YAAK VALLEY FOREST COUNCIL

November 13, 2020

Objection Reviewing Officer
USDA Forest Service
Northern Region
26 Fort Missoula Road
Missoula, MT 59804
Via email: appeals-northern-regional-office@usda.gov

Re: Black Ram Draft Decision Notice and Finding of No Significant Impact, and Final Environmental Assessment

Dear Reviewing Officer:

The Yaak Valley Forest Council ("YVFC") hereby submits these objections to the Kootenai National Forest's Draft Record of Decision (ROD), Finding of No Significant Impact (FONSI), and Final Environmental Assessment (Final EA) for the Black Ram Project.

Project Objected To:
Pursuant to 36 C.F.R. § 218.8(d)(4), YVFC objects to the following::
Project: Black Ram Project, Three Rivers Ranger District, Lincoln County, Montana

Timeliness:
These objections are timely filed. Notice of the draft ROD and FONSI was published in the Missoulian on September 29, 2020.

Lead Objector
Aaron Peterson
Executive Director
Yaak Valley Forest Council
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The Yaak Valley Forest Council has been involved in this project since 2017. Our formal comments following the EA were submitted on August 8, 2019.

OBJECTIONS

I. The Black Ram Draft Decision Notice and Finding of No Significant Impact (FONSI) fails to address significant public concerns

The FONSI and Black Ram EA lack scientific assessment of water quality and the retention of water on the landscape, the protection of old growth, unprejudiced scientific inquiry into the effects of recreational pedestrian traffic on grizzly bears, or other such Needs as identified in the Forest Plan and the Endangered Species Act. A list of our concerns include the likelihood of significant negative effects on grizzly bear, amphibians, songbirds, and other sensitive and protected fish and wildlife species, compounded ecological consequences of clearcutting, interference with intact old growth stands and evident pursuit of timber in mature forests, failure to account for climate change in project design, unmonitored recreation, inadequate use of best available science, lack of ecological connectivity mapping, failure to consider the 1,000-member Yaak Valley Forest Council's request for an alternative and proposed prescription , failure to acknowledge or address the effects of the Davis firefighting damage, failure to monitor and treat weeds, failure to account for the lack of a comprehensive plan for the Pacific Northwest National Scenic Trail, and the failure to adequately provide information quantifying watershed degradation. We request an EIS that pays diligent attention to these important and numerous concerns.

The Kootenai National Forest (KNF) professes that "This proposal is the result of the need to move the existing resource conditions in this project area toward the desired conditions as stated in the Kootenai National Forest Land Management and Resource Plan (2015 Forest Plan)." This is a mischaracterization of those parts of the Forest Plan relating to timber production while avoiding those parts of the Forest Plan that do not directly contribute to timber production. An equal diligence or attention to that portion of the Forest Plan that directs the KNF to restrict timber-extraction openings to less than 40 acres each would have resulted in a different proposal In this proposal there are dozens of openings exceeding those recommended in the Forest Plan.

The recreation proposals in this project do not enhance the qualities of wildness in this portion of the valley and are not fully considered with regard to their own impacts nor cumulative effects with existing unmonitored and user-created recreational pressures and challenges. This project area has the highest wilderness rating in Region One, while the KNF has the lowest ranking with regard to meeting the needs of the National Wilderness Preservation System. The proposed clearcuts and regeneration harvests within the viewshed of the Northwest Peaks Scenic Area do not support this aspect, as identified in the Forest Plan, nor our desire for protection and enhancement of the Yaak Valley's wild qualities including: remote, unroaded, unmanaged, and natural viewsheds, and fully functioning ecosystems.

We take particular issue with the assertion that this project meets the Need to "Maintain or improve old growth character within existing old growth" when it does not. How does road building and "regeneration harvest" of old growth in this project meet this Need? The desire to "Promote early seral tree species including western larch, ponderosa pine, and western white pine"— by clearcutting roughly 1,000 contiguous gerrymandered acres of old growth spruce and subalpine fir in the Rampike region of the project area is

errant. The early seral species described for replanting will not survive in that soil type, as specialists within, as well as without, the agency have noted.

The desire to: "Reduce the potential for high intensity wildfire…in the Wildland Urban Interface…" is a contradiction. As noted, roughly half of the harvest units in this project area are located great distances from, and upwind of, any dwellings or structures—as far from the WUI as could be mapped in the valley.

We take issue with the treatment of grizzly bear in both the FONSI and EA. The FONSI does not acknowledge existence of a lawsuit by Alliance for the Wild Rockies regarding the KNF's failure to provide secure habitat for grizzlies, of which secure gate closures are but one part of a legally-mandated and socially desired requirement for the protection of the Yaak's (and the Cabinet's) grizzly bear populations (between which no genetic exchange exists, due to habitat fragmentation and reduced population numbers). The Yaak Valley Forest Council met with KNF Supervisor Benson shortly after he was hired to discuss our concerns with the EA, requesting he direct the KNF to produce a more scientifically rigorous EIS given the sensitivity of the region, the flaws in the EA, and the immense size of the project, which, when linked with all its adjacent and ongoing projects, approaches nearly a quarter of a million acres of public land, in which the Yaak Valley's last 25 grizzlies take refuge.

On page 18 of the FONSI, paragraph one of the section on "Grizzly bear,", the KNF appears to be ignoring the phantom gate closures in the BMUs—asserting security and compliance where it does not exist (see Appendix 1). The second paragraph acknowledges "in terms of the ESA for this project" grizzly bears—a protected Endangered species—are at increased risk of harm, whereas then in the next paragraph the narrative reverses and contradicts itself by stating there can be no effects because "effects [extinction?] …are within those anticipated in the 2015 [KNF] Forest Plan…" These statements are contradictory. Likewise, the EA states it will create more forage for grizzly bears—"This project will benefit [Grizzly bear] sustainability because of long-tern habitat and especially forage habitat." How is this sustainable when the EA acknowledges that the project is "Likely to Adversely Affect Grizzly bears?" The limiting factor for grizzly bears in the Yaak Valley is not food, but secure habitat that results in Human Caused Mortality (HCM), and which can be accomplished most effectively and at low cost by securing road closure standards to the required minimum and accurately monitoring the closures.

The FONSI states that "other units and acres proposed in the EA could decrease or change shape due to creation of islands or exclusion of wet areas during layout and implementation." Failure to pre-plan, design, and map these leave islands during project planning reduces the likelihood of their implementation and excludes biologically relevant ground-level assessments of the habitat needs of terrestrial species that depend on ephemeral water sources during key portions of their life cycles. We expand on this critique in section III.F. We request public access to maps showing the alterations made in the 2020 field season to Unit 72, 72A, and 72B.

The FONSI states that "this project does not require any Forest Plan amendments" (pg 8). We feel that updates are required to both the Forest Plan and the EA (necessitating a Black Ram EIS) based on scientific recommendations surrounding use of overland corridors in addition to RHCA's by sensitive amphibian

species, and recent finding relative to impaired long-term health and viability of migratory bird populations, particularly in forested lands of the Pacific Northwest.

We take issue with section 3e on page 10 of the FONSI (and referenced sections of the EA) stating that clearcuts will be "carried out in a manner consistent with protection of soil, watershed, wildlife…" No documentation has been provided to indicate that these cuts are actually going to be carried out in a manner that protects wildlife given that the EA fails to recognize the likely presence of at least one amphibian species of concern, the Cour D'Alene Salamander (see section III.F below), and minimizes potential effects on other species of concern including migratory birds. We also note that both here, and in reference to section 2c on page 9 ("protection is provided for streams…"), consideration of possible impacts of clearcuts on soils appears to be limited to sedimentation. No consideration has been given to compounding detrimental effects of clearcutting on soil and runoff water pH, soil compaction, or microryza communities necessary for healthy stand regeneration. We expand on this critique in section II.K. Please provide measurements to how soil resources will (not) be affected by mechanized logging and roadbuilding, and how they have been harmed by Davis fire log decks and burning.

In no way does the Black Ram EA or the 2015 Forest Plan, by accounting for a "fine filter management direction" arguably suitable to grizzly bear and lynx (pg. 11 of the FONSI) and the handful of other species considered in the final EA (grey wolf, Fisher, flammulated owl, etc), account for the habitat needs of all terrestrial vertebrates. Again, we draw attention to the failure to consider effects of suggested harvest prescriptions on songbirds and amphibians.

While we appreciate that the KNF has sought expert scientific opinion in the production of a Biological Assessment relevant to grizzly, wolverine, and lynx, we do not feel that reliance on an antiquated 2015 Forest Plan is adequate to the need to consider "Best Available Science" (pg. 12 of FONSI).

We take issue with the adequacy of the Migratory Bird Treaty Act of 1918 or the Executive Order 13186 of January 2001 as guiding documents for consideration of migratory birds in the project area (pg. 13 of FONSI). The Black Ram EA, while it discusses North American Landbird Conservation Plans dated in 2004 and 2016, failed to acknowledge the recent and precipitous declines documented in North American songbirds[1]. In the Pacific Northwest, plummeting population sizes are highest in species reliant on mature stands[2], and population failures are compounded by negative effects of clearcutting[3]. The EA makes two inexcusable assumptions relative to songbirds: 1) that an increase "in early seral and open forest habitats" (final EA pg. 413) is desirable for most species, and 2) that since "most species are small with small ranges and territories", they are unlikely to be impacted by project activities given "abundant alternative areas for birds to utilize if disturbed" (final EA pg. 414). In response to the first assumption, this "early seral" habitat preference is too coarse a filter to account for the diverse habitat needs and life history strategies of hundreds

[1] Rosenberg, K.V., Dokter, A.M., Blancher, P.J., Sauer, J.R., Smith, A.C., Smith, P.A., Stanton, J.C., Panjabi, A., Helft, L., Parr, M., Marra, P.P., 2019. Decline of the North American avifauna. Science 366, 120.

[2] Northrup, J.M., Rivers, J.W., Yang, Z., Betts, M.G., 2019. Synergistic effects of climate and land-use change influence broad-scale avian population declines. Global change biology 25, 1561-1575.

[3] Hagar, J.C., 2007. Wildlife species associated with non-coniferous vegetation in Pacific Northwest conifer forests: A review. Forest Ecology and Management 246, 108-122.

of species of birds, including many of the species listed in Table 115 of the EA (pg. 417). The second assumption presents an anthropocentric analysis of bird habitat needs that entirely discounts between season site fidelity [4]common to many songbirds and disruptions to seasonal mating cycles and mating success arising from habitat fragmentation[5].

II. The Final EA violates NEPA because it fails to complete or disclose pertinent information and analysis to the public.

NEPA requires that the Forest Service conduct and disclose all pertinent information and analysis produced to the public.[6] The Final EA failed to do so in several key areas, limiting the opportunity for the public to adequately understand and respond to the proposed project. Indeed, throughout much of the scoping and then commenting process, the KNF failed to disclose the status or even existence of the project on the agency's own webpage.

A. The Final EA failed to provide evidence regarding the absence of fire within unit 72 and the Rampike area.

In our August 8, 2019 letter, we highlighted the work of ecologist and registered forester Herb Hammond who "examined [unit 72] extensively and found old-growth characteristics indicating that the spruce-subalpine fir stand that extends for much of the 284 acres is 600-800 years old. He found no signs of past harvest or fire and described this unit as a unique habitat within the Kootenai."[7] The Forest Service Responded: "There is char in the soil and on the surface throughout the stands indicating that there was a stand replacing wildfire in the early 1800s."[8] The Forest Service's response to comments on unit 72 direct to the Final EA's discussion of the fire history of this unit. Yet the project file's "Black Ram Fire History" map[9] indicates that only the farthest western edge of unit 72 might have burned within the past quarter millennium, and the Forest Service failed to provide evidence of past history of fire on the unit on field trips to the area.

While the final EA and FONSI claim review of Best Available Science, there is a total failure to acknowledge the importance of preserving such "persistent" fire refugia under increased climate-change induced regional fire activity[10]. Use of clearcutting and high tree-removal harvesting to reduce fuels biomass is not an ecologically viable strategy for offsetting wildfire severity.[11] Indeed, industrial, homogenous, young forests are often hardest hit by wildfire. In actuality, *live* fuel biomass was the strongest predictor of fire refugia (areas

[4] Schlossberg, S., 2009. Site fidelity of shrubland and forest birds. The Condor 111, 238-246.
[5] Robinson, S.K., Wilcove, D.S., 1994. Forest fragmentation in the temperate zone and its effects on migratory songbirds. Bird Conservation International 4, 233-249.
[6] WildEarth Guardians v. Mont. Snowmobile Ass'n, 790 F.3d 920, 925-28 (9th Cir. 2015)
[7] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[8] Final EA Appendix p. 79
[9] Attached in addenda as "2019.08.09 MapBlkRamFireHistory0001"
[10] Martinez, A.J., Meddens, A.J., Kolden, C.A., Strand, E.K., Hudak, A.T., 2019. Characterizing persistent unburned islands within the Inland Northwest USA. Fire Ecology 15, 20.
[11] Zald, H.S.J., Dunn, C.J., 2018. Severe fire weather and intensive forest management increase fire severity in a multi-ownership landscape. Ecological Applications 28, 1068-1080.

resistant to wildfire) in an analysis of 39 wildfires across Washington and Oregon.[12] Old growth mature stands with uneven canopy and species composition are significantly more likely to experience low-severity burn.[13]

By failing to report analysis or evidence of historic fires within this area yet relying on the presumption of fire as a rationale for treatments, the Final EA fails to disclose pertinent information to the public, and thus violates NEPA.

B. The final EA does not disclose in what ways Herb Hammond's "Initial Review" and "Field Assessment" are inconsistent with Forest Service management directives.

NEPA requires agencies to explain opposing viewpoints and their rationale for choosing one viewpoint over the other.[14] Courts will set aside a NEPA document where the agency fails to respond to scientific analysis that calls into question the agency's assumptions or conclusions.[15]

Mr. Hammond produced two documents based upon 30 years of experience in research, industry, teaching and consulting. He is a registered professional forester. The final EA did not respond to the content or substance of Mr. Hammond's expert review, other than to say that "his recommendations were not consistent with the 2015 Forest Plan, the purpose and need for the Black Ram project or the Forest Vegetation analysis." The project file contains no review of Mr. Hammond's work. The Forest Service's failure to respond to Mr. Hammond's expert submission violates NEPA.

C. The Final EA does not properly analyze the impacts of the Davis Fire.

In 2018, 4,135 acres in the Project Area burned in the Davis Fire, comprising 4% of the Black Ram project area. Logging is attached to this Final EA under the rubric of Davis Fire, but restoration needs resulting from the fire are not included in the Final EA. There was significant damage to public lands caused by the firefighting efforts of 2018. If Davis is regarded as an existing condition, we would expect silvicultural treatments proposed before the fire for purposes of changing the overall early-seral percentage of the forest to change, reflecting the large percentage of area treated by the fire and converted to early seral species as a result. And if Davis timber is included in the project area, then we would expect the damage done to be

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[12] Meigs, G.W., Dunn, C.J., Parks, S.A., Krawchuk, M.A., 2020. Influence of topography and fuels on fire refugia probability under varying fire weather conditions in forests of the Pacific Northwest, USA. Canadian Journal of Forest Research 50, 636-647.

[13] Lesmeister, D.B., Sovern, S.G., Davis, R.J., Bell, D.M., Gregory, M.J., Vogeler, J.C., 2019. Mixed-severity wildfire and habitat of an old-forest obligate. Ecosphere 10, e02696.

[14] 40 C.F.R. § 1502.9(b) (requiring agencies to disclose, discuss, and respond to "any responsible opposing view").

[15] See Ctr. for Biological Diversity v. U.S. Forest Serv., 349 F.3d 1157, 1168 (9th Cir. 2003) (finding Forest Service's failure to disclose and respond to evidence and opinions challenging EIS's scientific assumptions violated NEPA); Seattle Audubon Soc'y v. Moseley, 798 F. Supp. 1473, 1482 (W.D. Wash. 1992) ("The agency's explanation is insufficient under NEPA – not because experts disagree, but because the FEIS lacks reasoned discussion of major scientific objections."), aff'd sub nom. Seattle Audubon Soc'y v. Espy, 998 F.2d 699, 704 (9th Cir. 1993) ("[i]t would not further NEPA's aims for environmental protection to allow the Forest Service to ignore reputable scientific criticisms that have surfaced").

mitigated and repaired within this project. Neither of these analyses are included in the Final EA, nor does the final EA plan for a full restoration of the Davis area.

Likewise, the EA does not fully analyze the impacts to soil from the Davis Fire and associated firefighting. In our August 8, 2019 comments, we noted our frustration with the characterization of coarse woody debris (CWD), highlighting that "in the absence of canopy, the moisture content that renders coarse woody debris its driving function, rot and moisture absorption, is nonexistent… we direct an observer to walk the Davis fuel break directly adjacent to proposed Unit 72 and examine the few pieces of CWD that can be found there and reconsider page 244's assertion, 'these pieces of material serve as important biomass for soil recovery since downed wood helps to stratify the growing environment for holding water.' As well, look at the CWD in the Davis fuel break and reconsider, please, 'Such material serves as a nutrient resource, along with providing shade and covering soil to help lessen evaporation losses.'" We further requested additional "analysis of soil as well as ambient temperatures and humidity/aridity in the fuel break and then at varying distances into Unit 72 throughout the course of a day and a night in various seasons." We cannot find this analysis in the EA or provided project record.

By failing to complete a consistent or complete analysis of the Davis Fire, the Final EA fails to disclose pertinent information to the public, and thus violates NEPA.

D. The final EA failed to provide evidence regarding beetle-caused impacts on the project area.

In our August 8, 2019 comments, we noted a discrepancy with the project file and our observations of the project area: "during the field assessment of Unit 72, representative of the large spruce tree condition… perceived as being at risk to spruce bark beetles (SBB) we did not see any evidence of SBB." We noted that:

> The old-growth spruce found in Unit 72 occurs in a diverse mosaic of associated species. This species mixture coupled with an open crown discourages any build up of bark beetle populations. While single, lower vigor trees may be picked off here and there, SBB is unlikely to build any significant population in the area. Bark beetles depend upon attractant pheromones to build populations. When a tree is successfully attacked, the bark beetles emit an attractant pheromone to "call" other beetles to mate, and build the population. However, with an open crown the pheromones emitted in a successful attack move up through the canopy openings, rather than laterally to attract other beetles. This is the reason that light thinning of potentially susceptible trees offers "beetle proofing" benefits in stands of high density, older spruce… these same population dynamics work for mountain pine beetles and their major host, lodgepole pine.[16]

The EA states that: "Spruce beetle have potential to significantly impact stand composition in the Project Area, specifically the upper Pete Creek/Rampike area, which is an area with homogeneous patches of mature Engelmann spruce in the large size class."[17] The EA further notes that "MPB is not expected to impact large portions of the Project Area…" Yet we struggled to find stands that meet that description on repeated field

[16] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[17] Final EA 103

visits. Given MPB and SBB concerns, we are also left wondering about the impact of this important mortality agent around the WUI.

By failing to provide conclusive analysis of risks stemming from beetles, the Final EA fails to disclose pertinent information to the public, and thus violates NEPA.

E. The Final EA failed to consider a reasonable alternative that would meet the purpose and need for the project.

The Final EA considered three alternates: Alternative 1, a "no action" alternative which the Forest Service claims will have detrimental impacts and would not achieve the purpose and need for the project; Alternative 2, the proposed actions, including 4,038 acres of commercial logging, and 90.3 miles of road reconstruction or maintenance, 0.8 miles of which are new construction in old growth forest; and Alternative 3, which is identical to Alt. 2, except for 0.9 fewer miles of road construction, eliminating that in old growth, and 461 fewer logging harvest acres, or 11% of that for Alt. 2.[18] Alternatives 2 and 3 were analyzed together throughout the majority of the Final EA—the phrase "Alternatives 2 and 3" appears 218 times. There was no alternative that analyzed YVFC proposed adjustments along the lines of our comments from August of 2018, including basing treatments upon a full landscape level assessment, improving "the wild qualities of this area," higher intensity treatments within the WUI than outside it, road decommissioning, uneven aged management, trans-Canadian border connectivity, cushioning wildlife corridors, and reducing the impact to grizzly and lynx habit, nor did the EA include any maps of the alternatives displaying wildlife linkage zones and corridors.[19]

NEPA requires that federal agencies consider alternatives to recommended actions whenever those actions "involve unresolved conflicts concerning alternative uses of available resources."[20] CEQ regulations oblige agencies to "use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment."[21] "NEPA's requirement that alternatives be studied, developed, and described both guides the substance of the environmental decisionmaking and provides evidence that the mandated decision making process has actually taken place."[22]

An EA must "study, develop, and describe" reasonable alternatives to the proposed action.[23] 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."[24] This alternatives analysis "is at the heart of the NEPA process, and is 'operative even if the agency finds no significant environmental impact.'"[25]

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[18] Final EA p. 12
[19] Letter of Robyn King, Yaak Valley Forest Council to K. Kaiser, Kootenai National Forest (August 14, 2018).
[20] 42 U.S.C. § 4332(2)(E).
[21] 40 C.F.R. § 1500.1(e).
[22] Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir. 1988)
[23] 42 U.S.C. § 4332(2)(C) & (E); 40 C.F.R. § 1508.9(b) (an EA "[s]hall include brief discussions ... of alternatives")
[24] Davis v. Mineta, 302 F.3d 1104, 1120 (10th Cir. 2002) (granting injunction where EA failed to consider reasonable alternatives).
[25] 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

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."[26] 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."[27]

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."[28]

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."[29] The agency's obligation to consider reasonable alternatives applies to citizen-proposed proposals.[30]

Courts hold that an alternative may not be disregarded merely because it does not offer a complete solution to the problem.[31] Even if additional alternatives would not fully achieve the project's purpose and need, NEPA "does not permit the agency to eliminate from discussion or consideration a whole range of alternatives, merely because they would achieve only some of the purposes of a multipurpose project."[32] If a different action alternative "would only partly meet the goals of the project, this may allow the decision maker to conclude that meeting part of the goal with less environmental impact may be worth the tradeoff with a preferred alternative that has greater environmental impact."[33]

The courts also require that an agency adequately and explicitly explain in the EA any decision to eliminate an alternative from further study.[34] We could find no such discussion in the project file, which appeared to be missing the biological assessment.

1035, 1050 (9th Cir. 2013) (in preparing EA, "an agency must still give full and meaningful consideration to all reasonable alternatives" (internal quotation and citation omitted)); 40 C.F.R. § 1502.14 (describing alternatives analysis as the "heart of the environmental impact statement").

[26] Ayers v. Espy, 873 F. Supp. 455, 473 (D. Colo. 1994) (internal citation omitted)

[27] Wilderness Soc'y v. Wisely, 524 F. Supp. 2d 1285, 1309 (D. Colo. 2007) (quotations & citation omitted).

[28] Diné Citizens Against Ruining Our Env't, 747 F. Supp. 2d at 1255 (quoting New Mexico ex rel. Richardson, 565 F.3d at 709). See also Idaho Conservation League v. Mumma, 956 F.2d 1508, 1520 (9th Cir. 1992) ("nature and scope of proposed action" determines the range of reasonable alternatives the agency must consider).

[29] Id. at 1256.

[30] 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")

[31] Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 836 (D.C. Cir. 1972).

[32] Town of Matthews v. U.S. Dep't. of Transp., 527 F. Supp. 1055 (W.D. N.C. 1981).

[33] North Buckhead Civic Ass'n v. Skinner, 903 F.2d 1533, 1542 (11th Cir. 1990).

[34] 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

YVFC's proposals comprised reasonable elements that should have been considered in an alternative and were not. These proposals would have met the purpose and need of the project, better protected communities from wildfire, and taken together or in parts might have supported an even less harmful alternative. By not pursuing this alternative, and thus not completing analysis of the full range of alternatives, the Final EA violates NEPA.

F. The Final EA fails to comprehensively analyze historic forest conditions.

Historically, as much as 50% of the Kootenai forest was old growth. According to the most recent KNF plan, 2/3rds of its stands are now small to medium-sized stems. This project's emphasis on regeneration rather than intermediate cuts will further homogenize and accelerate the unhistoric trend toward a forest of overstocked small young trees. The Final EA references "historic patch shapes and sizes," but fails to provide those metrics. The closest index available in the Final EA is a table showing acreages that have been burned. An EIS would allow a more scientific approach to mapping not just large stand replacing general outlines, but smaller jump-and-skip-mosaic patterns. Such fire data would show patterns and mosaics of fire/no-fire areas in various wind and topographic events, and this analysis should have featured in the discussion, as well as how it differs across elevation, moisture regimes, and species compositions.

By not providing this analysis, the final EA failed to release pertinent information to the public. The Final EA thus violates NEPA.

G. The Final EA does not provide requested analysis regarding Winter Range.

In our August 8th, 2019 comments, we noted regarding the projects stated purpose & need to "Improve big game winter range conditions and promote forage opportunities" that:

> Given the recent creation of large openings by Canada, the adjacent Buckhorn project, ...the Davis Fire, the Davis fuel break logging and road building, ... the Caribou fire, Caribou fire salvage, and recent management history, in addition to recent prescribed burns as well as proposed prescribed burns, it might be safely assumed that there is enough forage….How much forage exists in the project area, how much is desired? How was this identified as a Purpose and Need? The implication seems to be that numbers of animals are limited by a paucity or inadequacy of forage….A definition of what the district considers big game winter range would be helpful. It is requested.

It's unclear to us how clearcutting the northwest end of the valley will create big game winter range where the necessary component is thermal cover, not "forage," wherein caloric and nutritive components are so lacking that the conservation of energy within thermal/closed canopy provides the winter range valuable (and limiting) to deer and elk. Indeed, the research indicates that combinations of thinning, clearcuts and

controlled burns can actually diminish the quality of forage for ungulates, while simultaneously reducing necessary thermal cover.[35]

By not providing detailed analysis of existing "winter range" coverage within the project area, definition, and projected outcome, the final EA failed to release pertinent information to the public. The Final EA thus violates NEPA.

H. The Final EA fails to analyze the effects of an unfinished comprehensive management plan on the Pacific Northwest National Scenic Trail.

In our August 8, 2019 comment letter, we called attention to restrictions stemming from the Pacific Northwest National Scenic Trail, or PNNST. We noted that:

> The USFS is in the process of drafting a [Congressionally mandated] comprehensive plan (CP) which will replace [the current KNF] guidelines in order to unify the look and feel of the trail across management boundaries. In the absence of a complete or even preliminary version of the CP, it is impossible to know in what way that document will change management of these units. It could preempt the KNF's requirements to treat these units differently than other project proposals, or it may add new ones, changing the project's specs after bidding. Given this uncertainty, we urge the PNNST administrator and the USDA to complete the CP.[36]

Our comments urged the Forest Service to drop treatments abutting the PNNST and to avoid ground-disturbing treatments until compliance with the CP requirement is achieved.[37]

The Forest Service responded by saying that "Nothing in the National Trails System Act or agency policy prohibits the Forest from carrying out its management responsibilities along the PNNST. The NTSA states 'Development and management of each segment of the National Trails System shall be designed to harmonize with and complement any established multiple-use plans for the specific area in order to insure continued maximum benefits from the land'"[38] It does not respond directly to the potential for changes to guidelines stemming from a CP. The EA elsewhere notes that "It is anticipated that the completion of the CP... would not be finalized during this project. As seen with management of other National Scenic Trails, completion of a CP and route re-location can be a long term effort."[39]

The National Scenic Trails Act stipulates that a CP must be completed by a trail's managing agency within two years of a trail being Congressionally authorized. As the PNNST was authorized in 2009, the Forest Service is 11 years out of compliance with the NSTA. YVFC filed a lawsuit in August of 2019 over this Forest Service NSTA violation. On October 7 2019, the USDA published notice in the Federal Register of its intent

[35] Foster, S. (2018). "The effects of tree thinning and broadcast burning on the quality of ungulate winter range: A case study within a southern interior forest in British Columbia
[36] Ibid.
[37] Ibid.
[38] Final EA Appendix p. 98
[39] Ibid., 187

to renew the PNNST's Advisory Council, the next step in completing a CP. PNNST Advisory Council applications were taken from April through July, 2020. There still is no Advisory Council that has formed to develop the required CP.

The project further fails to consider how treatments conducted to enhance the PNNST viewshed impact grizzly connectivity. Many of these treatments, including those along the West Fork IRA, take place within designated core habitat. The presence of a potentially high-volume through-hiker trail in this area is problematic and sets up competing values in a sensitive area. Without a CP, activities affecting the scenic qualities of the trail are premature and inappropriate. The effects that industrial as well as pedestrian activity such as trails can have on bears are well documented[40].[41]

By not planning for or analyzing the potential impacts of changes stemming from the execution of the PNNST CP or analysing PNNST impacts on grizzly connectivity, the Final EA violates NEPA.

I. The Final EA fails to properly analyze recreation and trail usage.

In our August 8, 2019 comments, we noted changes to recreation within the project area and called for monitoring of use: "'Over the life of the Plan, the outcome is: Improve conditions at 50 to 75 dispersed sites.' The relationship between dispersed sites and their tether to funneling and/or concentrating users into concentrated and fragile areas needs to be addressed at the project level, including this one. Coupled with the mention of 30 or so known sites in the project area alone, there is a clear purpose and need for prioritization and analysis rather than ad hoc chasing after one user-created site after another. We raise again the problem the KNF has allowed to happen by not implementing an effective and longstanding monitoring program for visitor use, focusing instead disproportionately on other projects."

The Final EA does not include requested monitoring analysis. Response to comments say: "The current and foreseeable (5-10 years) number of users is not anticipated to affect secure grizzly core. The number of thru-hikers and general public use in the area has been and will continue to be monitored as part of the management of the PNNST." This response does not outline what actual monitoring results are. Notably, Appendix F—Monitoring Plan does not include recreation or trail usage.

J. The Final EA fails to disclose analysis of existing vegetative conditions or potential changes stemming from proposed treatments, including huckleberry response.

In our August 8, 2019 comments, we noted our disagreement with the claim that "Vegetation would continue to encroach into existing openings and is expected to limit forage for wildlife and berry production," and called for additional analysis to be completed. Of particular concern are claims regarding huckleberry productivity. The EA claims that "where berry shrubs are sparse but present, we expect treatments that

[40] Mattson, D.J., 2019. Effects of pedestrians on grizzly bears: an evaluation of the effects of hikers, hunters, photographers, campers, and watchers with reference to the proposed Pacific Northwest Trail.
[41] Mattson, D.J., 1990. Human impacts on bear habitat use. Bears: their biology and management, 33-56.

reduce overstory canopy, by whatever means, to result in improved growing conditions for these shrubs. This has been observed in other projects where there were huckleberries present prior to treatments."[42] The EA does not mention which specific projects, make reference to ongoing study into this particular question currently being conducted by Region 1 and the Three Rivers District.

We also note that improving grizzly bear forage is only helpful when it is within a secure habitat. The FONSI states improvement of "long-term productivity of huckleberry….to increase forage availability" (pg. 2) as a Purpose and Need for treatment, and the final EA asserts that "past harvests provided habitat conditions favorable for huckleberry production and other forage for grizzly bears" (pg. 295), and "harvest and post-harvest fuels management includes a wide variety of methods to achieve goals and desired conditions….where huckleberries and other bear forage plants are present prior to treatment, vigorous growth occurs after treatment (appendix pg. 121)." Lack of huckleberry forage has not been identified as a limiting factor for grizzlies in the Cabinet-Yaak ecosystem, whereas the gravest threat to grizzlies in the area is conflict with humans. Promoting huckleberry production along open roads and near residences is not helpful in reducing human/bear conflicts. Review of the literature supports our conclusion. In a long term study of grizzly bear movements across disturbed forest lands in Alberta, Canada males showed a strong preference for disturbances greater than thirty years in age. Even at the peak of the summer huckleberry season, female grizzlies avoided any disturbances under ten years in age.[43] Huckleberry shrubs take more than a decade to reach maximal fruit production.[44] It is thus highly unlikely that management regimes that claim increased bear forage potential through regenerative harvest will meet their goals.

By not including analysis or data regarding huckleberry production and vegetative conditions, necessary for the public to understand the impact of proposed treatments, the Final EA violates NEPA.

K. The Final EA fails to provide climate change modeling or account for variability of models.

In our August 8, 2019 comments, we voiced concern that "this analysis does not take into account the unknowables of climate change, while simultaneously failing to prepare communities for the worst eventuality,"[45] and asked "Is the active bear year lengthening with global warming?"[46] The Final EA does not respond directly to these comments and largely ignores the realities of global warming, except as a justification for restarting healthy forest stands to early seral species.

We can find no analysis in the public record examining potential effects from climate change on water yield in conjunction with proposed burns and regeneration harvests and clearcuts, and in the final EA, the Forest Service did not address our concerns (detailed in our Aug. 2019 letter) regarding lack of analysis for global

[42]Final EA p. 304
[43] Stewart BP, Nelson TA, Wulder MA, Nielsen SE, Stenhouse G (2012) Impact of disturbance characteristics and age on grizzly bear habitat selection. Applied Geography 34, 614-625.
[44] Anzinger D (2002) Big huckleberry (Vaccinium membranaceum Dougl.) ecology and forest succession, Mt. Hood National Forest and Warm Springs Indian Reservation, Oregon.
[45] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[46]Ibid.

warming. Moreover, there is no discussion in the final EA about the effects of clearcuts on water retention or soil and water chemistry. Clearcutting can affect soil carbon sequestration, moisture and pH[4748]. These effects are exacerbated by climate change[49] and can lead to rapid alterations in regional habitat types and loss of moist topographic pockets critical for biodiversity. Along with an increase in sediment loads, effects on stream water chemistry and temperature can rapidly expose otherwise pristine water systems to algal bloom, species invasions, and transmission of fish diseases.[50] These various ecological consequences have not been accounted for in the Black Ram EA.

The Effects to Forest Vegetation resource analysis section of the Final EA does note that "climate change could stress a portion of the current forest,"[51] but does not provide evidence of modeling to indicate which sections of forest are most vulnerable to this stress, and thus in need of treatment. In our August 8, 2019 letter, we discussed the role of the "Yaak as a climate refuge and therefore a region of greatest value and responsibility." We highlighted a relevant paper by Morelli et al.[52] which provides scientifically valid tools for determining the location of climate microrefugia within a managed forest. The Forest Service responded: "The concept of "reserving" large areas on the Kootenai National Forest is discussed on page 76 of the Forest Plan FEIS. It discusses how this does not make ecological rational in disturbance prone forests. By trending the forest composition towards more resistant and resilient conditions, stress complexes, such as those that develop from drought, fire, insects, diseases, and climate change, could be reduced (Forest Plan FEIS, p. 67). See response to comment 89."[53] Morelli et al. define climate change refugia as "areas relatively buffered from contemporary climate change over time that enable persistence of valued physical, ecological, and socio-cultural resources"[54] The Forest Service response appears to have taken this term to instead mean untouched tracts of reserved land. This is a fundamental and unfortunate misunderstanding and demonstrates the failure of the KNF to apply Best Available Science in design and consideration of the Black Ram project..

Researchers out of the U.S. Geological Survey, U.S. National Park Service, U.S. Environmental Protection Agency, USDA Forest Service, along with myriad academic institutions have pioneered and are driving the

[47] Zetterberg, T., Olsson, B., 2011. Long-term effects of clearcutting and biomass removal on soil water chemistry at three coniferous sites in Sweden. Swedish Environmental Research Institute, report B 1959.
[48] Zetterberg, T., Löfgren, S., 2010. Acidification effects in forest soils, soil water, groundwater and stream water following clear-cutting and aboveground biomass removal.
[49] Kreutzweiser, D.P., Hazlett, P.W., Gunn, J.M., 2008. Logging impacts on the biogeochemistry of boreal forest soils and nutrient export to aquatic systems: a review. Environmental Reviews 16, 157-179.
[50] Aldous, A., Fitzsimons, J., Richter, B., Bach, L., 2011. Droughts, floods and freshwater ecosystems: evaluating climate change impacts and developing adaptation strategies. Marine and Freshwater Research 62, 223-231.
Griffith, A.W., Gobler, C.J., 2020. Harmful algal blooms: a climate change co-stressor in marine and freshwater ecosystems. Harmful Algae 91, 101590.
Palmer, M.A., Lettenmaier, D.P., Poff, N.L., Postel, S.L., Richter, B., Warner, R., 2009. Climate change and river ecosystems: protection and adaptation options. Environ Manage 44, 1053-1068.
Pierce, R., Podner, C., Marczak, L., Jones, L., 2014. Instream habitat restoration and stream temperature reduction in a whirling disease-positive spring creek in the Blackfoot River basin, Montana. Transactions of the American Fisheries Society 143, 1188-1198.
[51] Final EA p. 103
[52] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[53] Final EA appendix p. 84
[54] Morelli TL, Daly C, Dobrowski SZ, Dulen DM, Ebersole JL, et al. (2016) Managing Climate Change Refugia for Climate Adaptation. PLOS ONE 11(8): e0159909. https://doi.org/10.1371/journal.pone.0159909

field of climate refugial research. [55] The tools they are producing guide land management to account for projected climate effects, local disturbance regimes, and regional topographic, hydrologic, and biological features and needs. The resulting prescriptions do not necessitate preservation of "large tracts of land" (as assumed in the final EA), but guide preservation of climate and disturbance resilient microrefugia within and across stands that provide niche pockets capable of sheltering species communities. These resources are widely and publicly available and failure by the KNF to assess Best Available Science, even when it is produced by their own agency, undermines and damages the validity of the final EA and necessitates generation of a comprehensive EIS.

While we were pleased that the Final EA included a short discussion of carbon cycling and storage within the effects to forest vegetation resource section, unfortunately it was not accompanied by relevant analysis[56]. Moreover, we take issue with the following statement which undermines the necessity of collective action in reducing greenhouse gas emissions by maximizing carbon sequestration: "The Black Ram Project would affect only a tiny percentage of the forest carbon stocks of the Kootenai National Forest, and an infinitesimal amount of the total forest carbon stocks of the United States" (final EA, appendix pg 66). Almost all individuals and entities could excuse environmentally unethical actions that contribute to greenhouse gas emissions along the same lines of argument. The USFS should not be excused based on such feeble justification. A review of the literature indicates that avoidance of clearcutting would enable timber harvest without drastically altering carbon sequestration in forest lands. Net carbon stocks are lowest following clearcutting, taking into account carbon sequestration in Harvested Wood Products, with higher net carbon stock values for shelterwood and selective cuts and the most net carbon in unmanaged "reference" stands [57]. When forests are managed for timber, selection cutting that mimics natural forest stand structure, producing an uneven aged condition, is far more effective towards carbon sequestration than the diameter-based, single species, shelterwood, or clearcut harvesting protocols[58].

By not including analysis regarding carbon sequestration following timber harvest, climate effects on water resources, and potential climate microrefugia within the project area, the Final EA violates NEPA.

Suggested Remedies: Section II -- The Final EA violates NEPA because it fails to complete or disclose pertinent information and analysis to the public.

The Forest Service must begin a comprehensive EIS process. This would release information not included in the Final EA, and provide the public with an opportunity to engage with the full analysis completed for this project.

[55] https://www.climaterefugia.org
[56]Final EA p. 118
[57] Puhlick, J.J., Weiskittel, A.R., Fernandez, I.J., Fraver, S., Kenefic, L.S., Seymour, R.S., Kolka, R.K., Rustad, L.E., Brissette, J.C., 2016. Long-term influence of alternative forest management treatments on total ecosystem and wood product carbon storage. Canadian Journal of Forest Research 46, 1404-1412.
[58] Puhlick, J.J., Weiskittel, A.R., Kenefic, L.S., Woodall, C.W., Fernandez, I.J., 2020. Strategies for enhancing long-term carbon sequestration in mixed-species, naturally regenerated Northern temperate forests. Carbon Management 11, 381-397.

The Forest Service must conduct an EIS that critically analyzes past history of fire to determine and conserve possible fire refugia in unit 72 and the Rampike area.

The Forest Service must comprehensively analyze the impacts, direct and cumulative, stemming from the Davis Fire of 2018.

The Forest Service must conduct an EIS with more substantial alternatives.

The Forest Service must analyze and plan for changes stemming from a PNNST CP and must heavily moderate area road usage until a CP is completed.

The Forest Service must survey current recreation and trail use in the project area.

The Forest Service must analyze projected effects of treatments on vegetiative conditions including huckleberry production.

The Forest Service must account for global warming by analyzing carbon sequestration following timber harvest, climate effects on water resources, and potential climate microrefugia within the project area.

III. The Final EA violates NEPA because it fails to take a hard look at the project.

NEPA requires that the Forest Service take a "hard look" at a project. The Final EA failed to do so in several respects.

A. The Final EA fails to take a hard look at impacts to moist forests types and uninventoried old growth.

i. Proposed regeneration treatments in moist habitats do not support a seral species conversion, and would instead be deleterious to current stand health.

In his analysis (included in YVFC's August 8 2019 comments), Herb Hammond noted that current habitat types are supporting healthy stands:

> A mosaic of diverse, productive habitats currently exist within the proposed treatment units in the Black Ram project area... If there are specific habitat types that are needed in the project area, these habitat types need to be identified and supported through a landscape analysis; and treatment regimes designed to produce the composition and structure needed to provide a particular habitat type.[59]

This is especially true of units within the transition zone along the edge between moist and subalpine biophysical settings, including unit 72.

[59] Herb Hammond, Black Ram Project—Initial Review p. 5

Nearly ninety percent of the proposed logging units for this project takes place in these moist or subalpine forest types. Alternative 2 proposes regeneration harvest, either near or complete clearcuts, throughout these functioning forest areas. These treatments are implemented to promote early serals species such as white pine and larch, species that are better suited to dry, well drained soils, not moist warm or alpine cool sites. YVFC was told in conversations with the district ranger and silviculturist that due to the wetness of the Vegetative Response Units of the Rampike area in many of the proposed treatment areas, only about ten percent of the early seral seedlings planted-larch and pine were expected to survive. The EA itself recognizes this: "previous regeneration harvest in the Project Area followed by broadcast burning did not mimic all of the ecological processes that occur during a mixed or stand replacing wildfire."[60] The Final EA is thus proposing to restart these stands, knowing that it will restart them not as early seral stands, but as young, small diameter moist or alpine cool stands, changing only the size class. Per table 46 of the final EA, the existing size class of large trees in subalpine biophysical setting, is 31%, while desired size class distribution is 32-64 percent.[61] Thus proposed treatments in and along subalpine habitat will push the forest further from desired class sizes.

The EA also claims of these clearcuts that, "these treatments would somewhat mimic the historic effects of stand-replacing and mixed severity fires, with the larger fire-tolerant trees remaining, and the smaller and non-fire tolerant trees being killed."[62] Yet analysis points to the limitation of this assertion. Clearcuts do not mimic patch content nor natural fire regimes. Fire seeks drier, rockier soil, while regeneration harvest targets the high-productivity wet soils where big trees are found. Clearcuts compact, rather than aerate, soil. Fire leaves nutrients on site, and leaves a wild and robust array of geometric structure—horizontally, for small carnivores and moisture retention and groundcover regeneration—but also standing snags of all size classes, casting shadows for moisture rendition, perching birds, raptors, cavity nesters—the latticework of mortality remaining on site slows runoff and erosion.

ii. The EA fails to rigorously justify the need to "restart" these stands.

The Final EA does not provide a scientific basis to substantiate the claim that clearcuts followed by planting unsuitable species will contribute to resiliency of stands, nor does it rigorously support its rationale for promoting seral species over existing stands.

By failing to provide rigorous analysis regarding cool forest types, the Forest Service failed to take a hard look at impacts, and thus violates NEPA.

B. The Final EA fails to take a hard look at blowdowns stemming from regeneration harvest.

Our observations in the neighboring Buckhorn and OLY projects found near-complete mortality of solitary leave trees, no matter what the species. In many cases this is due to blowdowns in the seasons immediately following harvest. Treatments could avoid this by clustering leave trees into islands, or leaving a higher percentage of trees per acre. (see Appendix 2).

[60] Final EA p. 91
[61] Final EA p. 111
[62] Final EA p. 125

By not including these features, and by not analyzing the impact to the forest from blowdowns caused by treatments, the Forest Service failed to take a hard look at impacts, and thus violates NEPA.

C. The Final EA fails to take a hard look at impacts from large regeneration harvest units.

In our August 14, 2018 comments, we noted the lack of concrete analysis in the EA about the "perceived need of making openings larger than 40 acres to 'provide more effective areas for suppression resources to engage wildfires safely under more severe conditions,'" especially in light of Forest Plan recommended limiting of unit size to under 40 acres. The Final EA states regarding regeneration harvest units over 40 Acres:

> In alternative 2, 36 units would contribute to 21 openings over 40 acres. These treatments have been designed to contribute to forest wide desired conditions and to emulate the natural range of variability for patch sizes on the Kootenai National Forest. The desired pattern would be to emulate some of the characteristics of a wildfire, depending on the context and forest type of the unit. The largest of these openings would be approximately 293 acres.[63]

The Final EA also claims in response to comments that "The size of individual or adjacent harvest units (that is, those contributing to openings over 40 acres) are at the small end of the historic range of opening sizes in a disturbance-driven ecosystem such as this. Native wildlife are adapted to such conditions. See also the introduction to the wildlife section of this response to comments.[64]" The Final EA does not analyze the impact of these large units, specifically noting that an alternative that would have limited unit sizes to 40 acres or smaller "was eliminated from detailed study."[65] The EA states several reasons for doing so, but provides no data or sources to demonstrate the validity of the choice not to analyze unit size.

As noted in section I above, we are concerned about the consequences of timber harvest, and in particular clearcutting, on migratory birds within the Black Ram project area. Clearcutting of mature forests alters vegetative regeneration away from the broad-leaf species that supply the majority of insect forage for songbirds and that are most likely to colonize following natural disturbances.[66] Moreover, cool old growth forests provide a temperature "buffer" against negative effects of climate change on climate-sensitive species of songbirds.[67] The synergistic effects from loss of mature forests and drying climatic conditions are responsible for declines in nearly half of all forest bird species of the Pacific Northwest in the last 30 years.[68] With staggering declines in North American songbird populations [69], it is inexcusable to avoid discussion of treatment effects on these sensitive species.

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[63] Final EA p. 8
[64] Final EA Appendix p. 116
[65] Final EA p. 15
[66] Hagar, J.C., 2007. Wildlife species associated with non-coniferous vegetation in Pacific Northwest conifer forests: A review. Forest Ecology and Management 246, 108-122.
[67] Betts, M.G., Phalan, B., Frey, S.J., Rousseau, J.S., Yang, Z., 2018. Old-growth forests buffer climate-sensitive bird populations from warming. Diversity and Distributions 24, 439-447.
[68] Northrup, J.M., Rivers, J.W., Yang, Z., Betts, M.G., 2019. Synergistic effects of climate and land-use change influence broad-scale avian population declines. Global change biology 25, 1561-1575.
[69] Rosenberg, K.V., Dokter, A.M., Blancher, P.J., Sauer, J.R., Smith, A.C., Smith, P.A., Stanton, J.C., Panjabi, A., Helft, L., Parr, M., Marra, P.P., 2019. Decline of the North American avifauna. Science 366, 120.

Since the Final EA is missing critical unit size analysis, the Forest Service has not taken a hard look at the impacts to wildlife, fire suppression, soils, hydrology, and desired vegetative conditions by the proposed actions, and thus violates NEPA.

D. The Final EA fails to take a hard look at impacts to wildlife corridors.

In our August 14, 2018 comments, we voiced concern regarding the lack of analysis and information provided in the EA regarding potential impacts to "wildlife habitat, linkage zones and corridors." We noted our hope that the project would include "an alternative that takes into account wildlife corridors and linkage zones for ungulates and other sensitive species as well as bears – within the project area and across the [Candian] border" and asked for "maps that can demonstrate the wildlife linkage zones and corridors that the district has considered."[70] The Forest Service responded that "wildlife habitat connectivity is an important consideration in the Forest. The Forest Plan FEIS (2013; beginning on page 374) analyzed connectivity specifically... as the conditions on the Forest move toward those desired historical conditions, native species' habitats would more closely resemble that under which they are adapted… Broad areas for landscape-scale movements have been considered in the EA for numerous species, in particular the wide-ranging carnivores... Harvest and prescribed fire units contribute to early-seral connectivity, which is lacking across the project area. Connected young, open patches provide forage and nesting opportunities for an abundance of wildlife species. Please see the EA for species-specific analyses where indicated in the 2015 Forest Plan... Prescriptions and subsequent treatments move the forest toward the desired conditions for species composition, structure, pattern, and processes that existed historically and under which native wildlife species are adapted (refer to the vegetation section of the EA). Thus, these types of treatments do consider and meet the needs of wildlife."[71] The Final EA does not provide requested maps. This comment directs the reader to individual wildlife resource sections, yet these resource sections remain vague when discussing wildlife movement or corridors. There is no discussion of specific corridors, indication of modeling to locate critical habitat for connectivity, or other scientific analysis.

Proposed units adjacent to West Fork IRA undercut wildlife connectivity by fragmenting corridors through roadless areas, thus limiting the potential benefits stemming from wildlife movement through them. The roadless areas in this project area are unconnected, a scattered archipelago of lands. In a project this large and significant, and in the long absence of monitoring and analysis, the agency must prove that the various wildlife resources are connected in this ever-increasingly fragmented transboundary landscape.

Since the Final EA is missing critical wildlife connectivity and corridor analysis, the Forest Service has not taken a hard look at the impacts to wildlife movement by the proposed actions, and thus violates NEPA.

E. The Final EA fails to take a hard look at unauthorized road system use.

[70] Letter of Robyn King, Yaak Valley Forest Council to K. Kaiser, Kootenai National Forest (August 14, 2018).
[71] Final EA Appendix p.113

In our August 8, 2019 comments, we stated that "An EIS is necessary to do a full and accurate inventory and correction/repair of insufficiently secure roads, and user-created roads."[72] The Forest Service responded that "In the Black Ram project area, any road closures or roads indicating unauthorized use have been repaired as of October 2019. This includes repair and replacement of gates, reinforcement of barriers, and closure of user-created routes that have been identified."[73] Over a period of three days the Yaak Valley Forest Council field-crew traveled around the 95,412 acre BlackRam project area to document the effectiveness of USFS Motor-vehicle (MV) road closures/ barriers. Twenty roads were found to have barriers that can easily be bypassed, and at times no barriers were present at all (see Appendix 1). The EA did not respond to comment asking for an accurate inventory, nor did it acknowledge ongoing litigation on the Kootenai National Forest stemming from unauthorized access of roads. The Forest Service has not demonstrated that unauthorized use of closed, stored, or user-created roads has been identified, analyzed, or mitigated.

Our observations across the entire Three Rivers Ranger District point to insecure, no barrier, open roads, user-created roads, and "phantom gates" which contribute to negative cumulative effects regarding grizzly bear protection, considering the stacking of adjacent projects across the District. As a result, we will continue our road barrier surveys and documentation across the District.

Given lack of up to date road use assessments, neither the Final EA or the the prepared Biological Assessments adequately calculate the impact that insecure gates may have on wildlife habitat, including that of lynx, wolverine and grizzly bears.

Since the Final EA does not account for insecure roads in its habitat analysis, the Forest Service has not taken a hard look at the impacts to wildlife movement by the proposed actions, and thus violates NEPA.

F. The Final EA fails to take a hard look at impacts to amphibian species of concern and effectiveness of use of RHCAs alone in preserving species habitat.

Page 36 of the final Black Ram EA claims the following regarding possible presence in the project area of the Coeur d'Alene salamander, a Montana designated species of concern: "Neither the Coeur d' Alene salamander nor northern leopard frog are present in the Project Area or its area of influence (Located in the project File for Montana Field Guide NL Frog 2018) (B. Maxell, 2018), therefore, neither the Coeur d' Alene salamander nor northern leopard frog are discussed further in this analysis. No suitable habitat for either species is known to be present in the Project Area or its area of influence, (B. Maxell, 2018)."[74] This statement disregards the presence of this species, and by simultaneously underplaying management concerns relevant to the similarly sensitive and locally present Western Toad, the USDA sidesteps a myriad of amphibian specific guidelines on timber harvest practices put in place by federal and state agencies including the Montana Natural Heritage Program as well as recommendations by leading experts within the peer-reviewed scientific literature.

[72] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[73] Final EA Appendix p. 118
[74] Final EA p. 26

The assertion that Coeur d' Alene salamander neither occurs, nor has suitable habitat to thrive in the project area, is false and is directly refuted by the very authors cited within the text of the EA, as well as by publicly available documents on the Montana Fish, Wildlife, and Parks website. B. Maxell, 2018, cited by the USDA as sufficient evidence to negate the possible presence of Coeur d'Alene salamander in the project area, appears to be an email correspondence, the contents of which are undisclosed and, regardless, do not meet the standards of documentation necessary to support such a claim. More importantly, B. Maxell is a leading expert on Montana Herpetology who's various published works all indicate presence of Coeur d' Alene salamander in the project area.[75] The following distribution information has been published by the Montana Natural Heritage Program:

> "In Montana they have been documented at isolated localities in a narrow band west of the Bitterroot River, Salish Mountains, and Lake Koocanusa from Sweathouse Creek in the Bitterroot Valley to just north of the town of Yaak near the Canadian border. However, given the paucity of surveys that have been conducted, it is likely that their range extends further south on the west side of the Bitterroot Valley and all the way to the Canadian border.[76]"

According to Montana Fish, Wildlife, and Parks,[77] the northernmost known population of Coeur d'Alene salamanders is "along the South Fork of the Yaak River (Wilson and Simon 1987; Maxell et al. 2003)." Note that the references listed here are at least 17 years old, supporting the paucity of field data on distributions of this species. Even the Black Ram final EA acknowledges lack of onsite monitoring for sensitive amphibian species with the following statement on page 39: "Population and distribution data for sensitive amphibian species is very limited and hard to collect. Western Toads were assumed present in areas of suitable habitat." Why haven't the same considerations and assumptions been aimed at the Coeur d'Alene salamander? And should the excuse that data is "hard to collect" for a sensitive species be considered sufficient for disregarding these species in management plans? The Canadian Government seems to have had no such difficulties, having released a detailed 2017 Management plan for the Coeur d'Alene salamander, a Schedule 1 Species of Special Concern under the Canadian Species at Risk Act, which shows species distributions directly adjacent to the Black Ram project area. "In British Columbia the Coeur d'Alene Salamander is found at over 74 sites in seven areas: along Kootenay Lake, the Duncan Reservoir, Upper and Lower Arrow Lake, the East Kootenay (including Yahk)…"[78]. It is therefore highly likely that Coeur d'Alene salamander occurs in the project area and actions aimed at disregarding this possibility neglect the majority of the literature which indicates otherwise.

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[75] See Maxell, B. A. (2000). Management of Montana's Amphibians: A Review of Factors that May Present a Risk to Population Viability and Accounts on the Identification, Distribution, Taxonomy, Habitat Use, Natural History and the Status and Conservation of Individual Species: a Report, Wildlife Biology Program, University of Montana
See also Maxell, B. A., P. Hendricks, M. T. Gates and S. Lenard (2009). Montana amphibian and reptile status assessment, literature review, and conservation plan. M. N. H. Program and U. o. M. Montana Cooperative Wildlife Research Unit and Wildlife Biology Program, Missoula. Helena, Montana: 642.

[76] Ibid.

[77] (document fwp.mt.gov >fwpDoc>id=26531)

[78] Canada, E. (2017). management Plan for the Coeur d'Alene salamander (Plethodon idahoensis) in Canada. E. Canada. Ottawa.

Moreover, the Coeur d' Alene salamander occurs at moderate to high elevations and, directly counter to claims to the contrary, in habitats that dominate the Black Ram project area. Coeur d'Alene salamander have been documented in Montana at elevations up to 5,000 ft, and are predicted to occur at nearly 6,000 ft.[79] The elevation range within the projected harvest units is between 3,025 to 5,849 ft, well within the suitable elevation gradient favored by this species. Habitat needs for this species include cool, damp environments, leaf litter, ephemeral water sources such as seeps and springs, streamside talus as well as talus far from free water (necessary for breeding), northwards facing slopes, and areas with heavy (greater than 25%) canopy cover.[80] Such habitat features are prominent across the project area, and specifically rocky talus features have been documented in units 41 and 71.

Without further detailed survey, it is both unethical and directly counter to the USDA 2015 Land Management Plan for the Kootenai National Forest to proceed with timber harvest activities that do not take into account the special needs of all Montana designated species of concern. Specific to the Coeur d' Alene Salamander, and according to the conservation guidelines proposed by the Montana Natural Heritage Program:

> "Timber harvest should not be allowed in areas that serve as refugia for the Coeur d'Alene salamander because of the species' dependence on moist microhabitats and the fact that populations of this species are usually isolated from one another by long distances, thereby eliminating the opportunity for recolonization."…. "Risk factors relevant to the viability of populations of this species are likely to include timber harvest, fire and fire management activities, road and trail development and maintenance, on-road vehicle use, development of water impoundments, and the isolation of individual populations as described above."[81]

Riparian Habitat Conservation Areas (RHCAs) do not provide adequate protection to account for the specific needs of amphibian species resident in the Black Ram project area. According to the Black Ram final EA: "RHCAs would be established around any new water features, fish bearing stream and landslide prone areas that are inadvertently discovered during implementation within or adjacent to harvest units per 2015 Forest Plan direction."[82]

RHCAs provide variable width buffer zones based on stream size and seasonality. These RHCAs are considered adequate to "protect streams from non-channelized sediment inputs" and "sufficient to provide other riparian functions".[83] Neither RHCAs, nor any other management actions proposed in the Black Ram EA take into account over-ridge corridors or headwater networks necessary for aquatic dependent species. "Possibly the most important feature of the biology of amphibians that management plans need to address is that their complex life histories require a complex set of habitats connected by suitable migratory corridors."[84]

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[79] Maxell, Hendricks et al. 2009
[80] Maxell 2000, Maxell, Hendricks et al. 2009, Canada 2017
[81] Maxell 2000
[82] Final EA p. 18
[83] 2015 Kootenai National Forest Land Management Plan
[84] Maxell 2000

Many amphibian species are patchily distributed, heavily reliant on isolated water features, and genetic diversity is maintained via long-distance dispersion. Headwater conservation is critical as amphibian populations are more abundant in these regions and habitat conservation will have broader impacts.[85] The Black Ram project area contains headwaters to a multitude of drainages systems (Pete Creek, Canuck Creek, Wood Creek, Dog Creek, Rat Creek, Koo Koo Creek, Sink Creek, Benefield Creek, Waper Creek, Lap Creek, Beetle Creek, Hensley Creek, Midge Creek, Davis Creek, Winkum Creek, Jungle Creek, Rampike Creek, Garver Creek, French Creek, Mud Creek, Slim Creek), making this a key area for considered management of resident sensitive species. Timber harvest protocols should be planned in a way that encourages connectivity between even distantly adjacent water features, enabling amphibian dispersal and reduction of genetic bottlenecking that can lead to rapid population decline and local extinction.[86] These management considerations include use of larger streamside buffers, islands of leave-trees that cross ridge-lines between watersheds, and additional protected areas between headwater regions of adjacent watersheds.[87]

In response to specific needs of the Coeur d'Alene salamander, the following management considerations should be met (note, use of RHCAs is only one of six management considerations proposed):

> " In their review of the management of the Coeur d'Alene salamander Groves et al. (1996) suggest that the impacts of timber harvest at sites known or likely to support populations be mitigated by: (1) avoiding concentration of harvest activities in headwater subdrainages; (2) using partial cutting that maintains at least 60% canopy cover; (3) ensuring that forest harvest activities provide for recruitment of woody debris; (4) reducing ground disturbance by winter harvesting and using low ground pressure tracked vehicles; (5) carrying out harvest activities during periods of salamander are not active on the ground surface (dry periods in the summer or during the winter); and (6) maintaining 30 meter forest buffers along both sides of all streams. Maintenance of buffer zones around streams has also been suggested by Corn and Bury (1989) (7.6-15.0 meters) and deMaynadier and Hunter (1995) (30-100 meters)."[88]

By not properly surveying the impact of treatments on amphibian species of concern, the Forest Service failed to meet the hard look requirement, and thus violates NEPA.

G. The Final EA fails to take a hard look at the project's impacts to noxious weeds.

In our August 8, 2018 comments, we voiced concerns about "significant and rapid... post-harvest disturbed unit [propagation] by weeds," and asked about efforts to mitigate and restore areas impacted by noxious weeds.[89] The Forest Service responded: "At the project level, highest concentrations of invasive plants are

[85] Olson, D. H., P. D. Anderson, C. A. Frissell, H. H. Welsh Jr and D. F. Bradford (2007). "Biodiversity management approaches for stream–riparian areas: perspectives for Pacific Northwest headwater forests, microclimates, and amphibians." Forest Ecology and Management 246(1): 81-107.
[86] Olson, Anderson et al. 2007
[87] Ibid.
[88] Maxell 2000
[89] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).

found on major travel routes. Project specific design features were developed to mitigate the spread of noxious weeds."[90]

Despite these assurances, all evidence indicates that the proposed actions would aggravate the spread of invasive weeds throughout the project area. The Black Ram proposed actions will promote increased traffic of machinery and trucks from "major travel routes" into previously isolated forest stands via new, reopened, or rarely-used Forest Service roads, introducing vectors for weed proliferation. The Final EA acknowledges this likely outcome. In the Effects to Noxious Weeds resource analysis, it concluded that "because [proposed regeneration harvest] treatment types result in significant changes to canopy cover, these treatment areas can result in a moderate risk of weed introduction and spread,"[91] and that "there is a moderate risk for existing infestations of spotted knapweed, thistles, common tansy, oxeye daisy, invasive hawkweeds, and goatweed to spread."[92] Thus the Forest Service's analysis of the design features discussed in the response to comments indicates that they are insufficient to prevent the spread of noxious weeds.

By failing to disclose the impacts of noxious weeds, build design features that prevent their proliferation, or removing treatments that aid weed dispersal, the Forest Service failed to meet the hard look requirement, and thus violates NEPA.

H. The Final EA fails to take a hard look at the project's lack of a CP for the PNNST.

There is no CP and the Final EA does not contain extensive history of monitoring of trail use, administrative use behind "closed" gates, user-created trails, the impact of proposed alternative routes, or inventory and assessment of impact created by user-created campgrounds associated with the PNNST. Ignoring these potential impacts violates NEPA.

Suggested Remedies: Section III -- The Final EA violates NEPA because it fails to take a hard look at the project.

The Forest Service should prepare a subsequent draft EIS that takes a hard look at impacts to cool forests types and uninventoried old growth, wildlife corridors, unauthorized road system use, and noxious weeds.

The Forest Service must drop or lessen units in moist and subalpine cool forest types from proposed action, and refocus Black Ram actions within the Wildlands Urban Interface.

The Forest Service must factor likelihood of blowdowns into analysis of impact on stands.

The Forest Service must reduce the number of 40 acre openings in the project area in compliance with the 2015 Forest Plan.

The Forest Service must take a hard look at compounding effects of clearcut treatments on soil and water chemistry, moisture, and wildlife habitat needs.

The Forest Service must produce maps and analysis of wildlife corridors.

[90] Final EA Appendix p. 95
[91] Ibid., p. 164
[92] Ibid., p. 166

The Forest Service must complete an up-to-date inventory of user created roads and reassess total road density based on effective and actual road use.

The Forest Service must reevaluate proposed treatments and drop units most likely to cause damage stemming from noxious weeds.

The Forest Service must conduct a top-down re-evaluation of timber harvest strategies proposed in the Black Ram EA that take into consideration all sensitive species present, including Coeur d'Alene salamander. This re-evaluation should consider Best Available Science and additions to use of RHCAs in addressing movement corridors for aquatic-dependent terrestrial species.

The Forest Service must complete a CP for the PNNST.

IV. The Final EA violates NEPA because it fails to disclose or comprehensively analyze cumulative effects.

CEQ regulations require the Forest Service to evaluate and address the cumulative impact of a proposed action, defined as "the impact on the environment which results from the incremental 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."[93] The Final EA failed to disclose or analyze the following sets of cumulative effects:

A. Recent fire history.

In our August 8, 2019 comments, we asked about the Davis fire's "cumulative effects on the project area" and noted the compounding impact of "fragmentation created by the Davis fuel break and the adjacent openings created by the Caribou fire" of 2017.[94]

i. Caribou Fire of 2017

The Final EA notes that the "Caribou fire salvage is occurring on land adjacent to the Project Area,"[95] that the 2017 fire impacted "about 3,396 acres (eight percent) of the Robinson LAU,"[96] and that "the Caribou fire… benefitted summer ungulate habitat,"[97] but otherwise does not analyze the cumulative impact of Caribou on the project, as a whole or in individual resource sections.

[93] 40 CFR § 1508.7
[94] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[95] Final EA p. 25
[96] Ibid., p. 320
[97] Ibid., Appendix p. 115

ii. Davis Fire of 2018

The Final EA responded to concerns of the Davis fire that: "the effects of the Davis Fire to aquatic species and their habitat are covered as a whole when describing wildfires in general. The Davis Fire was not singled out for analysis to aquatic species or their habitat, because there are no proposed activities to occur in the Davis Fire boundary under the Black Ram Project."[98] Response to comments also noted that "the effects of the Davis Fire have been incorporated into the existing condition of the project area,"[99] but did not discuss if or how cumulative impacts were analyzed. The Final EA concluded that "Road/stream crossings and existing ECA do not take into account crossings or ECAs within Canada or ECAs resulting from the 2018 Davis Fire or fire suppression since no harvest activities are proposed in these watersheds,"[100] a statement reiterated in Forest Service response to YVFC comments asking why these cumulative effects were not included in ECA or analyzed.[101] While no timber harvest activities are proposed in this project in the small areas of these watersheds, harvest stemming from Davis in those immediate watersheds and the crossings, fire-fighting and associated road use, and the fire itself have dramatically changed forest composition for a large percentage of the project area. Furthermore, the creation of fuel breaks along Pete Creek, without clear analysis as to its effects on this project infringes upon the public's and local community's opportunity to understand or respond fully to the project.

We are also concerned about the Davis firefighting impacts on sediment delivery to aquatic systems.

In response to our ongoing, and frequently voiced concerns over the condition of this Davis Fire break, we conducted a preliminary analysis of soil health relative to the neighboring forestlands. We found significantly increased exposure of firebreak soils to weathering through elevated wind speeds and reduced duff depth compared to within-forest sample locations (see Appendix 3). We urge future surveys into long standing impacts of this and other firefighting activities that have resulted in forest clearing, soil compaction, and alteration of natural moisture regimes.

We note that the final EA claims that "the Davis Fire increased snag densities in the subalpine setting." The agency appears to fail to differentiate between wet and dry subalpine settings. The Davis fire was in the dry subalpine setting; proposed regeneration harvests are in the wet subalpine setting. The snags in the Davis setting therefore do not make up for dramatic reduction of old forest and snags in the project area.

[98] Ibid., Appendix p. 65
[99] Ibid., Appendix p. 70
[100] Ibid., p. 265
[101] Ibid., appendix p. 110

By not reporting the cumulative effects of the Davis and Caribou fires, the Final EA fails to disclose pertinent information to the public and fails to demonstrate that it has evaluated pertinent cumulative effects, and thus violates NEPA.

B. Stacking of recently completed and proposed projects.

In our August 8, 2019 comments, we noted that "Black Ram is directly adjacent to the 45,000-acre Spread Thin/Buckhorn project area… The EA does not discuss how this creates a cumulative effect, one that should have been analyzed, as should have been the rapid development of roads built on private lands in the project area."[102]

The Forest Service response to this comment stated that "the Forest Service analyzed the past, ongoing, reasonably foreseeable actions and the effects of the proposed treatments for this project under cumulative effects in each resource section of the EA."[103] Yet the individual analyses by and large did not include the Buckhorn project area and related timber sales in their cumulative effects analysis statements. Buckhorn is mentioned in only two resource sections. In analysis of effects to black-backed woodpecker, the EA states that "the Buckhorn Project Area is adjacent to the south of Black Ram and has numerous large burns planned; none have occurred yet."[104] The analysis does not go further to evaluate the impact of Buckhorn's proposed 11,700 acres of burnings. And in the effects to Water Resource section: "Buckhorn project timber harvest units in the Pheasant Creek watershed that were harvested in 2017 and 2018 after existing ECA data was generated were incorporated into ECA analysis for the proposed project. As described earlier in this analysis, non-harvest fuels treatments (including those in adjacent Project Areas within the same watersheds, such as the Buckhorn project) were evaluated to pose little to no risk or effect to hydrology, so they were not analyzed further for cumulative effects."[105]

Combined, the Buckhorn, O'Brien Lower Yaak (OLY), Black Ram, and Knotty Pine projects comprise approximately 200,000-250,000 acres across the District. The cumulative effects of these four stacked projects need evaluation.

The effective stacking of projects in a connected chain is particularly concerning because of potential impacts to sensitive species, such as wolverines and grizzly bears, with regeneration cuts atop past harvests and roads in a landscape already depauperate in hiding cover and thermal cover, particularly on the cool north slopes utilized for summer thermoregulation further disrupts connectivity, not just east-west throughout the Yaak, but from and to Canada's immediately-adjacent Purcell Mountains. This deforestation will also have a negative effect on aquatic resources flowing north into Canada and represent an unauthorized taking of those values and resources.

[102] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[103] Final EA Appendix p. 93
[104] Ibid., p. 362
[105] Ibid., p. 278

By not reporting the cumulative effects of the adjacent project area, the Final EA fails to demonstrate that it has evaluated cumulative effects, and thus violates NEPA.

C. Road building not on Forest Service Lands.

In our August 8, 2019 comments, we voiced concern regarding the "cumulative effect... [of] roads in Canada that are adjacent to the project area," "the development of roads built on private lands" adjacent to the project area, and the potential of both to "cause sedimentation, water pollution, increased runoff, and increase in weed infestation, soil heating, increased recreational traffic, and other impacts."[106] The Forest Service responded: "these actions were included in Table 9, Ongoing and Reasonably Foreseeable Actions within or Adjacent to the Black Ram Project Area on page 25 of the EA. As such, these actions were considered in developing the existing condition and environmental consequences for the various resources." [107] Table 9 lists "Vegetation Management in Canada," described as: "continued harvest and prescribed burning is likely to occur on public lands adjacent to the Project Area." Table 9 also lists "Road and watershed work," which it describes as "Planned road storage, road decommissioning and watershed improvement work in the Buckhorn Project Area."[108] But Table 9 does not include either private or Canadian road construction and maintenance. In the Effects to Water Resource section, the final EA notes that "future development of private land in Canada is likely and is expected to be similar to private property development in the United States."[109] The grizzly bear resource section acknowledges that "there has been an increase in roads associated with private residential development. The increase in roaded area and road density has reduced the area of core and increased route density along the border of the Project Area BMUs,"[110] but does not discuss the cumulative effects stemming from that development. Road development is not discussed in any other resource analysis, including soils, weeds, recreation, or wildlife. Page 150 is a good illustration (Figure 22) showing proposed regeneration logging in the headwaters of Boyd Creek, on its journey north into Canada.

By not reporting or analyzing the cumulative effects of road construction adjacent to the project area, the Final EA fails to demonstrate that it has evaluated cumulative effects, and thus violates NEPA.

D. Accurate assessment of road closure security.

In our August 8, 2019 comments, we stated that "an EIS is necessary to do a full and accurate inventory and correction/repair of insufficiently secure roads, and user-created roads."[111] The Forest Service responded that "In the Black Ram project area, any road closures or roads indicating unauthorized use have been repaired as of October 2019. This includes repair and replacement of gates, reinforcement of barriers, and closure of

[106] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[107] Final EA Appendix p. 91
[108] Ibid., p. 25
[109] Ibid., p. 280
[110]Final ea 291
[111] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).

user-created routes that have been identified."[112] We document extensive breaching of road closures within the project area, as discussed in section IIIe above and detailed in Appendix 1.

The Final EA treats road security as a non-issue. It does not acknowledge ongoing litigation on the Kootenai National Forest stemming from unauthorized access of roads. The Effects to Grizzly Bears resource section states that unauthorized use has happened "in the past,"[113] but does not analyze current unauthorized use and the potential impact on grizzlies. The Forest Service has not demonstrated that unauthorized use of closed, stored, or user-created roads has been identified, analyzed, or mitigated—in the Black Ram project or across the entirety of the Three Rivers District.

Since the Final EA is missing this analysis, the Forest Service has not reviewed the cumulative impacts of insecurely closed roads, and thus violates NEPA.

Suggested Remedies: IV--The Final EA violates NEPA because it fails to disclose or comprehensively analyze cumulative effects

The Forest Service must prepare an EIS evaluating the cumulative effects of recent fires, recently completed or planned projects, road building adjacent to project area but not on Forest Service Lands, and road closure security.

V. The Forest Service's failure to respond to public comment violates NEPA.

Because the agency's NEPA regulations require the responsible official to respond to any substantive comments received, the Kootenai National Forest's failure to respond to comments violates NEPA.[114]

A. The Final EA failed to address comments concerning alternative treatment parameters within the draft EA.

In YVFC's comments dated August 8, 2019, we wrote of the EA: "not one of our recommendations was included and, in some cases, our input was misrepresented in the EA." We further clarified that in prior comments, YVFC "outlined a clear set of concerns and recommendations we expected would be addressed in the final document."[115] Those earlier comments stated that:

> We expect to see an alternative developed that adds to, retains, and improves the wild qualities of this area... in the backcountry areas, we would expect to see lower intensive restoration treatments in MA 6. In the MA 6 areas within the WUI we would expect to see medium and higher intensive restoration treatments to protect communities... road decommissioning and creating and maintaining large areas of secure wildlife habitat, linkage zones and corridors... We expect to see selective understory removal, uneven aged management and prescribed burning to achieve the management goals. Since the NW Yaak planning unit and Black Ram project includes a major part of the Yaak

[112] Final EA Appendix p. 118
[113]Ibid., 293
[114] 40 CFR § 6.203
[115] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).

> grizzly bear recovery zone and core habitat as well as lynx habitat, we expect to see an alternative that takes into account wildlife corridors and linkage zones – for ungulates and other sensitive species as well as bears – within the project area and across the border... Maps that can demonstrate the wildlife linkage zones and corridors that the district has considered as you are planning how to manage this project area help the public understand how wildlife movement is being considered in this critical transboundary area and is something we expect the alternative to reflect. Having these visuals enables the public to understand how the entire landscape will be functioning to protect wildlife and improve forest health. If the public can see a map that captures these corridors/linkage zones, grizzly bear core and habitat and lynx habitat, that will better inform comments for alternative development going forward.[116]

In our August 8, 2019 letter, we continued: "we wish to clarify that this was not an alternative driven by a desire to see wildness alone but by specific parameters, none of which were included in the EA."[117] The FONSI summarily disregards these alternative parameters and continues to condense our participation down to the desire for wildness. Neither does the Final EA include or respond to our requests that the project area contain additional treatment acres within the WUI.

B. The Final EA failed to address comments regarding cumulative effects of the adjacent Buckhorn Project.

In our August 8, 2019 comments, we noted that, "Black Ram is directly adjacent to the 45,000-acre Spread Thin/Buckhorn project area… The EA does not discuss how this creates a cumulative effect, one that should have been analyzed, as should have been the rapid development of roads built on private lands in the project area, as well as roads in Canada that are adjacent to the project area."[118] The Final EA does not include a response to this comment, and does not fully analyze the cumulative effect of the Buckhorn project.

C. The Final EA failed to respond to comments regarding insufficient analysis of road-building through old growth.

In our August 8, 2019 comments, we noted that "under alternative 2, harvest unit 76A would require road-building through old growth. The EA justifies thinning this unit with a simulation described on page 129. This simulation is far from convincing. Unless a model is truly deterministic—based upon so few and such simple variables that there is no chance of randomness—it must be run multiple times in order to achieve any certainty. The Forest Vegetation Simulator used here relies on stochastic modeling that requires both repeated runs and validations not included in the EA. Yet according to the document, the simulation of 76A was apparently run once under each of two conditions. This is insufficient to justify alternative 2's road-building through old growth."[119] The Final EA does not include a response to this comment. The Final EA also fails to properly disclose the likely impacts to old growth from road building, a separate NEPA violation.

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[116]Letter of Robyn King, Yaak Valley Forest Council to K. Kaiser, Kootenai National Forest (August 14, 2018).
[117]Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[118] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[119] Ibid.

D. The Final EA failed to respond to comments regarding units 37-41 in the Garver area.

In our August 8, 2019 comments, we highlighted in three paragraphs the Garver units of the project and the lack of analysis regarding their "broader integration of treatments into existing cuts and the implementation of the proposed leave islands." We further noted that a site visit had revealed "marked trees indicating the edges of proposed cuts and leave islands that directly abutted a significant rocky spine... directly at odds with the description of these units on p. 18."[120]

The Final EA responded to neither the site specific concerns, nor to the concern regarding tree marking. By not responding to these comments, either the final EA failed to release pertinent analysis to the public, or the Forest Service did not complete relevant analysis of the project area.

E. The Final EA failed to respond to comments regarding the effects of the comprehensive management plan on the PNNST.

In our August 8, 2019 comments, we identified the uncertain future of management directives from the Pacific Northwest National Scenic Trail's comprehensive management plan, which is still in development. We wrote:

> We want to highlight the special set of prescriptions for units abutting and/or covering the PNNST (Pacific Northwest National Scenic Trail), including the directive to repaint marked trees brown. This directive stems from the KNF's guideline FW-GDL-AR-01. The USFS is in the process of drafting a comprehensive plan (CP) which will replace this guideline in order to unify the look and feel of the trail across management boundaries. In the absence of a complete or even preliminary version of the CP, it is impossible to know in what way that document will change management of these units. It could preempt the KNF's requirements to treat these units differently than other project proposals, or it may add new ones, changing the project's specs after bidding.[121]

The Final EA did not respond to this comment.

F. The Final EA failed to respond to comments regarding monitoring recreation usage within the project area, including hikers on the PNNST.

In our August 8, 2019 comments, we noted changes to recreation within the project area, and called for monitoring of use: "'Over the life of the Plan, the outcome is: Improve conditions at 50 to 75 dispersed sites.' The relationship between dispersed sites and their tether to funneling and/or concentrating users into concentrated and fragile areas needs to be addressed at the project level, including this one. Coupled with the mention of 30 or so known sites in the project area alone, there is a clear purpose and need for prioritization and analysis rather than ad hoc chasing after one user-created site after another. We raise again the problem

[120] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[121] Ibid.

the KNF has allowed to happen by not implementing an effective and longstanding monitoring program for visitor use, focusing instead disproportionately on other projects."

The Final EA did not respond to this comment.

G. The Final EA failed to fully respond to comments regarding "patch size."

In our August 8, 2019 comments, we asked for a definition of "patch."[122] This is a substantive comment, given how amorphous a phrase "patch" is, a mapping term here being used as a silvicultural one, and given the potential consequences on the project. For a patch to be a patch the way the USFS appears to be intending, the elements within the patch would need to be identified and replicated: standing snags, nutrient retention on site, soil aeration rather than compaction, retention of a wild mosaic of living trees, both individually and in clumps. Yet a regeneration harvest does not replicate the sophistication of fire. The final EA did not provide this definition or respond to this comment.

H. The Final EA failed to fully respond to comments regarding the need for an EIS.

In our August 8 2019 comment letter, we called for an EIS to be conducted, given the cumulative effect of nearby projects, recent fires, opportunity for wilderness capacity, likely negative impacts to grizzly bears, and detailed, site-specific concerns.[123] The final EA responded by stating that when considering whether to proceed to an EIS:

> An EA serves to evaluate the significance of the proposed action for this project. Significance under the National Environmental Policy Act (NEPA) has a different legal standard than significance under the Endangered Species Act (ESA). Each ESA and NEPA determination stands on its own. NEPA regulations define significance in terms of context and intensity. In relation to intensity, there are 10 factors to be evaluated, one of which addresses effects on listed species under the ESA. This factor does not, in and of itself, trigger significance under NEPA; it is one of several considerations. In other words, ESA significance determinations should not solely be used to determine the potential for significance under NEPA, or vice versa. They are legally separate determinations. Each informs and influences the other, but are not determinative of each other. The EA process concludes with either a Finding of No Significant Impact (FONSI) or a determination to proceed to preparation of an Environmental Impact Statement (EIS). A FONSI is a document that presents the reasons why the responsible official has concluded that there are no significant environmental impacts projected to occur upon implementation of the actions. There are multiple factors to consider for intensity; no single factor determines whether the project will significantly affect the human environment. A determination of significance under NEPA is a Responsible Officials decision (FSM 1950.41(12)).[124]

[122] Addendum to Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[123] Ibid.
[124] Final EA Appendix p. 69, emphasis ours.

This response does not address our broader concerns. While ESA is part of the potentially significant impacts, our comments recognized that endangered species were not the only element that indicated this project may have significant impacts. By focusing on the singleness of ESA as a cause to proceed to an EIS, and by not addressing the spectrum of concerns, the Forest Service failed to respond to our comments.

I. The Final EA failed to fully respond to comments regarding the opportunity to designate northern units within a Research Natural Areas.

In our August comments, we noted that: "The unburned northern tier along the Canadian border offers a wonderful opportunity for Research Natural Areas and can serve as the baseline/foundation for a land management plan that is committed to identifying, studying, and managing the upper Yaak as the refugia that it already is."[125] If not a Research Natural Area, the Rampike region should be considered as a Botanical Area one that would protect the ecological integrity and maximum carbon sequestration capability of the region. We do not see this topic—raised early in the process—addressed in the FONSI or final EA. The rarity of this wholly intact unlogged and largely-unburned area, particularly within the Rampike region, and its connectivity to other VRUs, should be researched and studied.

By not responding to these comments, the Forest Service violated NEPA.

Suggested Remedy: Section V --The Forest Service's failure to respond to public comment violates NEPA

The Forest Service must prepare a supplemental NEPA document addressing these comments. This would be satisfied by a comprehensive EIS process.

VI. The Final EA violates the Kootenai Forest Plan and fails to meet the project's purposes and needs.

A. The Final EA fails to meet the stated purpose and need of maintaining public access.

In our August 2019 comment letter, we noted that "the use of the proposed Northwest Peak to Rock Candy Trail #461, discussed on p. 194, is driven by [Pacific Northwest National Scenic Trail, or] PNNST use and the [Pacific Northwest Trail Association]'s map depicting alternative 12A as an unauthorized spur trail to the congressional route…" and that formalizing the trail "will likely result in increased traffic across this fragile alpine habitat."[126] The Forest Service response confirmed the origin of this route and its use: "This route is shown as alternative route 12a on maps produced by the PNTA, but is not being proposed in this project to be part of the congressionally designated route."[127] Whether part of a congressionally designated route or not, Northwest Peak to Rock Candy Trail #461 would likely see increased use as the PNNST and advertised alternate routes experience increased traffic.

[125] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[126] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[127] Final EA Appendix p. 98.

One of the stated purposes and needs of the project is to "maintain public access to national forest land."[128] Yet expanding the PNNST could limit public access. When the number of hikers using the PNNST expands to 20 parties a week, the Kootenai Forest Plan's Grizzly Bear Access Amendment's parameter regarding high-use non motorized trails requires either the shifting of core and closing of roads within the BMUs through which the PNNST passes, or permitting to limit hikers, hunters, fishers, horse riders, and any other users from accessing any section in designated core. Rather than anticipating these changes, the Final EA proposes building the Northwest Peaks to Rock Candy trail. This trail is currently advertised by the Pacific Northwest Trail Association as an unauthorized spur trail to the PNNST, increasing the likelihood that this section of trail will potentially meet the high-traffic threshold established by the IGBC.[129]

The Forest Service claims that "the current and foreseeable (5-10 years) number of [PNNST] users is not anticipated to affect secure grizzly core,"[130] yet without a comprehensive management plan or analysis of the trail, it is impossible to gauge trends of hiker use of the trail, other than to note PNTA records indicating increasing thru-hiker use over the past five years.

On a related note, we have made several requests in Region 6 through the Freedom of Information Act (FOIA) regarding the out-of-compliance work the USFS has done on the PNNST from 2016. We have received some correspondence from the USFS but have not received any documentation.

By not including a plan to anticipate the eventual high-use of the PNNST, by failing to analyze hiker traffic, and by adding to the miles of PNNST network trails through Grizzly core, the Final EA will decrease public access, and thus fails to meet the stated purpose and need.

B. The Final EA fails to adequately treat the Wildland-Urban Interface (WUI).

In our September 11, 2017 letter, we encouraged the Forest Service to"focus management in previously managed stands, and in the wildland-urban interface."[131] And in our August 8, 2019 comments, we noted the projects lack of treatments in the WUI: "we are deeply concerned by a significant avoidance of WUI treatment in favor of pursuing regeneration harvests and roadbuilding in mature and old growth forests in the backcountry, upwind of any prevailing summer and fall winds, and, indeed, in the most fire resistant and fire resilient band of forest in the ecosystem."[132] We also noted the potential for additional analysis to lead to greater treatment within the WUI: "A landscape-level analysis would also likely reveal more opportunities for harvest in the WUI, meeting the stated purpose and need."[133]

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[128] Ibid., p. 2.
[129] PNTA 2019. Pacific Northwest National Scenic Trail: Section 2 Purcell Mountains (east) map. Accessed 23 January 2020, https://www.pnt.org/wp-content/uploads/2019/06/2019-PNT-Overview-Maps-FWV.pdf
[130] Final EA Appendix p. 98
[131] Letter of Jessie Grossman, Yaak Valley Forest Council to K. Kaiser, Kootenai National Forest (September 11, 2017).
[132] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[133] Ibid.

One of the purpose and needs of the project area is to "reduce the potential for high intensity wildfire while promoting desirable fire behavior characteristics and fuel conditions in the Wildland Urban Interface and other areas with values at risk."[134] Yet roughly half of the project' sharvest units are outside of the WUI, often twenty miles or farther from the nearest human structures.

These proposed treatments will not adequately reduce the potential for high intensity wildfires near communities, and thus fails to meet the stated purpose and need.

C. The Final EA fails to meet Forest Service Policy.

On page 97, the Final EA states: "Forest Service policy directs land managers to:…Before scheduling stands for regeneration harvest, ensure, based on literature, research, or local experience, that stands be managed for timber production can be adequately restocked within five years of final harvest."[135] With regard to approximately 1,000 acres of regeneration harvests scheduled in the Rampike area, we were told on field trips, as well as in a meeting with the district ranger and silviculturist, that due to the extreme wetness of the VRU (standing surface water deep into late summer and early fall), only about ten percent of the early seral seedlings planted-larch and pine—following the Rampike proposed regeneration cut—were expected to survive.

The EA states: "western larch is the most shade-intolerant conifer in the Northern Rockies."[136] By the agency's own admission, the northern tier of subalpine fir and spruce will not be converted to larch. If larch could grow there, it would.

By promoting early seral species in environs where they will not survive and propagate, the final EA is in conflict with the goals and objectives of the Forest Plan.

Suggested Remedy: Section VI--The Final EA violates the Kootenai Forest Plan and fails to meet the project's purposes and needs

The Forest Service must produce an EIS for the Black Ram Project that adequately addresses the purpose and need of the Kootenai Forest Plan.

VII. The FONSI violates the Endangered Species Act (ESA) because it fails to protect grizzly bear habitat and population security.

Both the FONSI and final EA concluded that the selected alternative 2 "may affect, and is likely to adversely affect grizzly bears."[137] This finding acknowledges that the mitigation efforts to limit the impact of the proposed treatments (including staying within forest plan compliance, in-kind replacement of core, measures to keep road use temporary, and potential benefits to forage) do not resolve the fundamental problems of the proposed project. These problems, as identified by the final EA, are disturbance of critical habitat and thus displacement, and the immediate impact of forest management, particularly the increase of motorized route

[134] Final EA p. 2
[135] Final EA p. 96
[136] Final EA p. 106
[137] Ibid., p. 312 , emphasis original.

densities within two Bear Management Units. Since the project may impact bears, despite mitigation, the Forest Service is bound by NEPA and ESA to conduct an EIS process.

A. The FONSI neglects to protect grizzly habitat from displacement due to treatments in high quality grizzly habitat.

In our August 8, 2019 letter, we commented that the "the EA notes that proposed action alternatives 2 and 3 are likely harmful to bears. According to US Fish and Wildlife biologist Wayne Kasworm's Grizzly habitat modeling, this is especially true for units 79-84. These units align with the small fraction of the Yaak that fits within modeled "very high" quality habitat, for characteristics that would be harmed by the proposed actions. In an EIS, we would expect to see a full analysis of the Beetle Creek units, with special attention to grizzly habitat concerns raised by habitat modeling."[138] The Forest Service responded that "the EA examined the effects to grizzly bears from all project activities and their respective locations relative to bear habitat. All vegetation treatments support long-term vegetation goals related to species composition, structure, pattern, and processes, and thus support the habitat attributes to which local grizzly bears are adapted." It did not address concerns regarding recent habitat modeling. The EA also notes that "entries into existing core for routine forest management and watershed improvement work from this project," including increases in motorized route density, "may result in short-term adverse effects to grizzly bears."[139]

This project has the potential to cause severe disruption to grizzly core from regeneration harvests and road-building. By failing to respond to site-specific concerns, the Forest Service has failed to protect grizzly bear habitat, and thus violates the ESA.

B. The FONSI neglects to protect grizzly habitat from immediate and cumulative impact of forest management.

The Final EA concludes that the Black Ram project "may affect, and is likely to adversely affect grizzly bears" because "project activities may cause temporary disturbance and avoidance of the affected areas."[140] These effects, even if short term, could be catastrophic to a population of likely fewer than thirty bears and are not adequately addressed in either the 2020 BO or BA.

We object to the scant consideration as to how high-intensity industrial prescriptions, including regeneration harvest, roadbuilding, stacked atop the existing conditions of high intensity firefighting and post-fire logging will affect transboundary grizzly bears in this identified fracture-zone. Without remediation of these concerns, the Black Ram project fails to protect grizzly bear habitat, and thus violates the ESA.

C. The FONSI neglects to protect grizzly habitat from unsecure road closures and unauthorized road use.

[138] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[139] Final EA p. 312
[140] Ibid.

In our August 8, 2018 comments, we voiced concern regarding the impact of unauthorized road use on effective total road density, and stated that "an EIS is necessary to do a full and accurate inventory and correction/repair of insufficiently secure roads, and user-created roads."[141] The Forest Service responded that "In the Black Ram project area, any road closures or roads indicating unauthorized use have been repaired as of October 2019. This includes repair and replacement of gates, reinforcement of barriers, and closure of user-created routes that have been identified."[142]

Regardless of the discussion and treatment of road-closure effects on grizzly by the final EA and 2020 BO and BA, the YVFC has documented extensive road barrier violations throughout the Black Ram project area. The Effects to Grizzly Bears resource section states that unauthorized use has happened "in the past,"[143] but does not analyze current unauthorized use and the potential impact on grizzlies. The Forest Service has not demonstrated that unauthorized use of closed, stored, or user-created roads has been identified, analyzed, or mitigated. It is our estimation that a notable percentage of the roads on the Three Rivers District are ineffective (see Appendix 1).

The inability to address or analyze the effects of faulty road closures renders current analysis of roads and effects on grizzlies inadequate. Since the Final EA is missing this analysis, the Forest Service has not comprehensively reviewed the cumulative impacts of roads on grizzly bears, and thus the FONSI violates the ESA.

Suggested Remedies: Section VII -- The FONSI violates the Endangered Species Act (ESA) because it fails to protect grizzly bear habitat and population security.

The Forest Service must begin a comprehensive EIS process to analyze the isolated Yaak grizzly subpopulation, apart from the Cabinet grizzly population, with site-specific management prescriptions for reconnecting and sustaining this population as accorded under the ESA.

The Forest Service must prepare a comprehensive and accurate assessment of road security and road density in the Project Area to incorporate into an EIS, given that the correct road density and usage status affects the majority of other analyses and assessments within this EA and FONSI.

VIII. The Forest Service violated NEPA by not preparing an Environmental Impact Statement on the Black Ram project.

A. Agencies Must Prepare 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."[144] Even the potential to cause significant impact is enough to trigger an EIS process. In Idaho Sporting Cong. v. Thomas, the Ninth Circuit held that "an EIS must be prepared if 'substantial questions are raised as to whether a project . . . may

[141] Letter of Jane Jacoby, Yaak Valley Forest Council to C. Benson, Kootenai National Forest (August 8, 2019).
[142] Final EA Appendix p. 118
[143] Final EA p. 293
[144] 42 U.S.C. § 4332(C).

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.[145]

B. The FONSI incorrectly applied the ten factors identified in 40 CFR 1508.27(b) to determine significance.

The FONSI claims, in reference to factor 3 ("unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas"[146]), that: "there are no parklands, prime farmlands, or ecologically critical areas within the project area based upon the specific management area designations."[147] In Herb Hammond's Initial Review, submitted with YVFC's August 8, 2019 comments, Mr. Hammond concluded that units 72, 20, 21, 22, 23, & 24 contain potentially "unique" and critical ecological areas, identified unit 72 as seasonal wetland, and indicated that multiple areas within proposed treatments were critical to the local ecosystem. Neither the final EA nor the FONSI responded to these claims, nor showed that analysis had ruled out the uniqueness or ecological significance of these sites.

The FONSI claims, in reference to factor 4 ("the degree to which the effects on the quality of the human environment are likely to be highly controversial"[148]) that "there is not a level of scientific dispute or controversy over the actions proposed."[149] Yet multiple ecologists, foresters, and biologists disputed the actions proposed, the potential for and scale of impacts, and the results of NEPA analysis. Given the robust level of these comments, there is a marked level of scientific dispute and controversy over the Black Ram project. This is precisely the circumstance when an EIS is warranted.[150]

The FONSI claims, in reference to factor 9, ("the degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act"[151]) that "the project actions themselves are not likely to have a Significant affect to grizzly bears because effects to grizzly bears are within those anticipated in the 2015 Forest Plan."[152] Anticipated effects may still be significant, given that the final EA concludes that this project "May Affect and [is] Likely to Adversely Affect" grizzly bears, regardless of mitigation efforts. This possibility, in conjunction with other concerns, points to the Forest Service's duty to proceed to an EIS.

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[145] Idaho Sporting Cong. v. Thomas, 137 F.3d 1146, 1149-50 (9th Cir. 1998)
[146] FONSI p. 15
[147] Ibid.
[148] Ibid., p. 16
[149] Ibid.
[150] Sierra Club v. USFS, 843 F.2d 1190, 1193-94 (9th Cir. 1988) (""[A]ffidavits and testimony of conservationists, biologists, and other experts who [are] highly critical of the EAs and dispute[] the [agency's] conclusion that there would be no significant effects" can establish that an action is controversial and uncertain.").
[151] FONSI p. 17
[152] Ibid.

C. The Black Ram Project May Have Significant Impacts.

The scale of the project itself may be significant. The Black Ram project calls for logging to take place on nearly 4,100 square acres of forest land across this 95,000-acre landscape. The large scale of the project supports a conclusion of significance.

The project may significantly impact watersheds. Construction of temporary roads and landing areas have the potential to significantly impact sensitive soils and watersheds.

There is a potential for significant impacts to sensitive area watersheds. As well, significant watershed damage was imposed by the firefighting efforts around the Davis fire of 2018. These damages were neither catalogued nor repaired, nor were they analyzed.

The project may significantly impact wildlife. The Final EA failed to fully address impacts to all threatened, endangered, and listed Species of Concern.The final EA itself concludes that the project is likely to negatively impact the endangered Cabinet and Yaak grizzly subpopulations. This should trigger the Forest Service's duty to prepare an EIS.

Suggested Remedy: Section VIII -- The Forest Service violated NEPA by not preparing an Environmental Impact Statement on the Black Ram project

The Forest Service must prepare an EIS to disclose the impacts of the Black Ram Project.

CONCLUSION.

YVFC hereby requests a meeting to discuss potential resolution of issues raised in this objection, pursuant to 36 C.F.R. § 218.11(a). We hope that the Forest Service will use the objection process and the resolution meeting as opportunities to engage with stakeholders, including the Yaak Valley Forest Council, to develop a project that is legally and ecologically sound.

Sincerely,

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All references have been emailed with this comment letter.

APPENDIX 1: BLACK RAM PROJECT AREA - ROAD BARRIER SURVEY

Over a period of three days the Yaak Valley Forest Council field-crew traveled around the 95,412 acre BlackRam project area to document the effectiveness of USFS Motor-vehicle (MV) road closures/ barriers. 20 roads were found to have barriers that can easily be bypassed by MV, and at times no barriers were present at all.

Referring to the current USFS Motor Vehicle Use Maps (MVUM) provided by the district. The MVUM displays National Forest System routes including roads, trails and areas designated open to motorized use. If the route or area is not shown on the MVUM, the route or area is closed to motor vehicles.
https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd674582.pdf
(Coordinates: WGS 84, hddd° mm' ss.s")
See field notes below-

Site: **BR-1**
Road # 5821
Coordinantes: 48° 57' 08.4" / 115° 32' 56.4"

Site Notes: Gate barrier. A user created bypass is located directly gate-left; approximately 8' wide passage with cleared/trampled vegetation. Grizzly bear tracks present in snow.

Site: **BR-2**
User created road off of Highway 92 (unmapped)
Coordinantes: 48° 57' 05.8" / 115° 33' 33.3"

Site Notes: User created road with no barrier. Takes off of highway 92, dropping down through the ditch and into a travel corridor through forest. Heavy tracks and rutting from motor-vehicle use. Miscellaneous litter along the travel corridor. Exceeds 300' in length.

Site: **BR-3**
Road # 5835
Coordinantes: 48° 57’ 23.4” / 115° 37’ 58.4”

Site Notes: Gate barrier with small boulders. 5’ wide passage directly to gate-left. Juniper shrub is not a sufficient barrier. Tire rutting and tracks behind the gate on road bed, indicating illegal MV use.

Site: **BR-4**
Road # 5839
Coordinantes: 48° 56’ 18.9” / 115° 40’ 10.4”

Site Notes: Berm barrier with sign posts; no sign. A low spot passage through berm-left. Tire ruts have reshaped the berm to be accessible via single-track / ATV.

Site: **BR-5**
Road # 276
Coordinantes:
48° 56’ 16.7” / 115° 43’ 38.0”

Site Notes: Berm barrier with a 4’ wide rutted passage through berm left. Looks as though it was possibly left open for ditch relief/drainage, but is being used by motor-vehicles to bypass barriers. Visible tire tracks in soil and grasses layed down from use.

Site: **BR-6**
User created road off of road # 5857 (unmapped)
Coordinantes:
48° 55’ 49.5” / 115° 44’ 12.1”

Site Notes: Appears to have been bermed to the right of the user created road. Currently there is no effective barrier to prevent passage. Tracks, rutting and signs of dispersed camping along the travel corridor. Full vehicle width.

Site: **BR-7**
Road # 5860 / French Creek Trail # 22
Coordinantes: 48° 56’ 05.2” / 115° 46’ 22.6”

Site Notes: Berm barrier, located at the end of road 5860, the start of the French Creek trail, has a 3.5’ wide passage to the berm-right. Woody debris has been laid along the fill-slope to widen the passage. Single track rutting from MV or ‘fat-tire’ bike.

Site: **BR-8**
Road # 5890
Coordinantes: 48° 50’ 20.1” / 115° 42’ 44.3”

Site Notes: Shallow berm barrier, located across the road at the junction of 5892 and 5886. There is a full vehicle sized passageway approx. 50’ to berm-left. Looks to be traveled frequently, major rutting and tracking from MV use. Barrier is ineffective and can be bypassed easily.

Site: **BR-9**
User created road off of road # 5892 (unmapped)
Coordinantes:
48° 50’ 25.3” / 115° 42’ 39.0”

Site Notes: User created road. Looks to possibly have been bermed in the past, but now is nothing more than a ‘bump’. Ineffective barrier and can be driven over by full-sized MV. Exceeds 300’ in length.

Site: **BR-10**
User created road off of road # 5892 (unmapped)
Coordinantes:
48° 50’ 34.9” / 115° 42’ 45.9”

Site Notes: Insufficient berm, nothing more than a minor bump. No signage. Exceeds 300’ in length. Looks driven often by full-sized vehicles.

Site: **BR-11**
Road # 5886A
Coordinantes:
48° 50’ 42.2” / 115° 44’ 19.5”

Site Notes: Berm barrier with motor-vehicle passage to berm-right. Signage at the barrier is broken from being driven over. Rutting and tire tracks going around the barrier.

Site: **BR-12**
User created road off of road # 5886 (unmapped)
Coordinantes:
48° 50’ 40.0” / 115° 45’ 14.9”

Site Notes: A full-sized MV travel corridor that proceeds through vegetation and forest, located off of 5886 Hensley Face Road. Well established roadbed with no sign or barrier. Exceeds 300’ in length.

Site: **BR-13**
Road # 5856
Coordinantes:
48° 53’ 13.5” / 115° 44’ 52.1”

Site Notes: Gate barrier. Motor-vehicle bypass to gate-right, using the spur road to get around the barrier, obvious tire tracks and rutting. Lack of vegetation from being driven over. The temporary log barrier (choice firewood tree) can be easily removed so the barrier is not effective.

Site: **BR-14**
Road # 748
Coordinantes:
48° 54’ 09.2” / 115° 50’ 43.7”

Site Notes: Shallow berm barrier with insufficient boulder placement. The lack of a barrier provides illegal access to sensitive Core Grizzly Bear Area. A 5’ wide passage through berm-right provides access for ATVs and motorcycles.

Site: **BR-15**
Road # 338P
Coordinantes:
48° 57’ 51.3” / 115° 54’ 50.7”

Site Notes: A pile of small mixed woody debris with flagging is the current barrier. There is no signage or effective barrier. Due to wildfire activity, the soil is sensitive and major surface runoff is present.

Site: **BR-16**
Road # 338R
Coordinantes:
48° 57’ 20.5” / 115° 54’ 52.5”

Site Notes: No barrier other than two recently fallen trees. Heavy rutting and tracks from motor-vehicle use. Due to wildfire activity, the soil is unstable and major surface runoff is present. Exceeds 300’ in length.

Site: **BR-17**
Road # 5895
Coordinantes: 48° 58’ 43.6” / 115° 50’ 43.1”

Site Notes: No barrier. Road 5895 is not mapped as an open road, according to the MV Use Map provided by the Kootenai Ntl. Forest.

Site: **BR-18**
Road # 5894
Coordinates: 48° 58’ 45.9” / 115° 50’ 11.8”

Site Notes: Gate. 5’ wide passage to gate-right. This road is accessible to ATVs and motorcycles. This ineffective barrier grants access to the Canada/USA international boundary and the sensitive Davis Wildfire fire-break.

Site: **BR-19**
Road # 747
Coordinates: 48° 58’ 17.4” / 115° 50’ 20.6”

Site Notes: Berm with signage. A 3.5’ wide passage through berm-right allows ATVs and motorcycles to access.

Site: **BR-20**
Road # 6134
Coordinates: 48° 51’ 43.5” / 115° 46’ 58.2”

Site Notes: Gate barrier with a leaning/unstable lock post. A passage to gate-left approx. 3’ allows access by motorcycles. There is a USFS marker, located gate-right, indicating the need to replace this insufficient barrier.

*** Additional Black Ram Project Area Barrier Observations:**

1. Road #338M lacks a barrier although does not appear to be drivable beyond 300'.

2. Midge Creek trail #177 can be accessed by ATVs and motorcycles due to lack of a sufficient barrier.

3. From Pete Creek Road, Garver Mountain trail #8 has no barrier, providing MV access to Pete Creek Meadows sensitive wetland area.

4. Two gates within the NW Yaak area were found to be examples of effective barriers. Road # 5874 and Road # 5878. Both sites have a heavy steel gate and gate posts with effective boulder placement, allowing non-motorized access only.

    a. See photo below of an effective barrier example (NF Road # 5878)-

APPENDIX 2: Blow-Down Stemming From Regeneration Harvest (Buckhorn Project Area)

APPENDIX 3: Clearcutting in the Davis Fire Break Significantly Impacted the Potential for Soil Weathering.

Clearcutting, either as part of a planned timber project or implemented during fire suppression, can have a multitude of effects on soils including compaction, leaching of nutrients, effects on soil and soil water pH, and capacity for soils to support healthy forest regeneration[153][154][155]. In response to long-standing and often voiced concerns over the Davis Fire break, the YVFC sampled microclimate data within the Davis Fire break (ca. N 48.97439 W 115.83960), measuring wind speeds and duff depth in the firebreak, the firebreak edge, and in the interior of the neighboring forest. Sampling occurred on October 8, 2020, with sample plots equidistantly spaced along four parallel transects. Final sample sizes for the treatments were: fire break N=15, edge N=15, and forest interior N=30 (two forest transects at 50' and 100' feet into the forest were combined for analysis). We statistically analyzed differences between treatment plots using general linear models and Tukey post-hoc tests for pairwise treatment comparisons. We tested for possible random effects of transect using log likelihood ratio testing in generalized linear mixed models, but in no case did transect impact goodness of model fit and thus random effects were excluded from the final analysis.

We found that the clearcut fire break is exposed to significantly higher potential weathering based on higher measurements of wind velocity (Figure 1A: $F_{2,57}=26.45$, $R^2=0.48$, $p<0.0001$; significant pairwise differences between all treatments). Duff depth was also significantly lower in the fire break vs. edge and forest plots (Figure 1B: $F_{2,57}=6.31$, $R^2=0.18$, $p=0.0033$). The combined effects of lower duffer depth and increased wind speed may lower the soils buffering capacity necessary to maintain soil moisture stability, and stable chemical balance. Clearcuts are known to induce soil nutrient leaching, with effects on soil carbon, nitrogen, and potassium[156] (Mann et al. 1988; Zetterberg and Löfgren 2010; Zetterberg and Olsson 2011). Downstream effects of this leaching on the pH of runoff waters into neighboring streams can have long-term effects on watershed health and be compounded by simultaneous effects of climate change. Our data strongly point at the existence of a clearcut induced microclimate that differs significantly from the neighboring forest both in weathering capacity of soils, but also likely seasonal temperature and moisture gradients that contribute to stable ecological conditions (see also Chen et al. 1993[157]). Our preliminary findings demonstrate the necessity for the USFS to more closely monitor and analyze consequences of these damaging timber practices on forest and watershed ecology in the Yaak as a whole and the Black Ram project area specifically.

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[153] Zetterberg, T., Löfgren, S., 2010. Acidification effects in forest soils, soil water, groundwater and stream water following clear-cutting and aboveground biomass removal.

[154] Zetterberg, T., Olsson, B., 2011. Long-term effects of clearcutting and biomass removal on soil water chemistry at three coniferous sites in Sweden. Swedish Environmental Research Institute, report B 1959.

[155] Page-Dumroese, D., Jurgensen, M.F., Harvey, A.E., 2003. Fire and Fire Suppression Impacts on Forest Soil Carbon. CRC Press Boca Raton, FL.

[156] Mann, L., Johnson, D., West, D., Cole, D., Hornbeck, J., Martin, C., Riekerk, H., Smith, C., Swank, W., Tritton, L., 1988. Effects of whole-tree and stem-only clearcutting on postharvest hydrologic losses, nutrient capital, and regrowth. Forest Science 34, 412-428.

[157] Chen, J., Franklin, J.F., Spies, T.A., 1993. Contrasting microclimates among clearcut, edge, and interior of old-growth Douglas-fir forest. Agricultural and forest meteorology 63, 219-237.

Figure 1: Davis fire break soils (N=15) are exposed to significantly elevated weathering through comparatively higher wind speeds (A) and lower duff depths (B) vs. edge (N=15) and forest (N=30) soils.