regulations and the Forest Plan. In addition to concerns about potential effects to the sensitive resources listed above, this proposal raises questions about impacts associated with new roads, climate change, and socio-economics. If an EA shows that the project may have significant impacts on any resources in and around the project area, the USFS must undertake a full EIS.

II. THE PROPOSED ACTION MUST COMPLY WITH NEPA.

[2] Colorado Natural Heritage Program, Level 4 Potential Conservation Area (PCA) Report: Fawn Creek North, https://cnhp.colostate.edu/download/documents/pca/L4_PCA-Fawn%20Creek%20North_11-27-2019.pdf (last visited Apr. 17, 2020) (supports an excellent (A-ranked) occurrence of a globally vulnerable (G4T3/S3) fish subspecies, Colorado River cutthroat trout (Oncorhynchus clarkii pleuriticus). There are also good (B-ranked) occurrences of globally secure plant communities, Drummond's willow (Salix drummondiana) / mesic forb (G4/S4) riparian shrubland and quaking aspen with bracken fern (Populus tremuloides / Pteridium aquilinum). This boundary includes Fawn Creek and its major tributaries, including 1,000 foot buffer on all sides of the streams. Downstream barrier to exotic salmonids is presumed to exist, but its location and condition are unknown. The lower boundary of the site should correspond with this barrier. This should be adequate to protect the elements from degradation of habitat including severe alterations of hydrology or riparian vegetation. Off- site considerations will be important. Any activities within the watershed that have potential to significantly alter hydrological processes need to be evaluated for their impact on the elements present).

[3] See Appendices 2, 3, 4, 5, and 6.

[4] We also note that units 110, 111, 217, 218, 219, 305, and 403 propose logging and in some cases new temporary road construction in unroaded lands adjacent to the eastern boundary of the Fawn Creek/Little Lost Park Colorado Roadless Area (CRA). *See* NOPA at 8, Figure 4. The eastern boundary of that roadless area is not defined by a NFS road, and therefore it is unclear why the unroaded lands to the east have not been added to that CRA. We request that the Forest Service explain this apparent discrepancy.

[5] Attached as Appendix 15.

The National Environmental Policy Act (NEPA) is "'our basic national charter for protection of the environment.'"[6] In enacting NEPA, Congress recognized the "profound impact" of human activities, including "resource exploitation," on the environment and declared a national policy "to create and maintain conditions under which man and nature can exist in productive harmony." 42 U.S.C. § 4331(a).

The statute has two fundamental goals: "(1) to ensure that the agency will have detailed information on significant environmental impacts when it makes decisions; and (2) to guarantee that this information will be available to a larger audience."[7] "NEPA promotes its sweeping commitment to 'prevent or eliminate damage to the environment and biosphere' by focusing Government and public attention on the environmental effects of proposed agency action."[8] Stated more directly, NEPA's "'action-forcing' procedures . . . require the [Forest Service] to take a 'hard look' at environmental consequences"[9] *before* the agency approves an action. "By so focusing agency attention, NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct."[10] To ensure that the agency has taken the required "hard look," courts hold that the agency must utilize "public comment and the best available scientific information."[11]

NEPA's review obligations are more stringent and detailed at the project level, or "implementation stage," given the nature of "individual site specific projects."[12] "[G]eneral statements about possible effects and some risk do not constitute a hard look, absent a justification regarding why more definitive information could not be provided."[13]

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[6] *Center for Biological Diversity v. United States Forest Serv.*, 349 F.3d 1157, 1166 (9th Cir. 2003) (quoting 40 C.F.R. § 1500.1).

[7] *Envtl. Prot. Info. Ctr. v. Blackwell*, 389 F. Supp. 2d 1174, 1184 (N.D. Cal. 2004) (quoting *Neighbors of Cuddy Mt. v. Alexander*, 303 F.3d 1059, 1063 (9th Cir. 2002)); *see also Earth Island v. United States Forest Serv.*, 351 F.3d 1291, 1300 (9th Cir. 2003) ("NEPA requires that a federal agency 'consider every significant aspect of the environmental impact of a proposed action . . . [and] inform the public that it has indeed considered environmental concerns in its decision-making process.'").

[8] *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 371 (1989) (quoting 42 U.S.C. § 4321).

[9] *Metcalf v. Daley*, 214 F.3d 1135, 1141 (9th Cir. 2000) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989)).

[10] *Marsh*, 490 U.S. at 371 (citation omitted).

[11] *Biodiversity Cons. Alliance v. Jiron*, 762 F.3d 1036, 1086 (10th Cir. 2014) (internal citation omitted).

[12] *Ecology Ctr., Inc. v. United States Forest Serv.*, 192 F.3d 922, 923 n.2 (9th Cir. 1999); *see also Friends of Yosemite Valley v. Norton*, 348 F.3d 789, 800-01 (9th Cir. 2003); *New Mexico ex rel. Richardson v. Bureau of Land Management*, 565 F.3d 683, 718-19 (10th Cir. 2009) (requiring site-specific NEPA analysis when no future NEPA process would occur); *Colo. Envtl. Coal. v. Ofc. of Legacy Mgmt.*, 819 F. Supp. 2d 1193, 1209-10 (D. Colo. 2011) (requiring site-specific NEPA analysis even when future NEPA would occur because "environmental impacts were reasonably foreseeable").

[13] *Or. Natural Res. Council Fund v. Brong*, 492 F.3d 1120, 1134 (9th Cir. 2007) (citation omitted); *see also Or. Natural Res. Council Fund v. Goodman*, 505 F.3d 884, 892 (9th Cir. 2007) (holding the Forest Service's failure to discuss the importance of maintaining a biological corridor violated NEPA, explaining that "[m]erely disclosing the existence of a biological corridor is inadequate" and that the agency must "meaningfully substantiate [its] finding").

NEPA requires site-specificity to fulfill two basic purposes: 1) to ensure agencies are making informed decisions prior to acting and 2) to ensure the public is given a meaningful opportunity to participate in those decision-making processes.[14] Federal courts apply these touchstone criteria when evaluating whether a NEPA document is adequate.[15]

Analyzing and disclosing site-specific impacts is critical because where (and when and how) activities occur on a landscape strongly determines the nature of the impact. As the Tenth Circuit Court of Appeals has explained, the actual "location of development greatly influences the likelihood and extent of habitat preservation. Disturbances on the same total surface area may produce wildly different impacts on plants and wildlife depending on the amount of contiguous habitat between them."[16] The Court used the example of "building a dirt road along the edge of an ecosystem" and "building a four-lane highway straight down the middle" to explain how those activities may have similar types of impacts, but the extent of those impacts – in particular on habitat disturbance – is different.[17] Indeed, "location, not merely total surface disturbance, affects habitat fragmentation,"[18] and therefore location data is critical to the site-specific analysis NEPA requires. Merely disclosing the existence of particular geographic or biological features is inadequate – agencies must discuss their importance and substantiate their findings as to the impacts.[19]

NEPA further mandates that the agency provide the public "'the underlying environmental data' from which the Forest Service develop[ed] its opinions and arrive[d] at its decisions."[20] Included in this underlying environmental data is consideration of baseline conditions. Courts have consistently acknowledged the importance of obtaining information on baseline conditions prior to approving projects.[21] "The agency must explain the conclusions it has drawn from its chosen methodology, and the reasons it considered the underlying evidence to be reliable."[22] In the end, "vague and conclusory statements, without any supporting data, do not constitute a 'hard look' at the environmental consequences of the action as required by NEPA."[23]

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[14] *Stein v. Barton*, 740 F. Supp. 743, 749 (D. Alaska 1990).
[15] *See WildEarth Guardians*, 790 F.3d at 921-25 (holding EIS inadequate for failure to disclose the location of moose range); *Or. Nat. Desert Ass'n v. Rose*, 2019 WL 1855419 (9th Cir. 2019) (holding environmental analysis violated NEPA by failing to establish "the physical condition of [roads and trails] and authorizing activity without assessing the actual baseline conditions").
[16] *New Mexico ex rel. Richardson*, 565 F.3d at 706.
[17] *Id*. at 707.
[18] *Id*.
[19] *Or. Natural Res. Council Fund v. Goodman*, 505 F.3d 884, 892 (9th Cir. 2007).
[20] *WildEarth Guardians v. Mont. Snowmobile Ass'n*, 790 F.3d 920, 925 (9th Cir. 2015).
[21] *Half Moon Bay Fishermans' Mktg. Asso. v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988); see also *Great Basin Res. Watch v. BLM*, 844 F.3d 1095, 1104 (9th Cir. 2016) (invalidating FEIS because for failure to consider baseline conditions).
[22] *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1075 (9th Cir. 2011) (citation omitted).
[23] *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 973 (9th Cir. 2006); *see also Ocean Advocates v. Army Corps of Engineers*, 402 F.3d 846, 869 (9th Cir. 2004) (finding that a vague and uncertain analysis is insufficient to meet NEPA's mandate).

CEQ's regulations establish specific ways agencies must analyze proposed actions, including project-level decisions, including a detailed discussion of direct, indirect, and cumulative impacts and their significance; and an analysis of all reasonable alternatives to the proposed action. Such analysis is required for both environmental assessments and EISs.

a. USFS Must Analyze a Range of Reasonable Alternatives.

In taking the "hard look" at impacts that NEPA requires, an EA must "study, develop, and describe" reasonable alternatives to the proposed action.[24] The Tenth Circuit explains that this mandate extends to EAs as well as EISs. "A properly-drafted EA must include a discussion of appropriate alternatives to the proposed project."[25] This alternatives analysis "is at the heart of the NEPA process, and is 'operative even if the agency finds no significant environmental impact.'"[26] Reasonable alternatives must be analyzed for an EA even where a FONSI is issued because "nonsignificant impact does not equal no impact. Thus, if an even less harmful alternative is feasible, it ought to be considered."[27] When an agency considers reasonable alternatives, it "ensures that it has considered all possible approaches to, and potential environmental impacts of, a particular project; as a result, NEPA ensures that the most intelligent, optimally beneficial decision will ultimately be made."[28]

In determining whether an alternative is "reasonable," and thus requires detailed analysis, courts look to two guideposts: "First, when considering agency actions taken pursuant to a statute, an alternative is reasonable only if it falls within the agency's statutory mandate. Second, reasonableness is judged with reference to an agency's objectives for a particular project."[29] Any alternative that is unreasonably excluded will invalidate the NEPA analysis. "The existence of a viable but unexamined alternative renders an alternatives analysis, and the EA which relies upon it, inadequate."[30] The agency's obligation to consider reasonable alternatives applies to citizen-proposed alternatives.[31]

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[24] 42 U.S.C. § 4332(2)(C) & (E); 40 C.F.R. § 1508.9(b) (an EA "[s]hall include brief discussions ... of alternatives").
[25] *Davis v. Mineta*, 302 F.3d 1104, 1120 (10th Cir. 2002) (granting injunction where EA failed to consider reasonable alternatives).
[26] *Diné Citizens Against Ruining Our Env't v. Klein*, 747 F. Supp. 2d 1234, 1254 (D. Colo. 2010) (quoting *Greater Yellowstone Coal. v. Flowers*, 359 F.3d 1257, 1277 (10th Cir. 2004)). *See also W. Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013) (in preparing EA, "an agency must still give full and meaningful consideration to all reasonable alternatives" (emphasis added) (internal quotation and citation omitted)); 40 C.F.R. § 1502.14 (describing alternatives analysis as the "heart of the environmental impact statement").
[27] *Ayers v. Espy*, 873 F. Supp. 455, 473 (D. Colo. 1994) (internal citation omitted).
[28] *Wilderness Soc'y v. Wisely*, 524 F. Supp. 2d 1285, 1309 (D. Colo. 2007) (quotations & citation omitted).
[29] *Diné Citizens Against Ruining Our Env't*, 747 F. Supp. 2d at 1255 (quoting *New Mexico ex rel. Richardson*, 565 F.3d at 709).
[30] *Id.* at 1256.
[31] *See Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217-19 (9th Cir. 2008) (finding EA deficient, in part, for failing to evaluate a specific proposal submitted by petitioner); *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1171 (10th Cir. 1999) (agency's "[h]ard look" analysis should utilize "*public comment* and the best available scientific information") (emphasis added).

Finally, courts require that an agency adequately and explicitly explain in the EA any decision to eliminate an alternative from further study.[32]

i. USFS must analyze a no action alternative.

NEPA mandates that agencies consider the alternative of no action.[33] The comparison between the action alternatives and the "no action" alternative enables the agency and the public to understand the difference between allowing the status quo to continue and taking the proposed action(s). To facilitate this review, EAs and EISs generally contain sections disclosing the environmental consequences of each alternative, including no action, to a variety of impacted resources.[34]

The Yellowjacket Project NOPA states that the EA prepared for the project "*may* document consideration of a no-action alternative." NOPA at 14 (emphasis added). We urge the USFS to comply with law and evaluate the no action alternative. Understanding the impacts of the no action alternative is particularly important here where: (1) the baseline wildlife and other values at stake are numerous and where the NOPA itself has failed to characterize or map those values; and (2) where the USFS asserts that its potentially damaging actions will somehow improve ecological conditions compared to leaving the area alone.

ii. USFS must analyze an alternative that limits clearcuts to less than 40 acres.

We request that the USFS analyze a reasonable alternative that limits clearcuts within the project area to 40 acres or less. As NFMA acknowledges by its very provisions, clearcuts larger than that should be rare and are likely to have significant impacts to watersheds, scenic values, and wildlife. Such a proposal would reduce such impacts while still enabling the Forest Service to achieve much of the purpose and need for the proposed action. The Forest Service could remove a reduced but similar acreage of trees by creating some areas with large "leave strips" (say 100 meters in width) between clearcuts within larger units.

iii. USFS must analyze alternatives that eliminate and/or minimize road construction and logging in roadless areas.

The Forest Service should consider at least one alternative that eliminates road construction (including temporary road-building) and logging within areas inventoried by conservation groups and found to be roadless. See Appendices 1-6 (attached). The Forest Service should also consider alternatives that minimize impacts on citizen-proposed roadless areas, such as by applying limits

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[32] *See Wilderness Soc'y*, 524 F. Supp. 2d at 1309 (holding EA for agency decision to offer oil and gas leases violated NEPA because it failed to discuss the reasons for eliminating a "no surface occupancy" alternative); *Ayers*, 873 F. Supp. at 468, 473.

[33] 40 C.F.R. § 1502.14.

[34] *See* San Juan National Forest, Fosset Gulch/Northern HDs Ecosystem Restoration Project, Draft Environmental Assessment (June 2014) at 18-51, available at https://www.fs.usda.gov/nfs/11558/www/nepa/97260_FSPLT3_1658988.pdf (last viewed Mar. 23, 2019).

on such activities compliant with the Colorado Roadless Rule and reducing mileage of road construction and use in roadless areas. Such alternatives would permit logging and bulldozing outside these citizen IRAs while protecting existing roadless character. This is exactly the type of balancing of resources that NEPA's alternative provision requires.

b. USFS Must Prepare an EIS.

i. Agencies must prepare an EISs when impacts 'may' be significant.

NEPA requires federal agencies to prepare a full environmental impact statement (EIS) before undertaking "major Federal actions significantly affecting the quality of the human environment."[35] As the Tenth Circuit has explained, "[i]f the agency determines that its proposed action *may* 'significantly affect' the environment, the agency must prepare a detailed statement on the environmental impact of the proposed action in the form of an EIS."[36] The Ninth Circuit agrees.

> We have held that an EIS *must* be prepared if 'substantial questions are raised as to whether a project ... *may* cause significant degradation to some human environmental factor.' To trigger this requirement a 'plaintiff need not show that significant effects *will in fact occur*,' [but instead] raising 'substantial questions whether a project may have a significant effect' is sufficient.[37]

If an agency "decides not to prepare an EIS, 'it must put forth a convincing statement of reasons' that explains why the project will impact the environment no more than insignificantly. This account proves crucial to evaluating whether the [agency] took the requisite 'hard look.'"[38]

"Significance" under NEPA requires consideration of the action's context and intensity.[39] An agency must analyze the significance of the action in several contexts, including short- and long-term effects within the setting of the proposed action (including site-specific, local impacts).[40] Intensity refers to the severity of the impact and requires consideration of ten identified factors that may generally lead to a significance determination, including: (1) whether the action is likely to be highly controversial; (2) whether the effects on the environment are highly uncertain or involve unique or unknown risks; and (3) whether the action may have cumulative significant impacts.[41] With respect to the degree to which the environmental effects are likely to be highly

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[35] 42 U.S.C. § 4332(C).
[36] *Airport Neighbors Alliance v. U.S.,* 90 F.3d 426, 429 (10th Cir. 1996) (citation omitted) (emphasis added).
[37] *Idaho Sporting Cong. v. Thomas*, 137 F.3d 1146, 1149-50 (9th Cir. 1998) (citations omitted) (emphasis original). *See also Ocean Advocates v. U.S. Army Corps of Eng'rs*, 402 F.3d 846, 864-65 (9th Cir. 2005) ("To trigger this [EIS] requirement a plaintiff need not show that significant effects will in fact occur, but raising substantial questions whether a project may have a significant effect is sufficient." (internal quotations, citations, and alterations omitted)).
[38] *Ocean Advoc.*, 402 F.3d at 864.
[39] 40 C.F.R. § 1508.27.
[40] *Id.* § 1508.27(a).
[41] *Id.* § 1508.27(b)(4)-(5), (7)

controversial, the word "controversial" refers to situations where "'substantial dispute exists as to the size, nature, or *effect* of the major federal action.'"[42]

Here, despite the vagueness of the proposal and the sparseness of the analysis provided, it appears that the Yellowjacket Project may have significant impacts, triggering the Forest Service's duty to prepare an EIS. Further, the fact that key assumptions of this project appear to ignore Forest Service science concerning the likely effects of climate change shows that there exists a controversy about the nature and extent of the proposed action's effect. Finally, the impact of this logging project, together with climate change and existing conditions on the ground, has the potential for significant cumulative impacts.

ii. The Yellowjacket Project may have significant impacts.

The scale of the project itself may be significant. Massive clearcuts across more than two square miles will create huge holes in the forested landscape, and may take years to implement (although the NOPA fails to disclose how many). The large scale of the project supports a conclusion of significance.

The impacts of this project are "highly uncertain" because, as discussed above, the project itself – its duration, the baseline conditions of the forest at issue, the nature of the stands to targeted for chainsawing, the potential impacts to roadless character lands – is not yet well defined.

The project may significantly impact soils and watersheds. Construction of temporary roads and landing areas, and the use of skid trails, have the potential to significantly impact sensitive soils and watersheds. The NOPA fails to disclose the location of sensitive or erosive soils or impaired watersheds, making it impossible for the Forest Service to rule out potentially significant impacts to such resources.

The project may significantly impact wildlife due to the massive clearcuts (with apparently no protection for snags or retention of trees and stands for raptor nests), and at least temporary increase in road density. The NOPA contains almost no information about wildlife use of the area, or habitat conditions before and after treatment. For example, the 4,500+ out-and-back logging truck trips the project predicts may have impacts to wildlife, including roadkill and disturbance. NOPA at 9, Table 2.

The project may significantly impact recreation. The NOPA admits that use in the area includes "a variety of motorized and non-motorized recreation including camping, hunting, snowmobiling, forest product gathering and off highway vehicle trail riding." NOPA at 1. The NOPA contains no information about how the Yellowjacket Project – and the noise, truck trips, road damage, and other impacts that would accompany it – would impact the area's use by recreationists, or who

[42] *Town of Cave Creek v. FAA,* 325 F.3d 320, 331 (D.C. Cir. 2003) (quoting *North American Wild Sheep v. U.S. Department of Agriculture*, 681 F.2d 1172, 1182 (9th Cir. 1982)) (emphasis in original). *See also Middle Rio Grande Conservancy Dist. v. Norton*, 294 F.3d 1220, 1229 (10th Cir. 2002) (same); *Town of Superior v. U.S. Fish and Wildlife Serv.*, 913 F. Supp. 2d 1087, 1120 (D. Colo. 2012) (same).

would enjoy using the damaged, denuded landscape that would be created and last for years by implementation of the proposed action. The impacts to recreational values could be significant.

The project has undisclosed/unknown economic impacts. As noted further down in these comments, while the Forest Service identifies subsidizing commercial logging as one of the few purposes and needs for the projects, the NOPA provides no information about these impacts.

The project has undisclosed/unknown climate impacts. As discussed above, the NOPA provides no information about the project's potential carbon pollution, nor does it disclose the potential cumulative impacts of logging the area in the face of the changing climate, including higher temperatures, less snow, etc.

III. THE PROPOSED ACTION MUST COMPLY WITH THE NHPA.

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to "take into account the effect of [any] undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register [of Historic Places]." 16 U.S.C. § 470f. Federal courts have described section 106 as a "stop, look, and listen provision that requires each federal agency to consider the effects of its programs" on historic properties and cultural resources.[43]

For any undertaking, the federal agencies must: (1) "make a reasonable and good faith effort" "to identify historic properties within the area of potential effects," "which may include background research, consultation, oral history interviews, sample field investigation, and field survey;" (2) determine whether identified properties are eligible for listing on the National Register of Historic Places; (3) assess the effects of the undertaking on any eligible properties; and (4) avoid, minimize, or mitigate any adverse effects. 36 C.F.R. §§ 800.1(a), 800.4(b), 800.5, 800.6, 800.8(c)(1)(v) & (c)(4).

USFS should consult with tribes to determine whether cultural resources that require protection or avoidance exist in the project area. Regardless of any cultural and/or historic surveys that USFS has conducted in the past, the agency must ensure it meets its obligations under the NHPA for this specific project.

IV. THE PROPOSED ACTION MUST COMPLY WITH THE FOREST PLAN.

The National Forest Management Act (NFMA) requires that all projects conducted on a forest must be consistent with the area's Forest Plan. 16 U.S.C. § 1604(i). If a proposed site-specific decision is not consistent with the applicable plan, the responsible official may modify the proposed decision to make it consistent with the plan, reject the proposal; or amend the plan to authorize the action. In this case it is unclear that the proposed action complies with the Forest Plan for several reasons discussed below.

[43] *Mont. Wilderness Ass'n v. Connell*, 725 F.3d 988, 1005 (9th Cir. 2013).

a. USFS must explain how the proposed action will comply with standards, goals, objectives and strategies of the Forest Plan that are cited in the NOPA.

Silviculture Standard 5

Silviculture Standard 5 in the Forest Plan indicates that the maximum size of openings created by even-aged management will be 40 acres regardless of forest type. LRMP at 2-11.[44] This standard is critical because even-aged management can result in major impacts to structural and stage ratios and landscape patterns and it can have significant impacts on wildlife and wildlife habitat (e.g., by perforating habitats). See FEIS at 3-83, 3-93.[45] Large openings created by even-aged management can also have the effect of reducing species and age class diversity—which runs counter to the goals of this proposal.

Silviculture Standard 5 is subject to an exception if a proposal is available for a 60-day public review and the proposal is approved by the Regional Forester. See id.; see also NOPA at 11. Here, though, use of this exception may be inappropriate regardless of the comment period length due to potential impacts. The USFS must take a hard look at the potentially significant impacts of large even-aged treatments and consider whether there is a need to prepare a detailed EIS.

Here the proposed action would clearcut 1285 acres – more than two square miles. See NOPA at Table 1 (adding proposed clearcuts and coppice cuts). Seven of the proposed units exceed 40-acres in size, and several more units exceed this 40-acre limit when added together with adjacent units. With so many large even-aged cuts proposed, this project has the potential to have major impacts on wildlife and to reset large swaths of the project area to early seral stages rather than "increasing age and size class diversity at the stand scale…" as articulated in the Purpose and Need. See NOPA at 2.

The substantial acreage of even-aged treatments proposed in this project far exceed reasonable limitations of the Forest Plan and may result in significant impacts, including those discussed in the FEIS prepared for the current Forest Plan. Simply providing a longer comment period does not resolve these potential problems.

Goal 1 Ecosystem Health

[44] U.S. Dept. of Agric. (USDA), Forest Service, WRNF Land and Resource Management Plan (LRMP) (2002) available at https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_000999.pdf. The LRMP defines a "standard" as a "course of action that must be followed, or a level of attainment that must be reached, to achieve forest goals. Adherence to standards is mandatory. Standards are used to assure that individual projects are in compliance with the forest plan. They should limit project-related activities, not compel or require them. Deviations from standards must be analyzed and documented in a forest plan amendment." Id. at 2-1.

[45] USDA, Forest Service, Final EIS for the WRNF LRMP available at https://www.fs.usda.gov/detail/whiteriver/landmanagement/?cid=fsbdev3_001228.

USFS claims that this project promotes Goal 1 Ecosystem Health by complying with at least two objectives. NOPA at 12.[46] First, the agency claims the project will improve and protect watershed conditions as per Objective 1a. The agency must present evidence to support this claim. And the agency must consider the substantial body of science showing that logging and associated road building activities generally have deleterious impacts on watershed conditions.[47]

The agency also claims that the project will further Objective 1d by increasing the amount of forest and rangeland maintained in a healthy condition with reduced risk of fire, and damage from insects and invasive species. The FS must present evidence that the proposed management is necessary to restore or maintain the project area in a healthy condition, or that the project area is at risk from fires, insects, disease or invasive species.

Importantly, the NOPA suggests that this project comports with Strategies 1.d.7 and 1.d.9 to achieve Objective 1d. These strategies call for implementation of management practices, including prescribed fire and management that mimic ecological processes, to move landscapes toward desired conditions and the HRV. Here again, the FS provides no evidence that the project area is outside of the HRV or desired conditions. Further, of the 2,293 acres proposed for treatment, only 56 acres are proposed for burning—just over 2 percent. It is unclear whether, how, or to what extent the FS is claiming that other treatment types actually mimic ecological processes.

Further, MA 5.13 directs the USFS to prioritize converting "decadent and overmature stands to young stands…" (NOPA at 13) while the agency provides no evidence that targeted stands are decadent or overmature. MA 5.4 requires that timber harvest activities will pattern HRV. NOPA at 13. Again, though, the agency fails to present anything to suggest the project will pattern the HRV. At a minimum, the Forest Service should provide to the public in any subsequently prepared NEPA document stand exam data that discloses the character of each stand proposed for logging, so that the public can understand the current nature of the forest and whether the proposed action will comply with the plan.

Based on the dearth of evidence or detailed explanation in the NOPA, it is unclear that the project would promote Goal 1 Ecosystem Health from the Forest Plan. In fact, serious questions exist about whether the proposed action may undermine this goal.

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[46] The LRMP defines "goals" as "broad statements that describe overall conditions the forest will strive to achieve." "Objectives" are intended to be the means to accomplish goals, and "strategies" are the measurable steps USFS will take to achieve objectives and goals. LRMP at 1-1.

[47] See e.g., Elliot, William J.; Miller, Ina Sue; Audin, Lisa. Eds. 2010. Cumulative watershed effects of fuel management in the western United States. Gen. Tech. Rep. RMRS-GTR-231. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 299 p. (attached as Appendix 7) (providing an overview of the cumulative watershed effects of fuel management in the western United States); see also Jack Lewis, "An Analysis of Turbidity in Relation to Timber Harvesting in the Battle Creek Watershed, northern California" (Sept. 2014) (attached as Appendix 8); Jonathan J. Rhodes, "The Watershed Impacts of Forest Treatments to Reduce Fuels and Modify Fire Behavior" (Feb. 2007) (attached as Appendix 9); C.A. Troendle & W. K. Olsen, "Potential Effects of Timber Harvest and Water Management on Streamflow Dynamics and Sediment Transport" (attached as Appendix 10).

Goal 4 Effective Public Service

USFS claims that this project promotes Goal 4 Effective Public Service by improving the safety and economy of Forest Service roads, trails, facilities, and operations. The agency says that this project comports with Strategy 4a.1 under Goal 4 which requires that "Within five years of plan approval, conduct appropriate maintenance on 25 percent of the Forest Development Transportation System each year." NOPA at 11.

This claim is problematic for several reasons. First, it is unclear the strategy is still applicable given that the Forest Plan was approved more than five years ago – in fact the plan was approved 18 years ago. Second, while this project proposes to reconstruct, maintain and recondition some existing routes, it also adds new temporary roads at a time when the agency has committed to reducing the road miles on the Forest due to environmental and financial costs. That hardly improves the economy of the agency's transportation system.

Goal 5 Public Collaboration

USFS claims that this project promotes Goal 5 Public Collaboration by complying with Strategy 5a.1, which requires opportunities for interested parties to participate in planning and management. However, given the ongoing public health crisis related to COVID-19 and the executive order declaring a national state of emergency on March 13, 2020, it seems that the USFS should suspend this project to ensure effective engagement with the public.[48]

Suspending the project to ensure effective public engagement is in line with a multitude of other requests submitted across the country, including requests from Members of Congress, attorneys general, and state and local governments to extend public comment periods for rulemaking efforts and other processes during the novel coronavirus pandemic.[49] We recognize the significant impact of the COVID-19 pandemic on normal working and living conditions, impairing the ability of the general public, issue experts, and others to conduct their daily routine, regular business, conduct site visits, locate material in libraries, and/or weigh in on federal government

[48] https://www.whitehouse.gov/presidential-actions/proclamation-declaring-national-emergency-concerning-novel-coronavirus-disease-covid-19-outbreak/.

[49] *E.g.*, Letter from seventy Members of Congress to Secretary Bernhardt, submitted April 14, 2020: https://lowenthal.house.gov/sites/lowenthal.house.gov/files/ASL%20Letter%20to%20DOI%20-%20Comment%20Periods%20-%20FINAL.pdf; Letter from fourteen House of Representatives Committee Chairs to Acting Director Russell Vought, submitted April 1, 2020: https://www.eenews.net/assets/2020/04/02/document_gw_08.pdf; Letter from Senators Wyden, Merkley, and Udall to Secretary Bernhardt requesting a pause on comment periods, submitted April 3, 2020: https://www.wyden.senate.gov/imo/media/doc/040320%20Letter%20on%20DOI%20comment%20periods.pdf; Letter from state attorneys general to Acting Director Russell Vought, submitted March 31, 2020: https://portal.ct.gov/-/media/AG/Press_Releases/2019/COVID-19-Rule-Delay-Letter---Final.pdf?la=en; Letter from various state and local government organizations requesting a pause on all public comment and rulemaking processes, submitted March 20, 2020: https://www.nga.org/letters-nga/state-and-local-government-organizations-seek-pause-on-public-comments-on-rulemaking-processes/.

actions affecting them. The country's attention is focused on keeping families healthy and safe, and complying with extraordinary measures being implemented to contain and limit the spread of the disease.

For the agency's request of public comment to be meaningful, it is critical that the entire public have adequate time and capacity to comment. It is noteworthy that administrative actions and public comment periods for other federal agency actions are being suspended or extended for "to be determined" amounts of time due to the national emergency.[50] As such, we request the project be suspended and/or the public comment period be extended until the COVID-19 pandemic is well enough under control to allow for appropriate public engagement and oversight.

b. USFS must show that the proposed action will comply with standards, goals, objectives and strategies of the Forest Plan and Amendments to the Plan that are not cited in the NOPA.

Goal 1 Ecosystem Health

Forest Plan Goal 1, Objective 1c requires the WRNF to: "Help ensure viability of species of concern for the White River National Forest." The project area overlaps habitat for several species of concern, including: Cutthroat Trout, amphibians, sage grouse, sensitive bats, and Canada Lynx. See LRMP at 1-4 – 1-7; 1-8 – 1-9. The proposed logging activities have the potential to affect these species in ways that contravene the Plan.

For example, Strategy 1c.14 requires the USFS to "[m]aintain corridors for interaction between adjacent populations of boreal toads and between adjacent populations of leopard frogs." LRMP at 1-5. Proposed vegetation projects, including new temporary roads, have the potential to sever these corridors in the project area.

Strategy 1c.17 requires the USFS to manage "snag, tree roost, and forage habitat to maintain survival and reproductive success" of sensitive bat species. LRMP at 1-5. The proposed action has the potential to impact these sensitive resources. As noted above, the project area includes habitat of Brazilian Free-tailed bat.

Strategy 1c.20 requires the USFS to "maintain or enhance habitat quality and reproductive success" in known Sage Grouse habitat by reducing temporary and permanent modifications to sagebrush cover types including road development, by maintaining native vegetation, and by protecting springs, seeps and riparian areas to ensure high levels of insect and succulent

[50] *E.g.*, the Dept. of Interior's Board of Land Appeals extended all filing deadlines by 60 days in response to COVID-19; the Daniel Boone National Forest Supervisor sent a letter to relevant parties suspending the public objection period in light of COVID-19; U.S. Forest Service extended a public comment period for the Nantahala and Pisgah forest plan revision with the length of time to be determined. Available at https://www.fs.usda.gov/detail/nfsnc/home/?cid=stelprdb5397660.

herbaceous forage. LRMP at 1-6. The proposed treatments have the potential to impact reduce and/or degrade known sage grouse habitat and undermine this strategy.

Goal 4 Effective Public Service

Objective 4a requires the USFS to improve the safety and economy of Forest Service roads, trails, and operations. LRMP at 1-14. One of the strategies to achieve this objective the is for the WRNF to decommission an average of 22 miles of Forest Development Transportation System roads each year. See Strategy 4a.2, at id. It appears that this project may add mileage to the system. The USFS should address how/whether the proposed action furthers this goal.

Goal 6 American Indian Rights and Interests

The Forest Plan requires close coordination between the USFS and tribal governments. Objectives and strategies outlined in this section of the plan make it clear that the FS must proactively engage representatives from tribal governments above and beyond a public scoping notice. Directives in the plan also make it clear that the USFS must provide appropriate protection for sacred sites, ceremonial cites, and traditional use sites that may overlap the project area, and must engage in government-to-government consultation with impacted tribes.

Forest-wide Standards and Guidelines

Soils Standards 5 and 7 provide specific thresholds requiring the USFS to maintain and improve soil quality and retain coarse woody debris to maintain soil productivity, limit soil movement, retain soil moisture, and provide microsites for new plants. LRMP at 2-5. Guidelines related to these standards that are also applicable to the proposed project require slope stability examinations, limiting activity on unstable slopes, plans to prevent soil contamination, restrictions on winter logging, limitations on methods of slash disposal, as well as restrictions on skid trails and management of heavy equipment. Id. The NOPA makes no mention of these standards and guidelines.

Standards related to water and riparian resources require "projects maintain sufficient habitat, including flow, for all life stages of native and desired non-native aquatic species." LRMP at 2-6. The USFS is also prohibited from removing natural debris from stream channels unless a safety threat. Id. Guidelines provide additional sideboards related to retention of large woody debris, and vehicle and equipment restrictions in streams, lakes and wetlands. Id. Once again, there is no discussion of these standards and guidelines in the NOPA.

Biodiversity standards require the USFS to develop prescriptions related to the amount, size, and distribution of downed logs and snags that will be left on site after implementation of a project. LRMP at 2-7. Guidelines for implementation of biodiversity standards require prioritization of native and desirable non-native plant and animal species over undesirable exotic species during management plan implementation activities. Id., at 2-8. Guidelines also require the USFS to analyze the historical spatial and structural occurrence of aspen in the landscape during project

design. The agency is then required to compare anticipated changes to reference landscape conditions where such conditions have been developed. These comparisons should involve the same ecological landtype. Reference landscape conditions should provide a baseline depiction of the spatial attributes, including landscape composition; landscape configuration; patch and size distribution; and distance between patches. The goal is to "maintain or enhance these attributes when compared to the reference landscape." Id. The guidelines provide these priorities for aspen regeneration:

- Decadent stands (stands with significant amounts of canker, stem decay, and root disease);
- Stands with less than 10 feet per acre basal area of aspen in a conifer stand;
- Isolated clones, low-elevation stands, and stands that are heavily used by animals; and
- Cost-efficient stands that contribute to aspen distribution.

Id. Guidelines further direct to USFS to prioritize conserving potential or existing late-successional stands based on biotic diversity, size, adjacency between late-successional stands, the degree of habitat variation between such late- successional stands and intervening vegetation, and to consider the following:

- Conserve older, unmanipulated stands over younger, manipulated stands;
- Favor stands with limited access by humans or livestock; and
- Provide potential for reintroduction of plant and animal species that have become locally eliminated.

Id.

Wildlife standards require the USFS to manage human disturbance to protect bat populations and retain all snags and trees known to be used as bat roosts. See Wildlife Standards 2 and 4, LRMP at 2-16. Related guidelines require USFS to retain drinking water for bats with limited open water access. See wildlife guideline 4, LRMP at 2-17. The project area overlaps with habitat for at least one bat species: Brazilian Free-tailed bat.

Standards also require protection of raptor nests with buffers and timing restrictions. See Wildlife Standard 5, LRMP at 2-16. Bald Eagles and Goshawks are two raptors with known habitat in the area. Clearcuts will obviously not protect nests if found within those units.

The USFS must maintain suitable habitat along a minimum of 80 percent of the length of riparian zones in the project area and space any disturbance to the corridors to minimize fragmentation. See Wildlife Standard 6, LRMP at 2-16. In this case, the project area includes several riparian zones and important riparian vegetation, at least one clearcutting unit (104) appears to overlap a creek, and others either overlap or are directly adjacent to streams (including units 108, 207, 208, and 209), but no mention is made of this standard in the NOPA. See NOPA, Figures 2-4. We

urge the Forest Service to map riparian zones and overlay those areas with the cutting units so that the public and decisionmaker can understand the juxtaposition.

Standards in the LRMP prohibit any vegetation treatments or new roads or trails that reduce elk habitat effectiveness below 0.40 by Data Analysis Unit (DAU), or that further reduce effectiveness of already degraded habitat. See Wildlife Standard 7, LRMP at 2-16. The project area overlaps a big game priority migration corridor in CPW's Colorado Action Plan, as described elsewhere in these comments). It also overlaps important elk habitat including: migration, production, winter range, severe winter range, winter concentration, overall range, summer concentration, and summer range. The Forest Service must present evidence that habitat effectiveness in the area will not fall below that threshold as a result of activities associated with the proposed action. We urge the Forest Service to map these important elk habitat areas and overlay those areas with the cutting units so that the public and decisionmaker can understand the juxtaposition.

Wildlife related guidelines require USFS to take wildlife into consideration when permitting new infrastructure, including roads and bridges. See Wildlife Guidelines 1 and 4, LRMP at 2-17. This is critically important in areas, like the project area, with sensitive Colorado River Cutthroat Trout habitat, as well as important habitat for various other wildlife species.

Standards related to all proposed, threatened, and endangered species require restrictions on all activities to avoid disturbance during breeding, young rearing, or at other times critical to survival. See Proposed, Threatened, and Endangered Species and Sensitive Species Standard 2, LRMP at 2-18. Sensitive species are to be protected from activities that may result in a trend toward listing or loss of viability. See Proposed, Threatened, and Endangered Species and Sensitive Species Standard 3, LRMP at 2-18. These standards are applicable to several species listed above with habitat in the project area.

Plan standards require protection of Bald Eagle habitat. For example, if a winter roost or nest site is discovered, the USFS must write a management plan to ensure that the necessary habitat components are maintained. Standard 1, LRMP at 2-24. The plan also prohibits human activities within 250 yards of bald eagle winter roosting areas between November 15 and March 1, and prohibits human activities within 400 yards of an active nest between February 1 and August 15. Standard 2, LRMP at 2-24.

To protect or enhance Colorado River Cutthroat Trout habitat the Forest Plan includes standards requiring the USFS to reduce sedimentation from roads and trails, and to maintain pool depths, riparian vegetation, and large woody debris in streams where projects have potential to impact occupied trout habitat, sensitive tributaries, or areas identified for reintroduction. Standard 1, LRMP at 2-25. In certain areas the USFS is also required to "maintain or reduce existing net density of roads (open or closed) to restore or prevent alteration of the hydrologic function of the sub-watershed. Temporary roads must be decommissioned upon project completion." Standard 2, LRMP at 2-25.

Guidelines intended to protect Colorado River Cutthroat restrict construction of new roads within 350 feet of occupied cutthroat streams or within 150 feet from the edge of the current or historic floodplain, whichever is greater, to maintain hydrologic function and limit road-related stream sediment. Guideline 1, LRMP at 2-25. Guidelines further direct USFS to decommission roads adjacent to cutthroat trout streams and their tributaries, when possible, to reduce direct impacts to cutthroat habitat, or to improve hydrologic function. Guideline 2, LRMP at 2-25. We urge the Forest Service, at a minimum, to map cutthroat trout streams and overlay those streams with the cutting units so that the public and decisionmaker can understand whether and how the Forest Service is complying with this requirement.[51]

Methods for decommissioning roads should emphasize restoring hydrologic function in occupied habitat. Guideline 3, LRMP at 2-25.

Standards to protect Boreal Toad and Leopard Frog habitat in the project area prohibit any loss or reduction in habitat quality of occupied or known historic habitat. Standard 1, LRMP at 2-25. Projects must maintain adequate vegetation cover around occupied boreal toad or leopard frog breeding ponds to minimize avian predation on newly metamorphosed frogs and toads. Standard 2, LRMP at 2-25. Standards also limit use of chemical herbicides and vegetation management techniques within 300 feet of occupied or known historic boreal toad habitat. Standard 3, LRMP at 2-26. We urge the Forest Service, at a minimum, to map the habitat of these toads and overlay that habitat with the cutting units so that the public and decisionmaker can understand whether and how the Forest Service is complying with this requirement.

Guidelines further restrict prescribed fire treatments within 3 miles of occupied boreal toad breeding sites and vegetation management projects involving heavy equipment to late fall and early spring. Guideline 1, LRMP at 2-26. Construction of new roads and trails within 300 feet of occupied or known historic boreal toad and leopard frog breeding sites are also restricted. Guideline 2. And where roads or trails are located within 300 feet of occupied or historical boreal toad or leopard frog breeding sites, USFS must consider reclaiming, redirecting, or redesigning those to minimize direct mortality and disturbance of adjacent vegetation. Guideline 4, LRMP at 2-26.

Standards in the plan require the USFS to protect or enhance habitat for Sage Grouse by managing for native vegetation, retaining a minimum of five percent of sagebrush over 48 inches in height, and maintaining a minimum of 20 percent canopy cover of sagebrush. Standard 1, LRMP at 2-28. The agency is also required to restrict use of insecticides and maintain adequate forage insects in sage grouse habitat. Standard 2, LRMP at 2-28. Standards further require the agency to:

> Maintain and manage such that a minimum of 15 percent continuous canopy cover of herbaceous plants averaging at least 7 inches in height is retained in sage grouse nesting

[51] Importantly, too, a guideline for MA 5.4 requires the USFS to "protect, enhance, and restore habitat for native fishes." LRMP at 3-56.

habitat during the sage grouse nesting and early brood-rearing season (generally from April 1 to July 31). If the herbaceous vegetation in an area cannot provide an average of at least 7 inches in height, maintain 15 percent continuous herbaceous plant canopy cover of the highest average height possible.

Standard 3, LRMP at 2-29. And, finally, the FS must restrict activities that have the potential to impact sage grouse breeding activities from April 1 to July 31 in areas where breeding is known or suspected in order to minimize any negative impacts to reproductive success or survival. Standard 4, LRMP at 2-29.

Guidelines related to Sage Grouse restrict burning of sagebrush patches larger than five acres to less than 15% of sage grouse habitat over a ten-year period to maintain an adequate seed source for sagebrush regeneration. Guideline 1, LRMP at 2-29. "If restoration of habitat in occupied sage grouse habitat is deemed necessary, [USFS must] design treatments to meet the goals as recommended in area specific sage grouse management plans." Guideline 2, LRMP at 2-29. Vegetation management projects must be designed so that a mosaic distribution of open and closed canopy will result; to remove invading conifers and maintain and expand sagebrush cover; to reduce or eliminate non-native plant species and promote reestablishment of native species; and to limit use of herbicides to minimize impacts on sagebrush. Guideline 3, LRMP at 2-29.

Southern Rockies Lynx Amendment

In 2008, the USFS amended the 2002 WRNF LRMP with the Record of Decision (ROD) approving the Southern Rockies Lynx Amendment (SRLA).[52] The SRLA provides additional guidance related to USFS's management activities in lynx habitat, including the project area.

The SRLA makes clear that vegetation management can directly affect lynx habitat, particularly by altering habitat for its primary prey, the snowshoe hare. The amount and quality of snowshoe hare habitat, especially winter habitat, directly affects lynx survival, reproduction, and population persistence. SRLA ROD at 6. The Canada Lynx Conservation Assessment and Strategy (LCAS) also identified risk factors affecting lynx productivity (pp. 2-2 to 2-15) including timber management, wildland fire management, forest backcountry roads and trails, and other human developments.[53] So there is clearly potential for the proposed action to impact lynx and lynx habitat.

[52] USDA, Forest Service, Southern Rockies Lynx Management Direction ROD (2008) is available at https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd508060.pdf. The ROD says "[t]he 2008 Biological Opinion for this amendment supersedes any requirements specific to lynx that were established under previous Biological Opinions for amended or revised Plans (i.e., […] White River Revised Plan …)." SRLA ROD at 31. To the extent requirements in the 2002 LRMP were not superseded by the 2008 ROD, those must also be considered by the USFS before approving this project.

[53] Ruediger, Bill, et. al. Canada lynx conservation assessment and strategy. USDA Forest Service, USDI Fish and Wildlife Service, USDI Bureau of Land Management, and USDI National Park Service. Forest Service Publication #R1-00-53, available at https://www.fws.gov/mountain-prairie/es/species/mammals/lynx/ruedigeretal_2000.pdf.

Objectives in the SRLA related to vegetation management activities require the USFS to manage vegetation to mimic natural succession and disturbance processes while maintaining habitat components necessary for the conservation of lynx (VEG O1); provide a mosaic of habitat conditions through time that support dense horizontal cover and high densities of snowshoe hare, including winter snowshoe hare habitat in stand initiation stage and in mature, multi-story conifer vegetation (VEG O2); conduct fire use to restore ecological processes and maintain or improve lynx habitat (VEG O3); and to focus management in areas with potential to improve winter snowshoe hare habitat, but that have poorly developed understories and lack dense horizontal cover (VEG O4).

Standards from the SRLA that the USFS is required to comply with to achieve the objectives above include:

- ALL S1 require the USFS to maintain and restore lynx habitat connectivity in and between LAUs, and in linkage areas.
- VEG S1 prohibits vegetation management projects in LAUs where more than 30 percent of habitat is currently in unsuitable condition.
- VEG S2 generally prohibits the USFS from undertaking vegetation management to change more than 15 percent of lynx habitat to unsuitable condition in any 10-year period.
- VEG S6 sets generally prohibits vegetation management projects that reduce snowshoe hare habitat in multi-story or late successional conifer forests unless a project falls into one of four distinct categories. The only category that appears applicable here requires uneven-aged management (single tree and small group selection) practices are employed to maintain and encourage multi-story attributes as part of gap dynamics. Project design must be consistent with VEG O1, O2 and O4, except where impacts to areas of dense horizontal cover are incidental to activities under this exception (e.g., construction of skid trails). If VEG S1 is exceeded, these activities are not permitted.

SRLA ROD, at Attachment 1-1. The following guidelines from the SRLA provide additional guidance on Standards listed above.

- Guideline VEG G1 requires that vegetation management projects are planned to recruit a high density of conifers, hardwoods, and shrubs where such habitat is scarce or not available. Priority for treatment should be given to stem-exclusion, closed-canopy structural stage stands to enhance habitat conditions for lynx or their prey (e.g. mesic, monotypic lodgepole stands). Winter snowshoe hare habitat should be near denning habitat.
- Guideline VEG G4 requires prescribed fire activities should not create permanent travel routes that facilitate snow compaction. Constructing permanent firebreaks on ridges or saddles should be avoided.
- Guideline VEG G5 requires USFS to provide habitat for alternate prey species, primarily red squirrel, in each LAU.

- Guideline VEG G11 requires that denning habitat should be distributed in each LAU in the form of pockets of large amounts of large woody debris, either down logs or root wads, or large piles of small wind thrown trees ("jack-strawed" piles). If denning habitat appears to be lacking in the LAU, then projects should be designed to retain some coarse woody debris, piles, or residual trees to provide denning habitat in the future.

Other objectives, standards and guidelines are relevant to management of lynx habitat in the project area. For example, maintaining habitat connectivity is a critical theme throughout the agency guidance. See e.g., Objective ALL O1 and Standard ALL S1 in the SRLA. Some guidance applies to specific activities associated with this project (e.g., road building or reconstruction), but not to the vegetation treatment specifically. For example. Human Use Objective O1 directs the USFS to maintain lynx's natural competitive advantage over other predators in deep snow by discouraging snow compaction. SRLA ROD, at Attachment 1-6. Guideline HU G8 directs the USFS to cut brush to the minimum level necessary to provide for public safety along low-speed, low-traffic-volume roads. SRLA ROD, at Attachment 1-8. Guideline HU G9 requires that if project level analysis determines that new roads adversely affect lynx, then public motorized use should be restricted, and upon project completion, these roads should be reclaimed or decommissioned. Id.

To the extent that the project area includes linkage areas in occupied lynx habitat, all objectives, standards and guidelines related to Linkage Areas in the SRLA apply and must be complied with. See SRLA ROD, at Attachment 1-8 – 1-9.

Importantly, as discussed below, the SRLA also includes specific monitoring requirements related to lynx that USFS must comply with here. Prior to authorizing this new project, the agency must ensure it is in compliance with existing monitoring requirements and ensure protocols are in place to comply with monitoring requirements moving forward. See e.g., internal cite; see also SRLA ROD, at Attachment 1-9.

Sage Grouse Amendments

As noted above, the project area includes historic habitat for Greater Sage Grouse. Specific standards and guidelines in the LRMP related to Sage Grouse are cited above. The White River National Forest was not included in the west-wide greater sage-grouse conservation planning effort that culminated in the 2015 Record of Decision and Land Management Plan Amendments for Northwest Colorado[54], or ensuing planning the Forest Service has undertaken related to the greater sage-grouse conservation plans.[55] Therefore, the WRNF cannot rely on any programmatic or site-specific analysis that the Forest Service completed through those planning efforts for greater sage-grouse. The WRNF must ensure impact analysis, including cumulative

[54] USDA, Forest Service, Greater Sage-grouse ROD and Land Management Plan Amendments for Northwest CO and WY (Sept. 2015), available at https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd567900.pdf.
[55] USDA, Forest Service, "Greater Sage-Grouse Home Page" available at https://www.fs.usda.gov/detail/r4/home/?cid=stelprd3843381 (last accessed Apr. 20, 2020).

impact analysis, is completed at the project level for any projects that may impact greater sage-grouse habitat.

c. USFS must ensure compliance with monitoring requirements of the Forest Plan.

NFMA requires "continuous monitoring and assessment in the field" to evaluate "the effects of each management system to the end that it will not produce substantial and permanent impairment of the productivity of the land." 16 U.S.C. § 1604(g)(3)(C). The goal is simple, monitor progress to ensure stated goals and objectives are being achieved and public resources are being enhanced rather than degraded.

In 2012 the USFS implemented a new planning rule that includes an ongoing three-part iterative process of assessment, planning, and monitoring. Under this rule, monitoring supports assessment and evaluation of the forest plan over time, and the effectiveness of implementation decisions. This planning framework is designed to "inform integrated resource management and allows the Forest Service to adapt to changing conditions, including climate change, and improve management base on new information and monitoring." 36 C.F.R. § 219.5 (a). In May of 2016 the WRNF adopted an Updated Monitoring Plan based on the 2012 Planning Rule.[56]

Under the framework established by the 2012 Planning Rule and adopted by the WRNF, a monitoring plan consists of "monitoring questions and associated indicators" which "must be designed to inform the management of resources on the plan area, including by testing relevant assumptions, tracking relevant changes, and measuring management effectiveness and progress toward achieving or maintaining the plan's desired conditions or objectives." 36 C.F.R. § 219.12(a)(2)).

A monitoring evaluation report is required every two years and made available to the public. 36 C.F.R. § 219.12(d). It "must indicate whether or not a change to the plan, management activities, or the monitoring program, or a new assessment, may be warranted based on the new information... [and] must be used to inform adaptive management of the plan area." 36 C.F.R. § § 219.12 (d)(2).[57]

Based on review of the WRNF website, it appears that the Forest has prepared no monitoring reports since 2007.[58] Obviously, this is problematic because the annual monitoring evaluation

[56] USDA, Forest Service, White River Forest Plan: Updated Monitoring Plan (May 6, 2016), available at https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd500459.pdf.

[57] The monitoring program and evaluation report are part of the administrative record and the Forest Supervisor must document "how the best available scientific information was used to inform planning, the plan components, and other plan content, including the plan monitoring program." 36 C.F.R. §§ 219.13(a)(4), 219.14(b). Forests will also have to document how Best Available Scientific Information (BASI) is used to develop the monitoring plan and specific monitoring items.

[58] See WRNF Land & Resource Management webpage at https://www.fs.usda.gov/detail/whiteriver/landmanagement/?cid=fsbdev3_001228 (last accessed Apr. 17, 2020) (scroll to the bottom of the page to see monitoring reports from 2004-2007, but nothing more recent than that).

report is required to be released to the public every two years. 36 C.F.R. § 219.12(d); see also WRNF Updated Monitoring Plan at 4-4. It is also problematic in this case because the USFS is proposing management actions to change forest conditions, purportedly in furtherance of forest plan goals, without data or information to test relevant assumptions or track relevant changes, and without any real information measuring management effectiveness and progress toward achieving or maintaining the plan's desired conditions or objectives. 36 C.F.R. § 219.12(a)(2)).

Here, the USFS claims this project will improve forest resilience by maintaining and/or increasing age and size class diversity at the stand and landscape scale. But the agency has presented no actual evidence that the planning area lacks resilience and diversity, or evidence as to the current age and size class diversity of stands in the project area, or whether and how the proposed action would effectively achieve the agency's stated goals. Information gleaned from monitoring could support the agency's proposed action. On the other hand, updated monitoring data could undermine USFS assumptions underlying this project. Either way, the agency does not appear to have the requisite monitoring data required by the Forest Plan or by NEPA's hard look mandate.

Importantly, there are numerous specific monitoring questions in the WRNF's Updated Monitoring Plan that directly relate to sensitive resources in the project area, the efficacy of this proposed action, and to standards, goals, objectives and strategies the Forest Service claims that this project will further. Here are some examples taken from the Updated Monitoring Plan at 4-6 – 4-18:

- These questions relate to Goal 1 Ecosystem Health, Objectives 1a and 1d, which the USFS claims this project supports:
    - Is the unit improving condition in priority watersheds?[59]
    - Are Best Management Practices (BMPs) implemented, and are they effective at protecting water quality?
    - Is the unit maintaining or improving watershed condition class in non-priority watersheds?
    - What are the status and trends of insects and disease in and around the plan area?
    - How are major vegetation types on the planning unit changing over time?
- These questions relate to the status of focal species that may be impacted by the proposed action:
    - Is Forest management contributing to conditions that maintain or improve biological stream health trends for lotic macroinvertebrate communities?
    - What do red squirrel populations tell us about the extent and condition of mid to late successional forested ecosystems on the planning unit?

[59] This question may only apply to priority watersheds.

    - What are the status and trends of select avian species on the White River National Forest?[60]
    - What is the status and trend of cutthroat trout across the planning area?
    - What is the status and trend of boreal toads and northern leopard frogs being across the planning area?
    - What is the status and trend of early successional conifer and late seral spruce-fir forests to promote recovery of Canada lynx?
- This question relates to climate change and other stressors, and probably relates to resilience in the planning area:
    - What are the status and trends of snowpack and precipitation in the planning area?
- The following questions relate to the USFS's progress toward meeting desired conditions and objectives, including Goal 5 Public Collaboration and Goal 4 Effective Public Service—which USFS claims this project will support:
    - What are the contributions from the range, timber, recreation, and minerals program from the National Forest or Grassland?
    - To what extent have management activities on the Forest complied with Section 110 of the National Historic Preservation Act and provided quality heritage recreational experiences?
    - What are the status and trends of roads and trails in the White River NF?
    - Are project level design criteria and mitigation measures addressing ground disturbing management activities meeting the direction to "...maintain or improve levels of soil organic matter on all lands" through bare ground rehabilitation projects?
- The following question relates to the substantial and permanent impairment of soils:
    - What are the status and trends of soil productivity?

There are additional monitoring requirements mandated by the SRLA that include:

1. Maps of the location and intensity of snow compacting activities and designated and groomed routes that occurred inside LAUs during the period of 1998 to 2000 constitute baseline snow compaction. Changes in activities and routes are to be monitored every five years after the decision.
2. When fuels treatment and vegetation management project decisions are signed, report the following:
    a) Acres of fuel treatment in lynx habitat by Forest and LAU, and whether the treatment is within or outside the WUI as defined by HFRA.
    b) Whether or not the fuel treatment met the vegetation standards or guidelines. If standard(s) were not met, report which standard(s) was not met, why it could not be met, and how many acres were affected.

[60] Monitored species may include American pipit (alpine), hairy woodpecker (all forest types), golden-crowned kinglet (late seral conifer), mountain bluebird (open forests), Brewer's sparrow (sagebrush), and common flicker (cavity excavator). Updated Monitoring Plan at 4-10.

c) Application of exceptions in Standard VEG S5:
   For areas where any of the exceptions 1 through 5 listed in Standard VEG S5 were applied, report the type of activity, the number of acres, and the location (by unit, and LAU) and whether or not Standard VEG S1 was within the allowance.
d) ApplicationofexceptionsinStandardVEGS6:
   For areas where any of the exceptions 1 through 4 listed in Standard VEG S6 were applied, report the type of activity, the number of acres, and the location (by unit, and LAU) and whether or not Standard VEG S1 was within the allowance.
e) Total acres of lynx habitat treated under exemptions and exceptions to vegetation standards, to assure the 4.5 percent limit is not exceeded on any Forest over the life of the amendment (15 years).

3. Application of guidelines:
   a) Summarize what guideline(s) was not followed and why.
   b) Document the rationale for deviations to guidelines.

SRLA ROD, at Attachment 1-9. Prior to approving any new activity in the project area, the USFS must ensure that these and any other applicable monitoring requirements of the Forest Plan and pertinent amendments have been complied with and will be complied with moving forward. Information gleaned from monitoring and evaluation should be utilized to justify or modify the proposed action, including compliance with standards discussed above, and to confirm the proposed action will be effective in maintaining or achieving progress toward desired conditions and objectives. This information is critical to understanding whether the proposed action will effectively achieve the purpose and need of this project and the goals of the Forest Plan.

V. USFS MUST CONSIDER POTENTIAL IMPACTS OF ROADS AND ROAD CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED ACTION.

The NOPA indicates that 12.2 miles of temporary road would be needed to implement the proposed action. NOPA at 10. Numerous other road related activities are proposed, including road reconstruction, road re-routing, construction of roadside ditches, culvert installation, turnout construction, low water crossings, and creation and use of new material sources for these activities. NOPA at 9-10.

Prior to approving this project, the USFS must disclose and consider the potential impacts of all new road construction and associated activities, as well as the environmental impacts of any existing non-system roads that will be utilized for implementation. Importantly, the WRNF Travel Management Plan (TMP) does not distinguish between temporary and permanent roads when defining and quantifying "new road construction."[61] The analysis must rely on current road ecology literature and include science-based habitat fragmentation analysis. The USFS must evaluate alternatives to mitigate the impacts of roads in the project area.

[61] See USDA, Forest Service, FEIS for the WRNF Travel Management Plan (TMP) (March 2011), App. A at A-14 ("new road construction" includes: "Activity that results in the addition of forest or temporary road miles.), available at https://www.fs.usda.gov/nfs/11558/www/nepa/1118_FSPLT2_048805.pdf.

a. USFS must analyze all road-related impacts, including specifically the impacts associated with temporary roads.

The TMP confirms that now is the time to consider these impacts. In discussing the cumulative impacts of timber management activities and vegetation treatment projects, the TMP makes clear that "the effects would be analyzed in the project environmental analysis prior to approval." See WRNF TMP FEIS, at 114. Constructing new temporary roads for this project was not previously considered by the USFS.

Importantly, too, it is unclear that the impacts of existing non-system roads that would be relied upon to implement this project have ever been fully considered under NEPA. Non-system roads are the same as unauthorized roads and have not been incorporated into the designated travel management system. See TMP FEIS, App. A at A-14, A-22 (defining "non-system roads" and "unauthorized roads"). Since the TMP focused on analyzing impacts of the designated travel management system, it appears that non-system roads in the project area have never been analyzed under NEPA despite the impacts those roads are having on the environment. Further, road ecology has evolved since the 2002 Forest Plan was completed, and the USFS must ensure it uses the best available science in analyzing potential impacts on elk and other wildlife. See, e.g., McCorquodale 2013; Bennett et al. 2011. The USFS should consider new science and potential impacts now.[62]

The Forest Service has long acknowledged that temporary roads can have significant impacts. In its analysis of the Roadless Area Conservation Rule – which generally barred the construction of both permanent and temporary roads – the agency stated:

> Although only used for relatively short periods, temporary roads present most of the same risks posed by permanent roads, although some may be of shorter duration. Many of these roads are designed to lower standards than permanent roads, are typically not maintained to the same standards, and are associated with additional ground disturbance during their removal…. While temporary roads may be used for periods ranging up to ten years, and are then decommissioned, their short- and long-term effects can be extensive to terrestrial species and habitats.[63]

[62] See e.g., *Wilderness Soc'y & Prairie Falcon Audubon, Inc. v. United States Forest Serv.*, 850 F. Supp. 2d 1144, 1157 & 1162 (D. Idaho 2012) (USFS decision to open non-system routes without taking a hard look at the impacts was arbitrary and capricious).

[63] USDA Forest Service, Final Environmental Impact Statement, Roadless Area Conservation Rule (Nov. 2000) at 3-150 excerpts attached as Appendix 11. *See also id.* at 3-30 ("temporary roads are not designed or constructed to the same standards as classified roads and are not intended to be part of the National Forest System Transportation System. The results can be a higher risk of environmental impacts over the short run."); *id.* at 3-164 (concluding that "[t]emporary roads present most of the same risks posed by permanent roads" to rare plants, "although some [impacts] may be of shorter duration.").

The Final EIS on the Roadless Rule also noted that "[t]he use of temporary roads may have the same long lasting and significant ecological effects as permanent roads, such as the introduction of nonnative vegetation and degradation of stream channels."[64] Temporary "[s]kid roads and trails, log landings, and similar disturbances within the [timber] sale area are the main cause of soil erosion and can contribute up to 90% of the sediment generated by timber sale activity (Patric 1976; Swift 1988)."[65] The Roadless Rule Final EIS acknowledges that temporary road construction can cause increased risk of surface erosion and landslides, but that this varies widely and depends on local site characteristics.[66] But "local site characteristics" are not disclosed in the Revised EA because that document fails to disclose the location of proposed temporary roads.

All potential impacts of new material source areas must be disclosed and analyzed as well. NOPA at 11. It is not clear if roads to new material sources will be closed, or closed and revegetated altogether at the end of this project. Is the goal to develop these areas to support additional projects down the road? Are any of those projects foreseeable? If so, USFS should discuss those in the EA.

b. USFS must conduct habitat fragmentation analysis if any new roads are authorized for this project, including temporary and non-system roads.

Habitat fragmentation consists of two different processes that simultaneously and negatively affect wildlife species: (1) a reduction in the overall habitat available to wildlife species – habitat loss; and (2) the creation of isolated patches of habitat separated from what was once the contiguous landscape. Crooks and Sanjayan 2006. There are many ways to measure habitat fragmentation; three of the most useful metrics, due to their ease of calculation and direct connection to biological field research, are road density, number and size of core areas, and distance to road. Conducting spatial analysis is critical to quantify these metrics and understand impacts to species and populations, and to ultimately make decisions that avoid, minimize or mitigate those impacts.

We recommend the USFS conduct the following spatial analyses to measure habitat fragmentation and assess the ecological impact of the existing and proposed roads in the project area: 1) density analysis of existing and proposed roads, including temporary roads; 2) buffer analysis to examine the effect zone of the roads; and 3) core area analysis. These analyses are described in The Wilderness society's report, "Ecological Effects of a Transportation Network on Wildlife."[67] The analysis must disclose route density in the area currently (under the no action alternative) as well as during and after implementation of the project.[68]

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[64] Id. at 2-18.
[65] Id. at at 3-45.
[66] Id. at at 3-45.
[67] See App. 14 (attached)
[68] Note the 2002 LRMP concluded that route densities on the WRNF were affecting elk populations based on a well-known study by L.J. Lyon (1983) that found when road densities neared 1 mile per square mile in optimal elk habitat, potential elk use dropped from 100% to 60%. See LRMP at 181 (citing Lyon, J.L. 1983. Road density models

Wildlife literature can be tied directly to habitat fragmentation metrics through field studies measuring the effects of different road densities, the size requirements for core areas, and the widths of road effect zones for particular species (Gucinski et al. 2001, Gaines et al. 2003, Wyoming Game and Fish Department 2004, New Mexico Department of Game and Fish 2005). The USFS can and should use wildlife literature to interpret fragmentation metrics developed through spatial analyses and adopt management decisions that best protect wildlife species.

In analyzing habitat fragmentation in the project area, the USFS should address the CPW Colorado Action Plan that was developed in response to Interior Secretarial Order 3362, as described previously in these comments. The project area is entirely within the Bears Ears and White River Landscape, which is Colorado Migration Corridor Priority #1 in the Colorado Action Plan. According to CPW, this landscape is "home to two of the largest migratory mule deer and elk herds in Colorado and perhaps the United States." Specifically:

> The Bear's Ears and White River mule deer and elk herds are estimated at 75,000 – 80,000 deer and 65,000 – 70,000 elk. They are also among the most migratory of deer and elk herds in Colorado. A significant proportion of each herd migrates 60 to 70 miles in spring and fall. The migratory pattern is primarily east-west, with summer ranges in the upper reaches of the Yampa and White River drainages near the Continental Divide and winter ranges west to within about 30 miles of the Colorado-Utah state line. These herds are of high state importance, as they comprise approximately 21% of all deer on the western slope of Colorado and 25% of elk in Colorado, respectively.

2019 Colorado Action Plan, p. 7. The Colorado Action Plan identifies habitat fragmentation and increased road density as threats to big game populations. The USFS should utilize the wildlife information included in the Colorado Action Plan, which includes spatial data on migration patterns, to inform the habitat fragmentation analysis and mitigation measures for this project.

c. USFS must evaluate alternatives to mitigate the impacts of roads in the project area.

The USFS must evaluate alternatives to eliminate, reduce and/or mitigate impacts of road use and construction associated with this project. The USFS should also consider alternatives requiring complete reclamation and decommission of all temporary roads in the planning area at the completion of the project. As it is the NOPA suggests that only "newly constructed temporary roads" would be decommissioned or closed in a manner that discourages motorized and mechanized use. NOPA at 10. The USFS should use this project as an opportunity to achieve Public Service Goals stated in the LRMP, including right-sizing objectives cited above in this comment letter. See e.g., Objective 4a (requiring USFS to improve economy of Forest Service

describing habitat effectiveness for elk. Journal of Forestry 81(9): 592-595, 613.). Elk are just one resource that may be impacted by new road construction and use. The biological screen attached as Appendix 1 highlights other valuable wildlife and biological resources that would be impacted by road construction and use in the project area.

roads, trails, and operations.); see also Strategy 4a.2 (directing USFS to decommission an average of 22 miles of Forest Development Transportation System roads each year).

VI. USFS MUST CONSIDER CLIMATE CHANGE IMPACTS ASSOCIATED WITH THIS PROPOSAL.

The activities proposed in this project undeniably have climate change impacts associated with them, including soil disruption, removal of vegetation that is currently storing carbon, prescribed burning and implications for resilience and adaptation. It is well established that federal agencies must analyze the climate impacts of proposed actions, and courts have invalidated agency decisions for failure to do so.[69]

The White River National Forest has not analyzed the climate impacts of these types of vegetation projects in the 2002 Forest Plan or any subsequent NEPA process, and so that climate analysis must be completed in a NEPA document for this project. We suggest that USFS would be best served by conducting programmatic NEPA analysis on climate change impacts associated with vegetation projects on the White River National Forest. However, unless and until USFS completes programmatic climate analysis, the agency must analyze climate change at the project level.

Climate analysis for vegetation projects such as the proposed Yellowjacket Project must include: 1) a full carbon accounting of the project; and 2) an assessment of the project's potential impacts on the adaptive capacity of ecosystems and species.

1) Carbon Accounting

The USFS must analyze the carbon impacts associated with vegetation projects in order to meet the agency's climate change analysis requirements, including emissions quantification and sequestration assessments. A full carbon accounting of the proposed activities would allow the USFS and the public to understand the climate impacts and tradeoffs associated with these projects and make informed decisions.

For example, the USFS may conclude that the near-term carbon emissions that would result from prescribed fire and other activities proposed in the Yellowjacket Project would be justified by the long-term outcome of improving resiliency on the forest. On the other hand, according to the most current science we are now operating on a 10-year horizon to make significant progress towards climate targets, so it may be the case that even a short-term emissions increase is unacceptable.[70] However, without conducting any climate analysis to understand the

[69] See e.g., *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008) ("The cumulative impacts regulation specifically provides that the agency must assess the 'impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.'" (emphasis added in opinion) (quoting 40 C.F.R. § 1508.7 (2008)).

[70] IPCC Special Report, Global Warming of 1.5°C, available at https://www.ipcc.ch/sr15/.

implications of this project on carbon stores and climate emissions, the USFS is incapable of making an informed decision. The agency also cannot assert that this project would not individually or cumulatively have a significant effect on the human environment without assessing carbon storage impacts or greenhouse gas emissions.

There is a wealth of scientific literature and data-driven tools available to the USFS to analyze and manage carbon on the White River National Forest, including to inform climate analysis for vegetation projects. We highlight the following data sources which would enable the agency to assess the climate implications associated with these implementation decisions:

- Forest Carbon Estimation. The Forest Service's Forest Inventory and Analysis (FIA) program provides a wealth of information related to carbon accounting, sequestration assessments, greenhouse gas emission quantification, modeling and trends.
- Forest Inventory Data Online (FIDO) and EVALIDator. These applications use FIA data to produce carbon estimates for an area of interest and can be filtered based on forest attributes and other variables.
- 2015 Rocky Mountain Region Carbon Assessment. This report specific to R2 is intended to help forest managers and the public understand how much carbon is stored in forest ecosystems, and develop capacity to integrate carbon into planning and decision making.
- U.S. Geological Survey Federal Lands Greenhouse Gas Emissions and Sequestration in the United States: Estimates for 2005–14. In November 2018, the USGS released new estimates of ecosystem carbon emissions and sequestration on federal lands. This national dataset or a similar one is necessary for cumulative impact analysis, as the agency must analyze climate impacts of a specific project relative to regional and national climate impacts.

Additionally, researchers at Oregon State University recently analyzed forest ecosystems across the West to identify areas that could contribute significantly to climate change mitigation due to their carbon sequestration capacity and biodiversity values. *See* Buotte et al. 2020. Areas were ranked as high, medium or low carbon preservation priority. The USFS should utilize this data in its carbon analysis and ensure any vegetation projects are not impacting the sequestration capacity of our national forests. We note that the researchers considered only forests that have low vulnerability to future drought and fire as high or medium carbon preservation priority, thereby eliminating much of the WRNF; however, there are pockets of high and medium priority lands across the Colorado Rockies and so the WRNF should consult this study when analyzing projects such as this one that could reduce the sequestration capacity of the forest.

2) Adaptation

The stated purpose and need for this project rely largely on improving forest resiliency. This is an admirable objective; however, it is unclear how the USFS has come to the conclusion that this project will result in a more resilient forest in the project area in the context of climate change.

The 2002 Forest Plan did not appear to use climate modeling to analyze or adopt forest management decisions, and even if it had, climate science has evolved significantly in recent years. The USFS must demonstrate that the proposed action is consistent with modern climate science, both in the context of achieving the stated objectives of restoring ecosystem function over the long term, and in the context of creating conditions that are favorable to climate change adaptation.

Again, we suggest this type of analysis would be better accomplished at a programmatic level. Such an approach would allow the agency to take a holistic look at climate predictions and identify a strategic approach for promoting resiliency across the forest. For example, at the programmatic level, the USFS could implement the experimental, adaptive design known as the "portfolio approach." The portfolio approach is a strategy by which land managers utilize a zoning approach to manage risk associated with climate change. The strategy relies upon the risk management principle of minimizing risk by spreading it across a portfolio of strategies, in this case management classes such as:

- Observation Zones: areas that are left to change on their own time to serve as scientific "controls" and to hedge against the unintended consequences of active management elsewhere.
- Restoration Zones: areas that are devoted to forestalling change through the process of ecological restoration.
- Facilitation or Innovation Zones: areas that are devoted to innovative management that anticipates climate change and guides ecological change to prepare for it.

These strategies should be used in conjunction with each other in order to spread the risk among the different strategies and to allow for diverse outcomes to inform rapid learning about management strategies in the future. See Belote et al. 2014; Tabor et al. 2014; Aplet and Mckinley 2017. We reiterate this type of approach can only be applied at the programmatic level and not on a project-by-project basis.

Identifying these zones on the White River National Forest would enable the USFS to proactively and strategically manage the forest for resiliency and adaptation, would guide implementation activities such as vegetation projects and help the USFS prioritize resources, and would help the public understand and have confidence in the agency's reasoning behind projects such as the proposed action.

Relevant to the White River National Forest's current practice of implementing restoration projects on a case-by-case basis, Aplet and Mckinley 2017 caution:

> Categorizing adaptation strategies into three basic classes not only provides a framework for organizing the burgeoning array of options, it also can help guard against willy-nilly application of strategies that may result in *maladaptation*, or "actions or inaction that may lead to increased risk of adverse climate-related outcomes, increased vulnerability to climate change, or diminished welfare, now or in the future" (Noble et al. 2014).

The authors note that the IPCC highly agreed in its Fifth Assessment Report (AR5), stating: "Poor planning, overemphasizing short-term outcomes, or failing to sufficiently anticipate consequences can result in maladaptation." IPCC 2014.

At least two studies have concluded that by the 2050s to 2060s, current forest types will be lost in some parts of National Forest lands in the Colorado Rockies due to the planet's warming caused by anthropogenic climate change. In its 2016 Final EIS on the Spruce Beetle Epidemic and Aspen Decline Management Response project, the neighboring GMUG National Forest included maps showing where certain types of forest habitat would be "lost" due to the changing climate.[71] Similarly, in 2017, Forest Service Rocky Mountain Region staff and researchers presented results from bioclimate models concluding that ponderosa pine and other forest types would likely be lost from the Dolores watershed in the 2056-65 time period.[72] We request that the WRNF work with Forest Service experts using the same or updated bioclimate models to disclose the potential of climate change to alter vegetation patterns for the Yellowjacket project area and surrounding national forest land.

In the absence of programmatic analysis, the USFS must conduct project-level NEPA to ensure decisions are informed by the best available science and not negatively impacting the capacity of ecosystems and species to adapt to a changing climate. Site-specific NEPA analysis must demonstrate the appropriateness of the project and location in a climate context and the low risk of maladaptation.

VII. USFS MUST ADDRESS SOCIO-ECONOMIC IMPACTS.

The USFS must disclose the socio-economic impacts of the proposed action and quantify the return to the Forest Service from the proposed action. The NOPA states that one of the project's purposes is to "[p]rovide forest products and/or biomass to local industries," and that the proposed action "is needed because … "[l]Local and regional timber markets exist that can utilize forest products." NOPA at 2. Because the Forest Service has defined subsidizing the local logging industry as part of the project's purpose and need, the Forest Service must disclose the project's fiscal costs and benefits, and the benefits (if any) to the local economy. Failure to disclose these impacts will make it impossible for the Forest Service to understand whether the project is indeed meeting its purpose and need.

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[71] GMUG National Forest, Final EIS, Spruce Beetle Epidemic and Aspen Decline Management Response (May 2016) at 17, excerpts attached as Appendix 12.

[72] J. Worrall et al., Projected Impacts of Climate Change on Forests of the Dolores Watershed, presentation to the Dolores Watershed Resilient Forest Collaborative (2017) at slides 29, 39 & 52 (showing results of bioclimate models predicting the likely persistence of various forest types, which characterize ponderosa pine as "lost" for the project area), attached as Appendix 13, and available at http://dwrfcollaborative.org/wp/wp-content/uploads/2018/06/projected-impacts-of-climate-change-on-forests-of-the-dolores-watershed.pdf (last viewed Mar. 21, 2019). Other forest types will suffer in the area as well. *See id*. at slide 33 (showing Gambel oak "threatened"); *id*. at slide 35 (showing aspen "lost" in the watershed, even in a "favorable climate" scenario).

Further, any environmental analysis should disclose who pays for road reconstruction, reconditioning and maintenance, and bonding requirements that will ensure immediate and effective reclamation of roads utilized to implement the proposed action.

VIII. USFS MUST ADDRESS THESE ADDITIONAL ISSUES.

- The NOPA does not appear to include target dates for implementation. The Forest Service should disclose when the project will be implemented and how long proposed activities will take. A timeline and end date for the project is critical to ensure authorized activities are relying on up-to-date information such as resource surveys and monitoring data, so that the public understands and can comment on the scope of the project, and to support the agency's assertion that roads used for the project are indeed "temporary."
- The public should be provided a map of MAs overlapping treatment areas.
- The NOPA indicates that "[a]ll vegetation types are generally in a mature state, except in areas where previous harvest has regenerated lodgepole pine and aspen." NOPA at 1. The USFS should provide a map depicting vegetation types and stand maturity in any EA.
- One stated purpose of the project is: "maintaining and/or increasing age and size class diversity at the stand and landscape scale." NOPA at 2. To justify this need, the USFS should provide maps of stands that lack age and size class diversity.
- The NOPA suggests that the project is needed because "[n]atural disturbance processes have been suppressed in a landscape that was previously adapted to wildfire," and "[f]orest resiliency is lacking across the landscape due, in part, to the absence of age and size class diversity in both aspen and mixed conifer stands." NOPA at 2. The USFS should provide detailed discussion of the historic range of variability of stands proposed for treatment in the project area, as well as support for the notion that the landscape somehow outside the historic range of variability and lacking resiliency.
- The USFS must disclose how it intends to advance regeneration in areas proposed to be clearcut.
- USFS claims that personal use/commercial thin prescriptions which remove up to 35 percent of the basal of a stand will "improve health and vigor of residual trees." NOPA at 5. The agency must provide some scientific evidence to support its assertion, and must disclose the baseline basal area of the unit, and why its chosen target of 35% reduction will improve forest health.
- If the USFS intends to rely on any previous analysis or decisions, those must be explicitly cited and linked in any environmental analysis. For example, the USFS says the proposed realignment of NFSR 260 (the Sawmill Mountain Road) was previously analyzed. NOPA at 3.
- USFS proposes to cut dead and dying trees. See e.g., NOPA at 5 ("All dead conifer trees would be harvested. In addition, lodgepole pine infested with dwarf mistletoe would be harvested"). The agency must disclose and assess potential impacts on cavity nesting birds, lynx, others, and how this may conflict with snag retention standards.
- At least some of the watersheds in the project area feed the White River upstream of Meeker. This stretch of river has in recent years been plagued by "nuisance" of levels of

algae, which may harm other aquatic life including fish and their prey.[73] The Forest Service must take a hard look at the potential impact of the Yellowjacket Project to increase sediment and other pollution, and whether that pollution may have cumulative effects to the degraded health of this stretch of the White River.

Thanks for your consideration,

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List of Appendices:

1. Yellowjacket Project Values Screen Spreadsheet
2. Big Beaver Basin Citizen Roadless Inventory
3. Fawn Creek Citizen Roadless Inventory
4. Milk Creek Citizen Roadless Inventory
5. WW et al., Comments on the WRNF inventory for the proposed Colorado Roadless Rule (July 2011)
6. Yellowjacket Project Area Map with Citizen Inventoried Roadless Areas
7. Elliot, William J.; Miller, Ina Sue; Audin, Lisa. Eds. 2010. Cumulative watershed effects of fuel management in the western United States. Gen. Tech. Rep. RMRS-GTR-231. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 299 p.
8. Jack Lewis, "An Analysis of Turbidity in Relation to Timber Harvesting in the Battle Creek Watershed, northern California" (Sept. 2014)

[73] *See* White River & Douglas Creek Conservation Districts, White River Algae Technical Advisory Group (TAG) webpage, at http://www.whiterivercd.com/white-river-algae-study.html (last viewed April 18, 2020).

9. Jonathan J. Rhodes, "The Watershed Impacts of Forest Treatments to Reduce Fuels and Modify Fire Behavior" (Feb. 2007)
10. C.A. Troendle & W. K. Olsen, "Potential Effects of Timber Harvest and Water Management on Streamflow Dynamics and Sediment Transport"
11. Excerpts from USDA Forest Service, Final Environmental Impact Statement, Roadless Area Conservation Rule (Nov. 2000)
12. Excerpts from GMUG National Forest, Final EIS, Spruce Beetle Epidemic and Aspen Decline Management Response (May 2016)
13. J. Worrall et al., Projected Impacts of Climate Change on Forests of the Dolores Watershed, presentation to the Dolores Watershed Resilient Forest Collaborative (2017)
14. The Wilderness Society, Ecological Effects of a Transportation Network on Wildlife: A Spatial Analysis of the Upper Missouri River Breaks National Monument (2003)
15. Geospatial data of the citizen-proposed roadless areas

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